KENWOOD

INSTRUCTION MANUAL

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MOBILE CONTROLLER

RC-2000

KENWOOD CORPORATION

© B62-1292-10 (M)
09 08 07 06 05 04 03 02 01

SUPPLIED ACCESSORIES

Accessory	Part Number	Quantity
RC-2000 Mobile Controller	–	1
DC power cable (7 m/ 23.1 ft)	E30-3406-XX	1
Microphone extension cable (5 m/ 16.5 ft)	E30-3407-XX	1
Speaker extension cable (5 m/ 16.5 ft)	E30-3408-XX	1
RC-2000 cable with modular plugs (5 m/ 16.5 ft)	E30-3409-XX	1
RC-2000 bracket[1]	J29-0663-XX J29-0664-XX	1 1
Screw set (for RC-2000 bracket)	N99-2014-XX	1
TS-2000(X)/ TS-B2000 Mounting bracket	A13-0635-XX	1
Spacers (for A13-0635-XX)	J30-0521-XX	2
Screw set (for A13-0635-XX)	N99-2024-XX	1
Speaker with cable and plug	T19-0116-XX	1
Screw set (for T19-0116-XX and A13-0635-XX)	N99-2017-XX	1
Line filters: For microphone (large) For panel and speaker (small)	 L79-1419-XX L79-1417-XX	 1 2
Fuse (25 A/ 32 V)	F05-2531-XX	1
Warranty card: For the U.S.A. and Canada For European Countries	 B46-0469-XX B46-0310-XX	 1 1
Instruction manual	B62-1292-XX	1

[1] 2 parts are used.

CONVENTIONS FOLLOWED IN THIS MANUAL

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The writing conventions described below have been followed to simplify instructions and avoid unnecessary repetition.

Instruction	What to do
Press **[KEY]**.	Press and release **KEY**.
Press **[KEY] (1 s)**.	Press and hold **KEY** for 1 second or longer.
Press **[KEY1]**, **[KEY2]**.	Press **KEY1** momentarily, release **KEY1**, then press **KEY2**.
Press **[F] (1 s)**, **[KEY]**.	Press and hold **[F]** for 1 second or longer, then press **KEY**.
Press **[KEY1]+[KEY2]**.	Press and hold **KEY1**, then press **KEY2**.
Press **[KEY]+ [⏻]** (POWER).	With transceiver power OFF, press and hold **KEY**, then turn ON the transceiver power by pressing **[⏻]**.
{page XX}	Refer to page XX of this manual.
{TS-2000 page XX}	Refer to page XX in the TS-2000(X)/ TS-B2000 instruction manual.

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BEFORE YOU BEGIN

This manual was created to show you how to access the functions you want to operate, and how to quickly configure the transceiver, through the use of the RC-2000. If you are operating the TS-2000(X)/ TS-B2000 transceiver for the first time, we recommend you read the TS-2000(X)/ TS-B2000 instruction manual before operating the RC-2000. Since this manual does not cover the functions in detail, make sure you have the TS-2000(X)/ TS-B2000 instruction manual handy for reference.

PREPARATION (Pages 2 ~ 6)

When you are getting ready to install the brackets and cables, read this chapter.

QUICK START (Page 7)

If you are operating the RC-2000 for the first time, read this chapter and follow the instructions for a trial run.

KEYS AND CONTROLS (Page 8 ~ 12)
CYCLING THE KEY GROUPS (Pages 13 ~ 30)

These chapters describe how to access and configure the various functions available on the RC-2000. Refer to the page that explains your desired key control.

SATELLITE MODE (Pages 31 ~ 33)

This chapter describes how to control the functions while you are operating in the Satellite mode.

EASY VIEWING MODE (Pages 34 ~ 36)

This chapter describes how to control the functions while you are in the Easy Viewing mode.

PACKET CLUSTER TUNE (Pages 37 ~ 38)

This chapter describes how to control the functions when you activate the Packet Cluster Tune mode.

VISUAL SCAN (Pages 39 ~ 40)

This chapter describes how to control the functions when you activate the Visual Scan function.

PROGRAMMABLE MEMORY (Pages 41 ~ 43)

This chapter describes how to store and recall the Programmable Memory function that is available on the RC-2000.

SKY COMMAND II+ (K-TYPE ONLY) (Pages 44 ~ 46)

This chapter describes how to control the Sky Command II+ functions.

QUICK KEY REFERENCE (Pages 47 ~ 51)

Alphabetical listing of the key functions in each operating mode. A Quick look-up table for referring to the page(s) in this guide as well as the TS-2000(X)/ TS-B2000 instruction manual.

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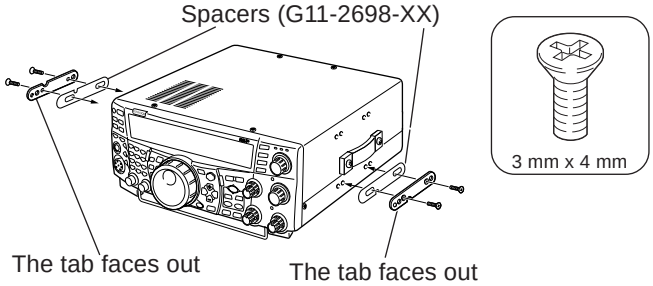
INSTALLATION

When using the RC-2000 in your vehicle, you can install the transceiver in the trunk, under the seat or under the dash board. On the transceiver, install the DC cable (7 m/ 23.1 ft), the microphone extension cable (5 m/ 16.5 ft), a cable for the speaker (5 m/ 16.5 ft), a cable to the RC-2000 (5 m/ 16.5 ft), and coaxial cable(s) to the antenna (not supplied in this package). Make sure all cable lengths are adequate before installing the brackets.

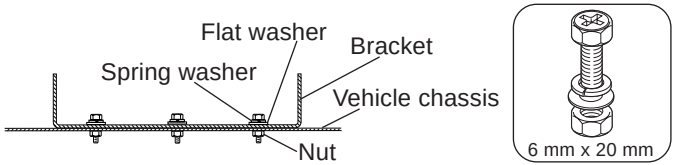
TRANSCEIVER INSTALLATION

When installing the metal plates, first attach the plastic spacers (G11-2698-XX) to the transceiver. This is necessary to protect the TS-2000(X)/ TS-B2000 from scratches.

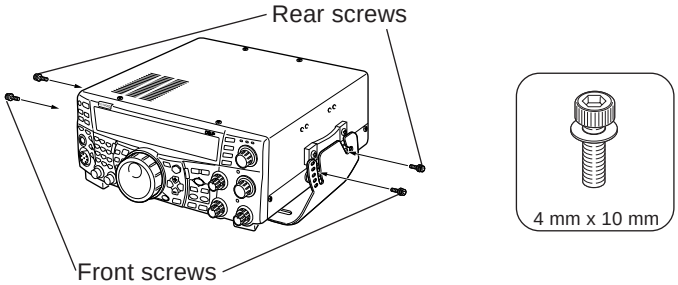
Note: *The plastic spacers (G11-2698-XX) are supplied accessories for the TS-2000(X)/ TS-B2000 transceiver.*



Install the bracket securely onto the vehicle, using 6 sets of the supplied screws (N99-2024-XX).



Then, prepare the transceiver by loosely screwing in the rear screws. Hook those screws onto the rear guide rail of the mounting bracket, then adjust the transceiver to your desired angle before tightening the screws. Insert and tighten the front screws to secure the transceiver in place.



To remove the transceiver from the bracket, first remove the front screws, then loosen the rear screws slightly and pull the transceiver forward to unlatch it from the bracket.

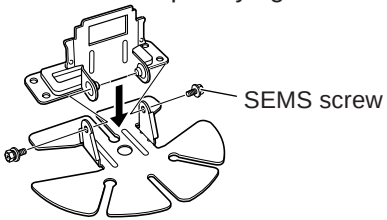
WARNING

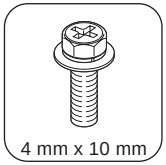
Do not install the transceiver so that it is vertically on its side.

FRONT PANEL INSTALLATION

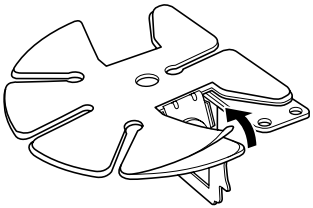
1 Assemble the mounting brackets using the 2 supplied hexagon SEMS screws and the 2 flat washers.

- Do not completely tighten the screws in this step.

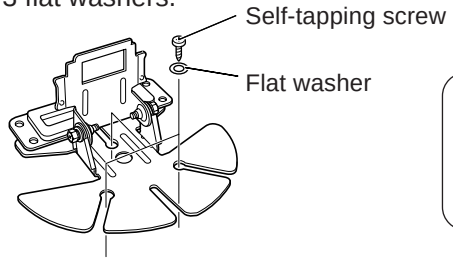


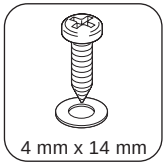


2 Peel off the paper backing from the base of the bracket.



3 Position the bracket in the vehicle, then install it securely using the 3 supplied self-tapping screws and the 3 flat washers.





4 Align the grooves on the front panel over the bracket tabs.

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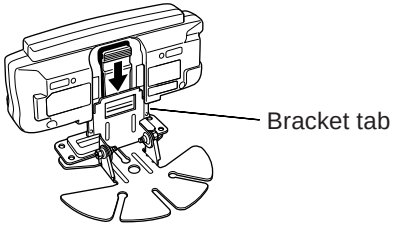
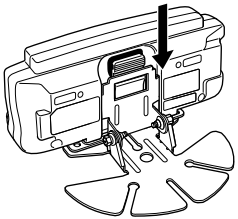
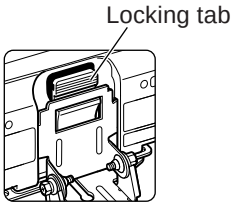


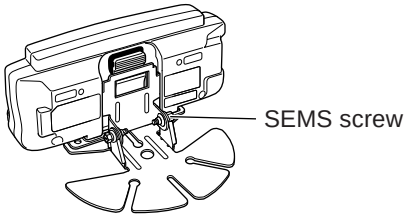
5 Slide the front panel down until it locks in place.

- The tab on the front panel must be completely locked by the bracket otherwise vehicle vibration may cause the front panel to become dislodged.



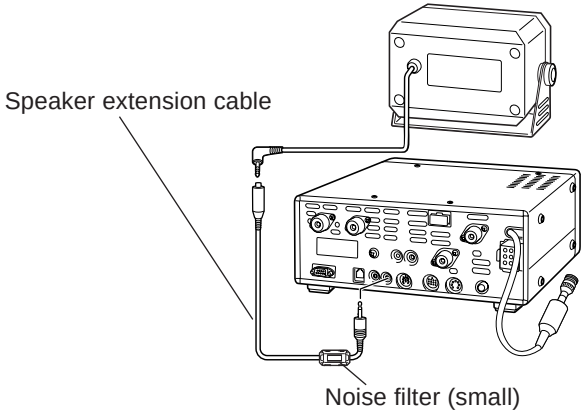


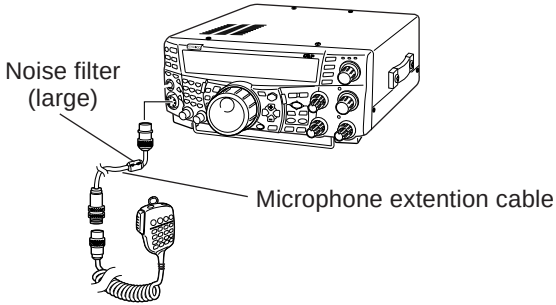
6 Position the front panel at your desired angle, then completely tighten the 2 SEMS screws on the bracket.



SPEAKER AND MIC CABLE INSTALLATION

Connect the speaker extension cable plug to the **EXT.SP1** or **EXT.SP2** connector {TS-2000 page 78}. Then connect a plug from the speaker to the jack as shown below. Connect the microphone extension cable between the microphone jack on the front of the transceiver and the microphone connector, as shown below.





MODULAR PLUG CABLE CONNECTION

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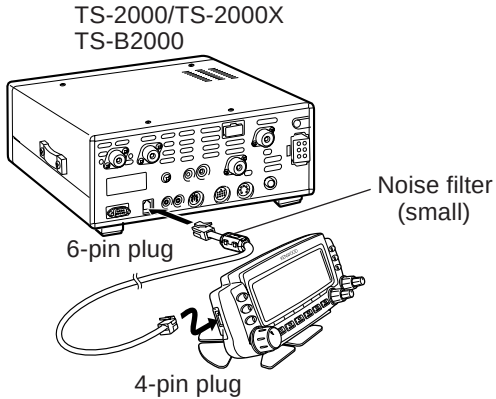
Use the supplied modular plug cable to connect the front panel to the main unit. Connect the 4-pin plug to the front panel and 6-pin plug to the main unit.

Note: *It is easy to identify between the plugs, as the 6-pin plug is slightly wider than the 4-pin plug.*



DC POWER CABLE INSTALLATION

The vehicle battery must have a nominal rating of 12 V. Never connect the transceiver to a 24 V battery. Be sure to use a 12 V vehicle battery that has sufficient current capacity. If the current to the transceiver is insufficient, the display may darken during transmission, or transmit output power may drop excessively.

1 Route the DC power cable supplied with the transceiver directly to the vehicle's battery terminals using the shortest path from the transceiver.

- If you are using a noise filter, it should be installed with an insulator to prevent it from touching any metal on the vehicle.
- We recommend you do not to use the cigarette lighter socket since some cigarette lighter sockets introduce an unacceptable voltage drop.
- If the power cable must be routed through a hole in the vehicle chassis or body, for example in the firewall at the front of the passenger compartment, use a rubber grommet to protect the cable from abrasion. Dismantle the fuse holder to pass the cable through the firewall.
- The entire length of the cable must be dressed so it is isolated from heat, moisture, and the engine secondary (high voltage) ignition system/ cables.

2 After the cable is in place, wind heat-resistant tape around the fuse holder to protect it from moisture and tie down the full run of cable.

3 To prevent the risk of short circuits, disconnect other wiring from the negative (–) battery terminal before connecting the transceiver.

4 Confirm the correct polarity of the connections, then attach the power cable to the battery terminals; red connects to the positive (+) terminal, black connects to the negative (–) terminal.

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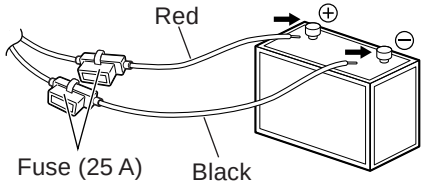
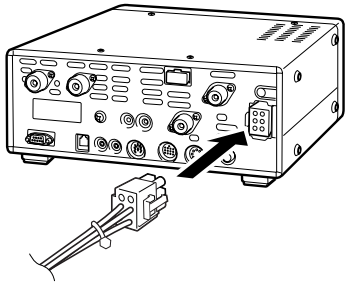
- Use the full length of the cable without cutting off any excess, even if the cable is longer than required. In particular, never remove the fuse holders from the cable.



5 Reconnect any wiring you may have removed from the negative battery terminal.

6 Connect the DC power cable to the transceiver's power supply connector.

- Press the connectors firmly together until the locking tab clicks.



CHECKING THE CONNECTIONS

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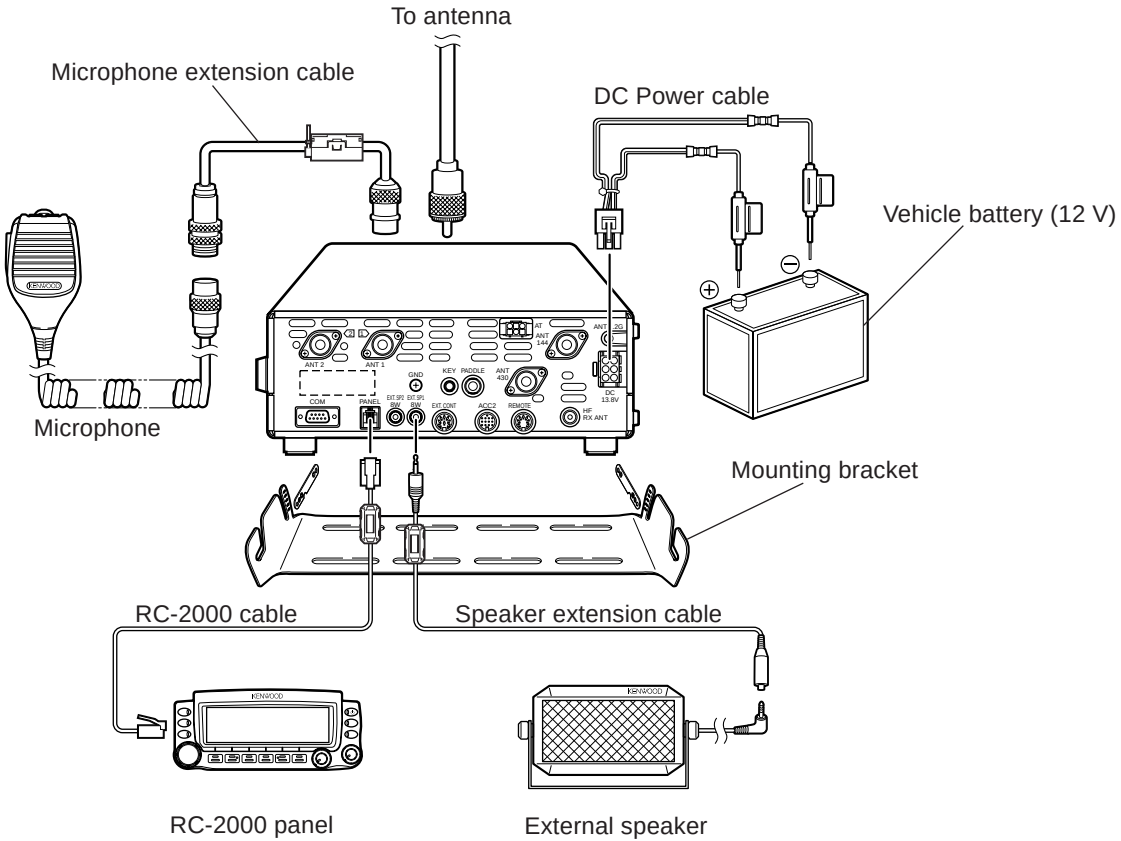
After installing the brackets and cables, make sure all the connections have been made in accordance with the following diagram.



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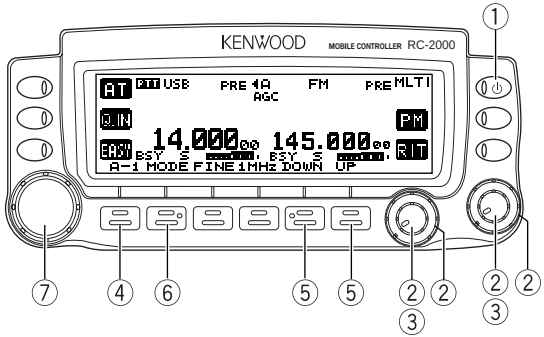
PREPARATION

1 Make sure that the RC-2000, the speaker, and the cables are connected as shown {page 6}.

2 Connect the transceiver to a DC power supply or 12 V vehicle battery {page 5}.

OPERATION



1 Press **[⏻]** (POWER) briefly to switch the transceiver ON.

- Upon power up, “KENWOOD MOBILE CONTROLLER HELLO!!” momentarily appears, followed by the current operating frequencies and other indicators.
- Assuming you want to operate the HF band on the main transceiver and VHF band on the sub-receiver.

2 Turn the **SUB SQL** (right outer ring) and **MAIN** and **SUB AF** (both center knobs) controls to approximately the 9 o’clock position. Turn the **MAIN SQL** (left outer ring) control fully counterclockwise.

3 Press the **MAIN AF** (left) or **SUB AF** (right) control to select the operating band.

- The “PTT” icon moves to indicate which band is currently selected for the TX band. The frequency information shown in a large font is selected for the current control band.

4 Press **[F1]** until you select group A–1 {page 13}.

5 Press **[DOWN]** or **[UP]** to select your desired band.

6 Press **[MODE]** to select your desired operating mode {page 15}.

7 Turn the **Tuning** control to adjust the frequency.

- The frequency shown in a large font changes.

8 Press and hold Mic **[PTT]**, then speak in your normal tone of voice.

9 Release Mic **[PTT]** to receive.

10 Repeat steps 8 and 9 to continue communication.

Note: *You may have to adjust the **AF** and **SQL** controls further in step 6.*

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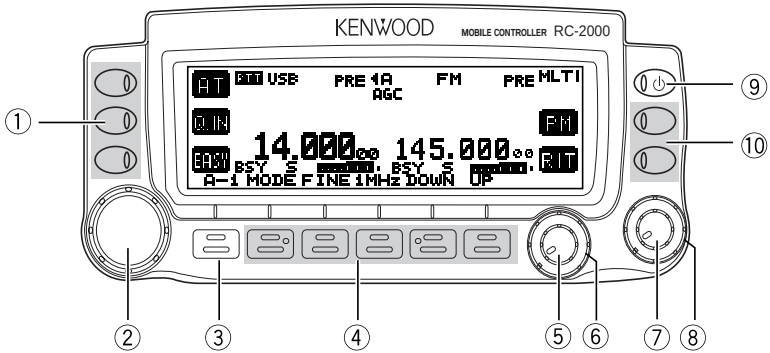
FRONT PANEL OVERVIEW

There are 12 keys on the front panel. These keys are denoted as follows: L1 ~ L3 are the 3 keys to the left of the display (from top to bottom); F1 ~ F6 are the 6 keys below the display (from left to right); the top most key to the right of the display is the Power switch; R1 ~ R2 are the two keys below the Power switch, to the right of the display (from top to bottom).



① **L1 ~ L3** key

Press to activate or select the function shown on the display to the right of each key.

② **Tuning / MULTI/CH / RIT/SUB** control

Normally, it is used to adjust the frequency. Press this control to change the control mode. The current tuning control mode status appears on the top right of the display where “TUN” is **Tuning** control, “MLTI” is **MULTI/ CH** control, and “RIT” is **RIT/ SUB** control.

③ **F1** key

Press momentarily to cycle within each group (for example, A–1 ➡ A–2 ➡ A–3 ➡ A–4 ➡ A–1). Press and hold to cycle among groups (Group A ➡ Group B ➡ Group C ➡ Group A) {page 13}. The selected group and corresponding number appear on the display above this key.

④ **F2 ~ F6** key

Press to activate or select the function shown on the display above each key {page 13 ~ 30}.

⑤ **MAIN AF** control

Functions the same as the **MAIN AF** control on the transceiver. If you press this control, it functions the same as **[MAIN]** on the transceiver {TS-2000 page 12}.

⑥ **MAIN SQL** control

Functions the same as the **MAIN SQL** control on the transceiver {TS-2000 page 12} .

⑦ **SUB AF** control

Functions the same as the **SUB AF** control on the transceiver. If you press this control, it functions the same as **[SUB]** on the transceiver {TS-2000 page 12}.

⑧ **SUB SQL** control

Functions the same as the **SUB SQL** control on the transceiver {TS-2000 page 12}.

⑨ ⏻ (POWER) switch

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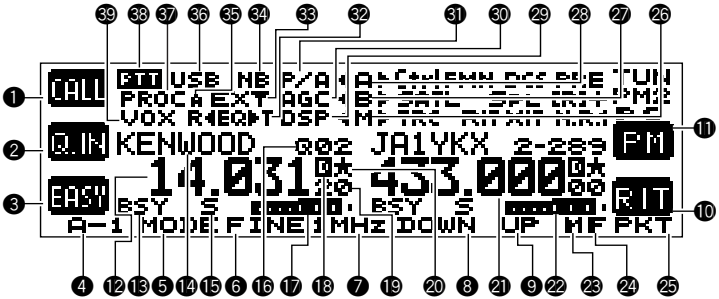
Press to switch the transceiver ON or OFF {TS-2000 page 8}.

⑩ **R1 ~ R2** key

Press to activate or select the function shown on the display to the left of each key.

DISPLAY AND KEY FUNCTIONS



❶ “AT” appears when you operate HF ~ 50 MHz band. Press **[L1]** to activate the automatic antenna tuner. While it is in-line, “AT IN” or “AT R IN” appears (when Menu No. 27 is “ON”). “CALL” appears when you operate 144 MHz ~ 1.2 GHz bands. Press **[L1]** to recall the CALL channel for the band or press and hold **[L1]** to store the new CALL channel data.

❷ While “Q.IN” appears, press **[L2]** to store the current frequency and other data to the Quick Memory.

❸ “EASY” appears when you operate the normal VFO/ Memory Recall mode. Press **[L3]** to enter Easy Viewing mode {page 34}.

❹ Displays the current key group and its suffix number. Press **[F1]** to move to next suffix number or press and hold **[F1]** to move to next group {page 13}.

❺ ~ ❾

The available function name appears. Press **[F2]** ~ **[F6]** or press and hold the key to activate the function {pages 13 ~ 30}.

❿ The assigned function of **[R2]** appears. Normally, “RIT” appears. Press **[R2]** to switch RIT ON or OFF. Press and hold the key to clear the RIT offset frequency.

⓫ The assigned function of **[R1]** appears. Normally, “PM” appears. Press to enter Programable Memory function {page 41}.

⓬ The main transceiver operating frequency display.

⓭ When the main transceiver receives a signal or the main transceiver’s squelch is open, “BSY” appears. When you transmit on the main transceiver, “TX” appears.

⓮ The memory name appears when you recall the memory channel. “CALL” appears when you recall the CALL channel. “SCAN–P1” (slowest scan speed) ~ “SCAN–P9” (fastest scan speed) appears while in Scan mode.

⓯ “S” appears when the main transceiver is in receive mode. “PWR” (output power), “SWR” (SWR ratio), or “ALC” (Automatic Level Control) appears when you select the meter function.

⓰ The memory channel number appears (3 digits) when you recall the Memory channel. The memory group number “0–” ~ “9–” also appears. When the channel is locked out, “— — —” appears above the memory channel number. “Q01” ~ “Q09” appears when you recall a Quick Memory channel. The Satellite memory channel number “0” ~ “9” appears in the Satellite mode. If no data is stored “▶” appears along with the memory channel number.

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⓱ Works as an S-meter in the receive mode. Works as the meter you selected while transmitting.

⓲ "▫" appears when the internal TNC is assigned to the main transceiver.

⓳ The Hz digits of the main transceiver operating frequency appears.

⓴ Appears when the frequency point of Program Scan Partially Slowed is selected on the main transceiver.

㉑ When the sub-receiver is switched ON, it shows the operating frequency for the sub-receiver. However, if you are controlling the main transceiver functions, such as RIT, XIT or SPLIT, it displays the frequency information for these functions.

㉒ Serves as an S-meter for the sub-receiver. It also displays the relative output power when the sub-band is selected for transmission.

㉓ Appears when the MHz Up/ Down mode is selected.

㉔ Appears when the Fine tuning function is selected.

㉕ "PKT" appears when the internal TNC is operating in Packet mode.

㉖ "◀M" or "M▶" appears while a simplex memory channel is selected. "◀M▶" appears while a split frequency memory channel is selected.

㉗ "◀B" or "B▶" appears while VFO B is selected. "B" appears while Menu B is being accessed.

㉘ "◀A" or "A▶" appears while VFO A is selected. "A" appears while Menu A is being accessed.

㉙ "DSP" appears when one of the DSP functions is activated.

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㉚ "AGC" appears when the AGC function is ON. "R" (Reverse function), "[R]" (Automatic Simplex Check), or the Repeater shift direction ("–", "+", or "=") appears.

Note: *"=" appears only for E-types.*

㉛ "ATT" appears when the attenuator function is ON. "PRE" appears when the preamplifier function is ON. "P/A" appears when both functions are ON.

㉜ "R◀EQ" appears when the RX Equalizer function of the main transceiver is ON. "EQ▶T" appears when the TX equalizer function is ON.

㉝ "EXT" appears while the HF RX ANT connector is enabled to receive HF band signals.

㉞ "NB" appears when the Noise Blanker function is ON.

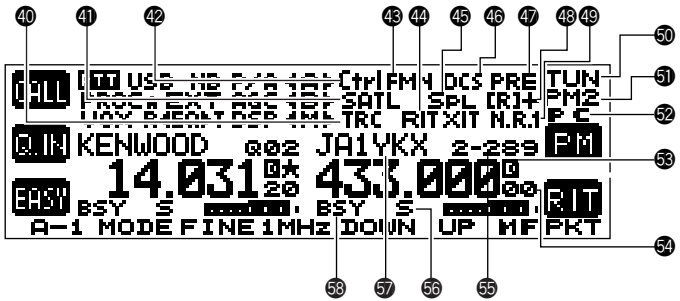
㉟ "A" appears when Auto mode selection is activated.

㊱ The current operating mode for the main transceiver appears.

㊲ "PROC" appears when the Speech Processor function is ON.

㊳ "PTT" appears when the main transceiver is selected for the transmission band. "Ctrl" appears when the main transceiver is selected for the Control band.

㊴ "VOX" appears when the VOX function is ON.



40 “TRC” appears when the Trace function is ON in the Satellite mode. “TRCR” appears when the Reverse Trace function is ON in the Satellite mode.

41 “SATL” appears while operating in Satellite mode.

42 “PTT” appears when the sub-band is selected for the transmission band. “Ctrl” appears when the sub-band is selected for the Control band.

43 The current operating mode for the sub-receiver (sub-band) appears.

44 “RIT” appears while the RIT function is ON. “XIT” appears while the XIT function is ON.

45 “SPL” appears while SPLIT operation is enabled.

46 “DCS” (DCS function), “CT” (CTCSS function), or “T” (Tone function) appears when one of the FM mode selective calls is activated for the sub-receiver.

47 “ATT” appears when the attenuator function is ON. “PRE” appears when the preamplifier function is ON. “P/A” appears when both functions are ON.

48 “R” (Reverse function), “[R]” (Automatic Simplex Check), or the Repeater shift direction (“–”, “+”, or “=”) appears.

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Note: *“=” appears only for E-types.*

49 “N.R.1” appears when the Noise Reduction 1 function is ON for the sub-receiver.

50 “TUN” (**Tuning** control), “MLTI” (**MULTI/ CH** control), “RIT” (**RIT/ SUB** control), or “SPED” (Scanning speed control) appears, indicating which control mode is currently assigned to the **Tuning** control.

51 Appears when the Programmable Memory function is ON. “PM1” ~ “PM5” appear to indicate which Programmable Memory channel is selected.

52 “PC” appears when the TS-2000(X)/ TS-B2000 is controlled by an external PC.

53 “◘” appears when the internal TNC is assigned to the sub-receiver.

54 The sub-receiver operating frequency display.

55 The memory channel number appears (3 digits) when you recall the Memory channel on the sub-receiver. (Same as 16.)

56 “S” appears when the sub-receiver’s squelch opens. “PWR” appears to display the relative output power level when you transmit on the sub-band.

57 When a memory channel is recalled to the sub-receiver, the memory name appears. (Same as 14.)

58 When the sub-receiver receives a signal or the sub-receiver’s squelch is open, “BSY” appears. When you transmit on the sub-band, “TX” appears.

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OVERVIEW

The TS-2000(X)/ TS-B2000 transceiver has many function controls. However, the RC-2000 mobile controller has only 12 keys and 5 controls. In order to access all the available functions of the transceiver from the RC-2000 mobile controller, the functions are divided into 3 groups: A, B, and C. Group A is a primary function group with most of the commonly used keys. Group B is a secondary function group. Group C is a special group whose functions change, depending on the current operating mode.

Within each group, there are several sub-groups, each identified by their suffix numbers. Momentarily press **[F1]** to cycle through each sub-group within your selected group (A, B, or C). The suffix numbers change to reflect the currently selected sub-group. To change the main group (A, B, or C), press and hold **[F1]**.

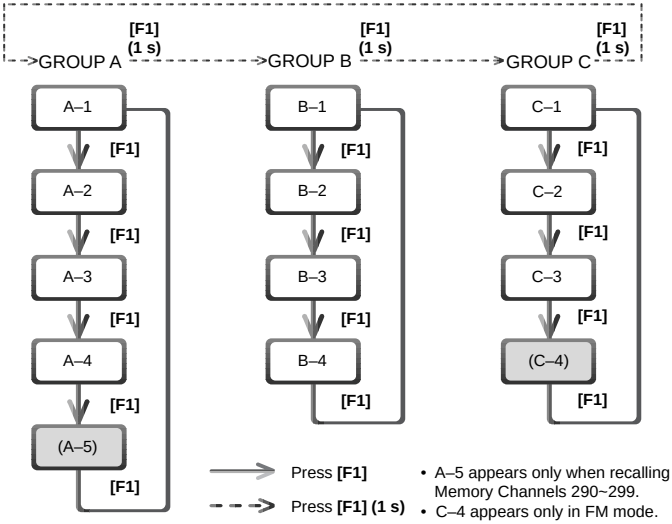
As you change the group and sub-group, the available functions for **[F2]** ~ **[F6]** change. Press one of **[F2]** ~ **[F6]** to activate the function which appears on the display above each key.

To access your desired function, first select the appropriate group by pressing and holding **[F1]**. Next, cycle within the group to the appropriate sub-group by continuously pressing **[F1]**. The selected group and corresponding number appears on the display above the **[F1]** key.

The following diagram illustrates how to access each group and sub-group.

For further information on each function, refer to the TS-2000(X)/ TS-B2000 instruction manual. A Quick look-up table of each operating mode is available, starting on page 47.

DIAGRAM



GROUP A KEYS

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Group A–5 appears only when you recall Memory Channel 290 ~ 299. Detailed explanations of each function are provided on the following pages:

Action	[A–1]	[MODE]	[FINE]	[1MHz]	[DOWN]	[UP]
Press the key:	Move to A–2	Change the operating mode pair	FINE function ON/ OFF	1 MHz Up/ Down control ON/ OFF	Move down one amateur radio band	Move up one amateur radio band
Press and hold the key:	Move to group B–1	Toggle the mode within the selected pair	—	Change the step size for the 1 MHz control	Continuously move down the band	Continuously move up the band
Action	**[A–2]**	**[A/B]**	**[SPLIT]**	**[TF SET]**	**[A=B]**	**[XIT]**
Press the key:	Move to A–3	Select another VFO	SPLIT function ON/ OFF	Check and change the TX frequency in SPLIT operation	Copy the current VFO data to another VFO	XIT function ON/ OFF
Press and hold the key:	Move to group B–1	—	—	—	—	Clear the XIT frequency offset
Action	**[A–3]**	**[MENU]**	**[STEP]**	**[NB]**	**[AGC]**	**[PF]**
Press the key:	Move to A–4	Enter Menu mode	Change the frequency step	Noise Blanker ON/ OFF	AGC ON/ OFF	Activate PF (Prog. Function)
Press and hold the key:	Move to group B–1	–	—	Configure the Noise Blanker level	Configure the AGC time constant	—
Action	**[A–4]**	**[CLR]**	**[M>V]**	**[MG SEL]**	**[M.IN]**	**[V/M]**
Press the key:	Move to A–5 or A–1	Exit, abort, or reset various functions	Transfer data from a Memory channel to a VFO	Enter Memory Group Select mode	Write data into memory or enter Memory Scroll mode	VFO or Memory Recall mode
Press and hold the key:	Move to group B–1	—	—	—	—	—
Action	**[A–5]**	**[SET]**	**[OPEN]**		**[CLOSE]**	
Press the key:	Move to A–1	Add the current freq. to the Prog. Scan Partially Slowed	Display the start frequency of the memory channel	—	Display the end frequency of the memory channel	—
Press and hold the key:	Move to group B–1	Clear all the above freq. points	—	—	—	—

GROUP A-1

MODE

Press to change the operating mode pair. There are 3 pairs: USB/ LSB, FM/ AM, and CW/ FSK. Press and hold to toggle the mode within each pair: USB ⬌ LSB, FM ⬌ AM, or CW ⬌ FSK.

FINE

Press to toggle the FINE tuning function ON or OFF. “F” appears on the display when this function is ON.

1MHz

Press to toggle the 1MHz Up/ Down function ON or OFF. “M” appears on the display when this function is ON. Press and hold to change the 1MHz Up/ Down frequency step size. Press the **[⬆]**/ **[⬇]** keys or turn the **MULTI/ CH** control to change the frequency step size, then press either **[EXIT]** or the **MULTI/ CH** control to accept the new setting.

DOWN

Press to move down the amateur radio band one step. Press and hold to continuously cycle down through the amateur radio bands.

UP

Press to move up the amateur radio band one step. Press and hold to continuously cycle up through the amateur radio bands.

GROUP A–2

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A/B

Press to alternate between VFO A and VFO B on the main transceiver.

SPLIT

Press to activate SPLIT operation on the main transceiver.

TF SET

When SPLIT operation is activated, press and hold this key, then turn the **Tuning** control to adjust the TX frequency. Press the **Tuning** control to toggle between the **Tuning** control and **MULTI/ CH** control mode. “TUN” or “MLTI” appears on the display to indicate the selected control mode.

A=B

Press to copy the data of the currently selected VFO to another VFO.

XIT

Press to switch the Transmit Incremental Tuning function ON or OFF. When it is ON, “XIT” appears on the display, along with the offset frequency. Press and hold to clear the XIT offset frequency.

GROUP A-3

MENU

Press to enter the Menu mode. Menu mode is used to activate and configure the various functions of the TS-2000(X)/ TS-B2000 {TS-2000 page 21}. Press **[ADD]** to add the current Menu No. to the Quick Menu. "★" appears on the display when the Menu No. is added to the Quick Menu. Press **[MNU SEL]** to activate the Quick Menu function.

STEP

Press to change the frequency step size used for the **MULTI/ CH** control {TS-2000 page 37}. Select the desired step size using the **[⬆]/ [⬇]** keys or by turning **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to accept the new setting.

NB

Press to switch the Noise Blanker function ON or OFF. When it is ON, "NB" appears on the display. Press and hold to change the Noise Blanker Level. Select the desired level using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to accept the new setting.

AGC

Press to switch the AGC function ON or OFF. When it is ON, "AGC" appears on the display. Press and hold to change the AGC Level {TS-2000 page 38}. Select the desired time constant using the **[⬅]/ [➡]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to accept the new setting.

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PF

Press to activate the PF (Programmable Function) key assignment. The default assignment is VOICE1 {TS-2000 page 77}.

GROUP A–4

CLR

Press to exit from, abort, or reset various functions. Also used for erasing memory channels {TS-2000 page 62} or locking memory channels out of the scan list {TS-2000 page 62}.

M>V

Press to transfer data from a memory channel to a VFO {TS-2000 page 61}.

MG SEL

Press to enter Memory Group Select mode {TS-2000 page 64}. The selected group numbers are highlighted. You can select your desired group numbers using the **[⬅]/ [➡]** keys, or by turning or pressing the **MULTI/ CH** control, then press **[SEL]** to toggle the selection. You can also press **[ALL]** to unselect all the group numbers. Press **[OK]** to save the setting or **[CLR]** to cancel the selection.

M.IN

Press to enter the Memory Scroll mode {TS-2000 page 60}. “MSR” appears on the display. Turn the **MULTI/ CH** control to select your desired memory channel number. Press **[M.IN]** to write the data to memory. You can also press **[MN.IN]** to enter and select the Memory Name and Memory Group. Select your desired character using the **MULTI/ CH** control, or the **[⬅]**/ **[➡]** and **[DEL]** keys. Press **[OK]** to store the Memory Name. Press **[G-SEL]** to enter the Memory Group selection. Select a desired Memory Group using the **MULTI/ CH** control or **[⬅]**/ **[➡]** keys, then press **[SEL]**. Press **[OK]** to store the new Memory Group selection.

V/M

Press to select either VFO or Memory Recall mode {TS-2000 page 59}. In Memory Recall mode, “◀M” or “M▶” appears on the display. Turn the **MULTI/ CH** control to select your desired memory channel.

GROUP A–5

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A–5 functions appear only when recalling Memory Channels 290 ~ 299 {TS-2000 page 62}.

SET

Turn the **Tuning** control and press **[SET]** to set the frequency point of Program Scan Partially Slowed on the main transceiver {TS-2000 page 67}. The “★” icon appears on the display when you tune to the marked frequency. Press and hold the key to clear all the frequency points that you have configured.

OPEN

Press to confirm the start frequency when you recall a memory channel from 290 ~ 299 {TS-2000 page 62}.

CLOSE

Press to confirm the end frequency when you recall a memory channel from 290 ~ 299 {TS-2000 page 62}.

GROUP B KEYS

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“ANT1” or “ANT2” appears only when you are operating on the HF ~ 50 MHz band. “ANT” appears for all other bands in group B–1. Detailed explanations of each function are provided on the following pages:

Action	[B–1]	[PRE]	[ATT]	[ANT1]	[P.C.T.]	[SATL]
Press the key:	Move to B–2	Pre-amplifier ON/ OFF	Attenuator ON/ OFF	Select another antenna	Packet Cluster Tune ON/ OFF	Satellite Mode ON/ OFF
Press and hold the key:	Move to group C–1	—	—	—	—	—
Action	**[B–2]**	**[REC]**		**[CH1]**	**[CH2]**	**[CH3]**
Press the key:	Move to B–3	Stand-by for recording a message	—	Play the CH1 message	Play the CH2 message	Play the CH3 message
Press and hold the key:	Move to group C–1	—	—	Record a voice message on CH1 in REC mode	Record a voice message on CH2 in REC mode	Record a voice message on CH3 in REC mode
Action	**[B–3]**	**[SCAN]**	**[AUTO]**	**[SG SEL]**		**[VISUAL]**
Press the key:	Move to B–4	Scan ON/ OFF	Auto-mode function ON/ OFF	Select the Scan Group	—	Visual Scan ON/ OFF
Press and hold the key:	Move to group C–1	—	—	—	—	—
Action	**[B–4]**	**[DUAL]**	**[CTRL]**	**[LOCK]**	**[Q.M]**	**[METER]**
Press the key:	Move to B–1	Sub-receiver ON/ OFF	Move the Control band to another receiver	Activate the Key lock function	Recall a Quick Memory channel	Change the meter mode (SWR, ALC, and COMP only) while transmitting
Press and hold the key:	Move to group C–1	—	—	Exit the Key lock function	—	Toggle the meter mode: PWR or SWR/ ALC/ COMP

GROUP B–1

PRE

Press to switch the receiver preamplifier ON or OFF {TS-2000 page 57}. “PRE” appears on the display when this function is ON. “P/A” appears on the display when both “PRE” and “ATT” are ON.

ATT

Press to switch the receiver attenuator ON or OFF. “ATT” appears on the display when this function is ON. “P/A” appears on the display when both “PRE” and “ATT” are ON.

ANT1/ ANT2/ ANT

When operating on the HF ~ 50 MHz band, “ANT1” or “ANT2” appears. “ANT” appears when operating on the 144 MHz ~ 1.2 GHz bands. Press to select another antenna when operating on the HF ~ 50 MHz band.

P.C.T.

Press to switch the P.C.T. (Packet Cluster Tune) function ON or OFF {page 37, TS-2000 page 53}.

SATL

Press to switch the Satellite mode ON or OFF {page 31, TS-2000 page 53}.

GROUP B–2

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REC

Press to enter stand-by mode for message recording {TS-2000 pages 43, 89}. To start recording a message, press **[CH1]**, **[CH2]**, or **[CH3]**.

CH1

Press to play back the message which has been recorded in channel 1. When **[REC]** is pressed and the transceiver is standing by for recording, press this key to start recording in CH1.

CH2

Press to play back the message which has been recorded in channel 2. When **[REC]** is pressed and the transceiver is standing by for recording, press this key to start recording in CH2.

CH3

Press to play back the message which has been recorded in channel 3. When **[REC]** is pressed and the transceiver is standing by for recording, press this key to start recording in CH3.

GROUP B–3

SCAN

Press to start or stop various Scan functions.

AUTO

Press to switch the Auto mode selection function ON or OFF. When it is active, “A” appears on the display.

SG SEL

Press to enter the Scan Group select mode. Select your desired memory group numbers using the **[⬅]/ [➡]** key, or by turning or pressing the **MULTI/ CH** control, then press **[SEL]** to toggle the selection. The selected group numbers are highlighted. You can also press **[ALL]** to deselect all the group numbers. Press **[OK]** to save the setting or **[CLR]** to cancel the selection.

VISUAL

Press to activate the Visual Scan function {page 39, TS-2000 page 70}.

GROUP B–4

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DUAL

Press to switch the sub-receiver ON or OFF.

CTRL

Press to move the Control band to another receiver. The frequency display of the Control band appears in a large font. If the same band is selected for the TX band and Control band, only “PTT” appears on the display.

LOCK

Press to lock all the keys and controls of the RC-2000. Press and hold to unlock the keys and controls of the RC-2000.

Q.M

Press to recall the Quick Memory channel. “Qnn” appears, indicating which Quick Memory channel is recalled (where “nn” = 00 ~ 09). Turn the **MULTI/ CH** control to scroll through the Quick Memory channels.

METER

Press to change the meter mode between SWR, ALC, and COMP. Press and hold to toggle the meter mode between PWR and SWR/ ALC/ COMP.

GROUP C KEYS

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The available group C keys change, depending on the current operating mode. Detailed explanations of each function are provided on the following pages:

USB/ LSB MODE

Action	[C–1]	[PROC]		[MIC]	[T-MON]	[PWR]
Press the key:	Move to C–2	Speech Processor ON/ OFF	—	MIC gain adjustment	TX Monitor level adjustment	Output power adjustment
Press and hold the key:	Move to group A–1	Speech Processor input level adjustment	—	—	—	—
Action	**[C–2]**	**[VOX]**	**[V GAIN]**	**[V DLY]**		**[RF]**
Press the key:	Move to C–3	VOX ON/ OFF	VOX gain adjustment	VOX delay adjustment	—	RF gain adjustment
Press and hold the key:	Move to group A–1	—	—	—	—	—
Action	**[C–3]**	**[N.R.]**	**[A.N.]**	**[B.C.]**	**[M.B.C.]**	**[FILTER]**
Press the key:	Move to C–1	Noise Reduction 1 or 2 ON/ OFF	Auto Notch ON/ OFF	Beat Cancel ON/ OFF	Manual Beat Cancel ON/ OFF	Configure DSP filter setting
Press and hold the key:	Move to group A–1	Adjust the Noise Reduction parameter	Auto Notch level adjustment	—	Adjust Manual Beat Cancel frequency	—

GROUP C–1

PROC

Press to switch the Speech Processor function ON or OFF. “PROC” appears on the display when it is ON. Press and hold to configure the Speech Processor compression level. While pressing Mic **[PTT]**, speak in your normal tone and level of voice. Adjust the input level using the **[⬆]**/ **[⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to accept the new setting.

MIC

Press to enter the Mic Gain adjustment mode. While pressing Mic **[PTT]**, speak in your normal tone and level of voice. Adjust the microphone gain using the **[⬆]**/ **[⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to store the setting. While the Speech Processor function is ON, it works as the Speech Processor output level adjustment control.

T-MON

Press to adjust the monitor level of your transmission signal. Adjust the monitor level using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to store the setting.

PWR

Press to adjust the output power {TS-2000 page 20}. Adjust the output power using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to store the setting.

GROUP C–2

VOX

Press to switch the Voice-Operated Transmission function ON or OFF {TS-2000 page 39}.

V GAIN

Press to adjust the VOX gain {TS-2000 page 39}. While pressing Mic **[PTT]**, adjust the VOX gain using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to store the setting.

V DLY

Press to adjust the VOX delay time. Select your desired delay time using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to change the setting.

RF

Refer to RF in the CW section {page 24}.

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GROUP C–3

N.R.

Press to activate Noise Reduction 1, Noise Reduction 2, or to turn the function OFF. When the noise reduction function is ON, “**N.R.**1” or “**N.R.**2” appears above the key. When it is ON, press and hold the key to change the noise reduction level. Adjust the noise reduction level using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to store the setting.

A.N.

Press to switch the Auto Notch function ON or OFF. Press and hold the key to change the Auto Notch level. Adjust the Auto Notch tracking time constant using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to store the setting.

B.C.

Press to switch the automatic Beat Cancel function ON or OFF. “**B.C.**” and “DSP” appear when it is ON.

M.B.C.

Refer to M.B.C. in the CW section {page 24}.

FILTER

Refer to FILTER in the CW section {page 24}.

CW MODE

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Action	[C–1]	[CW TUN]	[CAR]	[REV]		[PWR]
Press the key:	Move to C–2	CW Tune function ON/ OFF	Adjust a carrier level	Reverse the side-tone pitch frequency	—	Output power adjustment
Press and hold the key:	Move to group A–1	CW Tune function ON/ OFF	—	—	—	—
Action	**[C–2]**	**[VOX]**		**[BK DLY]**	**[KEY]**	**[RF]**
Press the key:	Move to C–3	Break-in ON/ OFF	—	Adjust the Break-in delay time	Adjust the electric keyer speed	RF gain adjustment
Press and hold the key:	Move to group A–1	—	—	—	—	—
Action	**[C–3]**	**[N.R.]**			**[M.B.C.]**	**[FILTER]**
Press the key:	Move to C–1	Noise Reduction 1 or 2 ON/ OFF	—	—	Manual Beat Cancel ON/ OFF	Configure DSP filter setting
Press and hold the key:	Move to group A–1	Adjust the Noise Reductoin parameter	—	—	Adjust Manual Beat Cancel frequency	—

GROUP C–1

CW TUNE

Press to activate the CW Auto Tune function. Press **[CW TUN]** again or **[CLR]** to exit the function.

CAR

Press to enter the carrier level adjustment mode. Press Mic **[PTT]** to transmit. Adjust the carrier level within the ALC zone using the **[⬆]**/ **[⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to change the setting.

REV

Press to reverse the side-tone pitch. “CWR” appears when it is ON.

PWR

Refer to the USB/ LSB section {page 22}.

GROUP C–2

VOX

Press to switch the CW break-in function ON or OFF.

BK DLY

Press to adjust the CW break-in delay time {TS-2000 page 42}. Select your desired break-in delay time using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to change the setting. The values range from FBK (full break-in) to 100 which is the slowest delay time.

KEY

Press to adjust the keying speed of the electric keyer. Select your desired keying speed using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or **MULTI/ CH** control to change the setting. The adjustable keying speed is between 10 (WPM) and 60 (WPM).

RF

Press to adjust the Radio Frequency (RF) gain for the main transceiver. Select your desired RF gain value using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to change the setting. The minimum RF gain value is 0 and the maximum value is 255.

GROUP C–3

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N.R.

Refer to N.R. in the USB/ LSB section {page 22}.

M.B.C.

Press to switch the Manual Beat Cancel function ON or OFF. Press and hold the key to enter the manual beat cancel frequency adjustment mode. Adjust the beat cancel frequency using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to store the setting.

FILTER

USB/ LSB/ FM/ AM mode:

Press to adjust the low cut-off or high cut-off frequency of the DSP. Press **[HI]** or **[LOW]** to select the high or low cut-off, then press **[⬆]/ [⬇]** or turn the **MULTI/ CH** control to select the desired cut-off frequency. Press **[EXIT]** or **MULTI/ CH** control to accept the new setting.

CW/ FSK mode:

Press to adjust the DSP filter width or shift frequency. Press **[SFT]** to adjust the shift frequency, then press **[⬆]/ [⬇]** or turn the **MULTI/ CH** control to select the desired shift frequency. Press **[EXIT]** to accept the new setting. Press **[WID]** to adjust the filter width, then press **[⬆]/ [⬇]** or turn the **MULTI/ CH** control to select the desired shift frequency. Press **[EXIT]** or **MULTI/ CH** control to accept the new setting.

FM MODE

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Action	[C–1]	[PROC]	[ASC]	[REV]	[T-MON]	[PWR]
Press the key	Move to C–2	Speech Processor ON/ OFF	Automatic Simplex Check ON/ OFF	Shift reverse ON/ OFF	TX Monitor level adjustment	Output power adjustment
Press and hold the key	Move to group A–1	Speech Processor input level adjustment	—	—	—	—
Action	**[C–2]**	**[VOX]**	**[V GAIN]**	**[V DLY]**	**[NAR]**	**[RF]**
Press the key	Move to C–3	VOX ON/ OFF	VOX gain adjustment	VOX delay adjustment	Narrow bandwidth ON/ OFF	RF gain adjustment
Press and hold the key	Move to group A–1	—	—	—	—	—
Action	**[C–3]**	**[CTCSS]**	**[TONE]**	**[DCS]**	**[ALT]**	**[SHIFT]**
Press the key	Move to C–4	CTCSS ON/ OFF	TONE ON/ OFF	DCS ON/ OFF	ALT ON/ OFF	Select the SHIFTdirection
Press and hold the key	Move to group A–1	Select CTCSS tone	Transmit 1750 Hz tone	Select DCS code	—	Adjust the offset frequency
Action	**[C–4]**	**[N.R.]**	**[T.SEL]**		**[M.B.C.]**	**[FILTER]**
Press the key	Move to C–1	Noise Reduction1 ON/ OFF	Select a sub-tone frequency	—	Manual Beat Cancel ON/ OFF	Configure DSP filter settings
Press and hold the key	Move to group A–1	Configure the Noise Reduction parameter	—	—	Adjust Manual Beat Cancel frequency	—

GROUP C–1

PROC

Refer to PROC in the USB/ LSB section {page 21}.

ASC

Press to switch the Automatic Simplex function ON/ OFF. When it is ON, “[R]” appears.

REV

Press to swap the TX and RX frequency when the SHIFT function is ON.

T-MON

Refer to T-MON in the USB/ LSB section {page 22}.

PWR

Refer to PWR in the USB/ LSB section {page 22} .

GROUP C–2

VOX

Refer to VOX in the USB/ LSB section {page 22} .

V GAIN

Refer to V GAIN in the USB/ LSB section {page 22}.

V DLY

Refer to V DLY in the USB/ LSB section {page 22}.

NAR

Press to select FM narrow bandwidth operation. “FMN” appears when you operate FM narrow bandwidth.

RF

Refer to RF in the CW section {page 24}.

GROUP C–3

CTCSS

Press to activate the CTCSS function. Press and hold the key to select your desired CTCSS tone using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to change the setting. Press **[SCAN]** to start the CTCSS Freq. ID Scan.

TONE

Press to activate the TONE function.

DCS

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Press to activate the DCS function. Press and hold the key to select your desired DCS code using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to change the setting. Press **[SCAN]** to start the DCS code ID Scan.

ALT

Press to activate the Auto Lock Tuning (ALT) function (1.2 GHz band only). When it is ON, “⚠” appears.

SHIFT

Press to select the desired repeater shift direction. “–”, “+”, or “=” appears to indicate the shift direction.

GROUP C–4

N.R.

Refer to N.R. in the USB/ LSB section {page 22}.

T.SEL

Press to select your desired TONE frequency using the **[⬆]/ [⬇]** keys or by turning the **MULTI/ CH** control, then press either **[EXIT]** or the **MULTI/ CH** control to change the setting. Press **[SCAN]** to start the TONE ID Scan.

M.B.C.

Refer to M.B.C. in the CW section {page 24}.

FILTER

Refer to FILTER in the CW section {page 24}.

FSK MODE

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Action	[C–1]		[CAR]	[REV]	[T-MON]	[PWR]
Press the key:	Move to C–2	—	Adjust a carrier level	Reverse the shift	TX Monitor level adjustment	Output power adjustment
Press and hold the key:	Move to group A–1	—	—	—	—	—
Action	[C–2]					[RF]
Press the key:	Move to C–3	—	—	—	—	RF gain adjustment
Press and hold the key:	Move to group A–1	—	—	—	—	—
Action	[C–3]	[N.R.]			[M.B.C.]	[FILTER]
Press the key:	Move to C–1	Noise Reduction 1 or 2 ON/ OFF	—	—	Manual Beat Cancel ON/ OFF	Configure DSP filter setting
Press and hold the key:	Move to group A–1	Adjust the Noise Reduction parameter	—	—	Adjust Manual Beat Cancel frequency	—

GROUP C–1

CAR

Refer to CAR in the CW section {page 23}.

REV

Press to reverse the FSK shift. “FSR” appears when it is ON.

T-MON

Press to adjust the monitor level of your FSK transmission signal.

PWR

Refer to PWR in the USB/ LSB section {page 22} .

GROUP C–2

RF

Refer to RF in the CW section {page 24}.

GROUP C–3

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N.R.

Refer to N.R. in the USB/ LSB section {page 22}.

M.B.C.

Refer to M.B.C. in the CW section {page 24}.

FILTER

Refer to FILTER in the CW section {page 24}.

AM MODE

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Action	[C–1]	[PROC]	[CAR]	[MIC]	[T-MON]	[PWR]
Press the key	Move to C–2	Speech Processor ON/ OFF	Adjust a carrier level	MIC gain adjustment	TX Monitor level adjustment	Output power adjustment
Press and hold the key	Move to group A–1	Speech Processor input level adjustment	—	—	—	—
Action	**[C–2]**	**[VOX]**	**[V GAIN]**	**[V DLY]**	**[NAR]**	**[RF]**
Press the key	Move to C–3	VOX ON/ OFF	VOX gain adjustment	VOX delay adjustment	Narrow bandwidth ON/ OFF	RF gain adjustment
Press and hold the key	Move to group A–1	—	—	—	—	—
Action	**[C–3]**	**[N.R.]**		**[B.C.]**	**[M.B.C.]**	**[FILTER]**
Press the key	Move to C–1	Noise Reduction 1 or 2 ON/ OFF	—	Beat Cancel ON/ OFF	Manual Beat Cancel ON/ OFF	Configure DSP filter settings
Press and hold the key	Move to group A–1	Configure the Noise Reduction parameter	—	—	Adjust Manual Beat Cancel frequency	—

GROUP C–1

PROC

Refer to PROC in the USB/ LSB section {page 21}.

CAR

Refer to CAR in the CW section {page 23}.

MIC

Refer to MIC in the USB/ LSB section {page 21}.

T-MON

Refer to T-MON in the USB/ LSB section {page 22}.

PWR

Refer to PWR in the USB/ LSB section {page 22}.

GROUP C–2

VOX

Refer to VOX in the USB/ LSB section {page 22} .

V.GAIN

Refer to V.GAIN in the USB/ LSB section {page 22}.

V DLY

Refer to V DLY in the USB/ LSB section {page 22}.

NAR

Press to perform AM narrow bandwidth operation.
“AMN” appears when you operate AM narrow bandwidth.

RF

Refer to RF in the CW section {page 24}.

GROUP C–3

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N.R.

Refer to N.R. in the USB/ LSB section {page 22}.

B.C.

Refer to B.C. in the USB/ LSB setion {page 22}.

M.B.C.

Refer to M.B.C. in the CW section {page 24}.

FILTER

Refer to FILTER in the CW section {page 24}.

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SATELLITE OPERATION

Amateur satellites receive on one band and transmit on another. This transceiver can handle uplink/ downlink frequency combinations simultaneously as shown below.

	UPLINK				
DOWN LINK	Band	HF ~ 50 MHz	144 MHz	430/ 440 MHz	1.2 GHz
	HF ~ 50 MHz		√	√	√
	144 MHz	√		√	√
	430/ 440 MHz	√	√		√
	1.2 GHz	√	√	√	

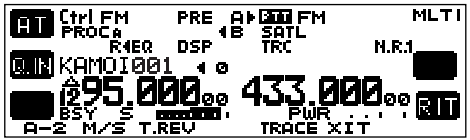
ENTERING THE SATELLITE MODE

1 Press **[F1] (1 s)** until you select group B.

2 Confirm that you have selected group B–1.

- If B–1 is not selected, press **[F1]** until you select B–1.

3 Press **[SATL]**.



GROUP A–2 KEYS

While in the Satellite mode, group A–2 keys are changed as follows.

Action	[A–2]	[M/S]	[T.REV]		[TRACE]	[XIT]
Press the key:	Move to A–3	Swap MAIN and SUB	T.REV ON/ OFF	—	TRACE ON/ OFF	XIT ON/ OFF
Press and hold the key:	Move to group B	—	—	—	—	Clear XIT offset

M/S

Press to swap the main band frequency with the sub band frequency.

T.REV

While the TRACE function is ON, press to toggle the Trace Reverse function ON or OFF.

TRACE

Press to switch the Trace function ON or OFF.

XIT

Press to switch the XIT function ON or OFF. Press and hold to clear the XIT offset frequency.

BASIC OPERATION

When you enter the Satellite mode, you are always controlling one of 10 Satellite Memory channels with the adjustable frequency function. The Satellite Memory channel number (0 ~ 9) appears above the main band frequency display when you enter this mode.

1 Press **[SATL]** while in group B–1 to enter Satellite mode.
   - The default downlink (435.9 MHz) and uplink (145.9 MHz) frequencies appear.
   - “TRC”, “R”, and “SATL” appear to indicate the current selections.

2 On VFO A, tune to the downlink (RX) frequency of the satellite.

3 Press or press and hold **[MODE]** while in group A–1 to select the desired operating mode.

4 As the Satellite moves, fine tune to the changing downlink (RX) frequency of the satellite using the **Tuning** control (adjusting the Doppler effect).
   - As you adjust the downlink (RX) frequency, the Trace function automatically changes the uplink frequency so that the sum of the two frequencies is kept the same (Reverse Trace).
   - If necessary, press **[TRACE]** while in group A–2 to quit the Trace function. “TRC” disappears.
   - The trace function can also change the uplink (TX) frequency so that the difference between the two frequencies is kept the same (Normal Trace).

5 If you want to switch to the normal trace mode, press **[T.REV]** while in group A–2. “R” disappears.

6 To adjust the frequency on the sub-band display: Press **[M/S]** while in group A–2 to swap the main band with the sub-band frequency, then turn the **Tuning** or **MULTI/ CH** control. The following table shows which control to use when adjusting frequencies with tracing ON and OFF.

Press to toggle the mode	**TRACE/ TRACE R** ON	**TRACE/ TRACE R** OFF
Tuning control (“TUN”)	Main and Sub	Main
MULTI/ CH control (“MLTI”)	Main and Sub	Main

STORING SATELLITE MEMORY CHANNELS

You can store all the above settings to one of 10 Satellite memory channels for future operations.

1 Press **[M.IN]** while in group A–4, then turn the **MULTI/ CH** control to select a channel from 0 to 9.

2 Press **[M.IN]** again to store the selection to the memory channel. To quit, press **[CLR]**.

Note: *The Satellite Memory channel does not hold the frequency adjustment values when the channel is changed. So, when you change the channel number or switch the transceiver OFF, the adjusted frequency values are cleared unless you stored it by pressing **[M.IN]**.*

RECALLING A SATELLITE MEMORY CHANNEL

1 Press **[V/M]** while in group A–4.

2 Turn the **MULTI/ CH** control to select your desired Satellite Memory channel.

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3 Press **[V/M]** to return to the frequency adjustment mode. If necessary, press the **Tuning** control to toggle between the **Tuning** and **MULTI/ CH** control.

SATELLITE CHANNEL NAME

You can name each Satellite Memory channel using a maximum of 8 alpha-numeric characters. First, store the settings to the Satellite Memory channel {above}.

1 Press **[M.IN]** while in group A–4, then turn the **MULTI/ CH** control to select your desired Satellite Memory channel.

2 Press **[MN.IN]**.

- An entry cursor appears.

3 Select a character by turning the **MULTI/ CH** control, then move the cursor using **[⬅]**/ **[➡]**. Press **[M.SR]** to go back to Memory Scroll mode. Press **[DEL]** to erase the character at the cursor. You can also use the optional MC-52DM microphone to enter a name {TS-2000 page 63}.

4 Press **[OK]** to store the name to the Satellite Memory channel. Press **[CLR]** to quit.

5 The stored Satellite Memory name appears above the main band frequency display on the RC-2000.

QUICK MEMORY IN SATELLITE MODE

While in the Satellite mode, only 1 Quick Memory channel is available. It uses Satellite Memory channel 9 to store the settings. To store the settings to the Quick Memory in Satellite mode, press **[Q.IN]** (L2). The settings are stored to Satellite Memory channel 9.

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To recall the Quick Memory, press **[Q.M]** while in group B–4 or press **[V/M]** while in group A–2, then turn the **MULTI/ CH** control to recall the Satellite Memory channel 9.

CHECKING THE UPLINK FREQUENCY

When you need to monitor the uplink (TX) frequency, press **[M/S]** while in group A–2. Each time you press **[M/S]**, the uplink (TX) frequency and the downlink (RX) frequency are swapped.

USING XIT/ RIT IN SATELLITE MODE

You can also use the RIT or XIT function while in the Satellite mode. Press **[RIT]** (R2) or **[XIT]** while in group A–2 to activate the function. When the RIT or XIT function is ON, the sub-band frequency display shows the current RIT or XIT offset frequency instead of the operating frequency. To clear the RIT or XIT offset frequency, press and hold **[RIT]** or **[XIT]**.

Note: *You cannot activate both the RIT and XIT functions at the same time in the Satellite mode.*

CHANGING THE FREQUENCY BAND

Press **[M/S]** while in group A–3 to select the band you want to change on the main band, then press **[UP]**/ **[DOWN]** while in group A–1 to select the band you want to operate. Press **[M/S]** again to swap the bands.

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OVERVIEW

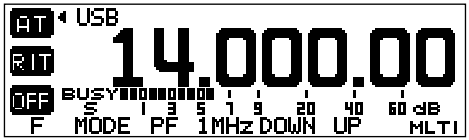
Since the RC-2000 is designed to be used in a vehicle, it has an unique Easy Viewing mode for mobile operation. When you enter this mode, the display shows only the current Control band frequency in a large font. Also, only 2 key function groups are available for quick function access. Unlike normal mode, 2 key function groups can be toggled by simply pressing **[F1]**.

OPERATION

While operating in the regular VFO mode or Memory Recall mode:

Press **[EASY]** (L3) to enter the Easy Viewing mode.

- The frequency and operating mode of the current Control band is displayed in a large font.
- To change the Control band, press either the **MAIN AF** control or the **SUB AF** control.
- To toggle the available key functions, press **[F1]**.



KEYS (F1 ~ F6)

Press **[F1]** to toggle between 2 groups. “F” appears for the first key group. “**F**” appears for the second key group.

[F]	[MODE]	[PF]	[1MHz]	[DOWN]	[UP]
Toggle the group	Change the mode	Program-mable Function	1MHz Up/ Down	Move down the band	Move up the band
[F]	**[CLR]**	**[M>V]**	**[MENU]**	**[M.IN]**	**[V/M]**
Toggle the group	Exit or clear	Copy the memory data to a VFO	Enter Menu mode	Store the data to a Memory channel	Toggle VFO and Memory channel

MODE

Refer to the **[MODE]** instructions {page 15}.

PF

Refer to the **[PF]** instructions {page 16}.

1MHz

Refer to the **[1MHz]** instructions {page 15}.

DOWN

Refer to the **[DOWN]** instructions {page 15}.

UP

Refer to the **[UP]** instructions {page 15}.

CLR

Refer to the **[CLR]** instructions {page 16}.

M>V

Refer to the **[M>V]** instructions {page 16}.

MENU

Refer to the **[MENU]** instructions {page 16}.

M.IN

Refer to the **[M.IN]** instructions {page 17}.

V/M

Refer to the **[V/M]** instructions {page 17}.

KEYS (L1 ~ L3)

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AT/ AT IN/ AT R IN (L1 key)

Press to activate the Automatic Antenna Tuner function for the HF ~ 50 MHz bands. When it is in-line, **[AT IN]** or **[AT R IN]** appears {page 10}.

CALL (L1 key)

Appears only when you operate the 144 MHz ~ 1.2 GHz bands. Press to recall the Call channel for the current operating band {page 10}.

RIT (L2 key)

Press to activate the RIT function. Turn the **RIT/ SUB** control to adjust the offset frequency. Press and hold the key to clear the offset {page 12}.

XIT (L2 key)

Press to activate the XIT function. Turn the **RIT/ SUB** control to adjust the offset frequency. Press and hold the key to clear the offset {page 15}.

OFF (L3 key)

Exit the Easy Viewing mode.

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CHANGING THE FONT STYLE

While you are in Easy Viewing mode, two different types of font styles are available. To change the font:

1. Press **[MENU]**.
2. Turn the **MULTI/ CH** control to select Menu No. 58.
3. Press **[+]/ [–]** to select “FONT2” or “FONT1” (default).
4. Press **[OK]** to accept the change.

FONT1

FONT2

Note: *Changing the font in the Easy Viewing mode does not change the font in the normal display mode.*

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PACKET CLUSTER TUNE FUNCTION

DX Packet Cluster is a packet network consisting of nodes and stations who are interested in DXing and contesting. If one station finds a DX station on the air, he or she sends a notice to his or her node. This node then passes the information to all its local stations as well as to another node. This transceiver can display received DX information and hold the latest information on up to 10 DX stations.

NORMAL P.C.T. MODE

1 Press **[A/B]** while in group A–2 to select VFO A or VFO B on the main transceiver.

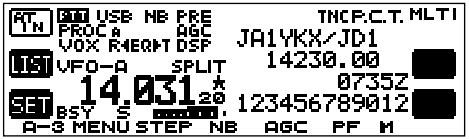
2 Press and hold the **SUB AF** control to switch the sub-receiver ON, if the sub-receiver is switched OFF.

3 Tune to the frequency of the target DX Packet Cluster node on the sub-receiver.

4 Press **[MENU]** while in group A–3, then turn the **MULTI/ CH** control to select Menu No. 46. Confirm that “SUB” is selected. If not, press **[+]** to select “SUB”.

5 Press **[P.C.T.]** while in group B–1 to enter the Packet Cluster Tune (P.C.T.) mode.

- Each time new DX Packet Cluster data is received, the DX station’s callsign, in Morse code, sounds and the information is displayed on the sub-band display.



6 If you are not using the Auto Tune function, press **[SET]** (L3).

- The main transceiver is tuned to the frequency of the reported DX station on the sub-receiver’s display.
- Transmitting on the tuned frequency, the transceiver exits the P.C.T. mode. Press **[P.C.T.]** again to reactivate it if necessary.
- In order to use the Auto Tune function, access Menu No. 49A and select “AUTO”; the default is “MANUAL”.

7 Press **[P.C.T.]** while in group B–1 to exit the P.C.T. mode.

LIST FUNCTION IN P.C.T. MODE

To access your desired DX information from the P.C.T memory in the P.C.T. mode:

1 Press **[LIST]** (L2).

```
  TNC  P.C.T.LIST
▶0 JA1YKX/JD1      14240.00 0135Z
 1 KJ6HC            7083.00 0254Z
 2 WA4GOX           7033.00 0334Z
 3 WB6LMN/P5       21195.00 0742Z
 4 8J1RL            7069.00 1234Z
EXIT DEL   ↑    ↓   SET  OK
```

2 Press **[⬆]/ [⬇]** or turn the **MULTI/ CH** control to select the report.

- "▶" indicates which DX report is currently selected.

3 Press **[SET]** to tune the main transceiver to the reported frequency.

- Press **[DEL]** to erase the selected DX information from the P.C.T. memory. Press **[EXIT]** to return to normal P.C.T. information display.
- Press **[OK]** to view all the comments of the selected DX station.

NEW PACKET CLUSTER DATA

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The transceiver can be set to output a beep instead of a Morse code when new DX Packet Cluster data is received. Press **[MENU]** while in group A–3, then turn the **MULTI/ CH** control to select Menu No. 49. Press **[SUB]**, then turn the **MULTI/ CH** control to access Menu No. 49B. Select "OFF". "VOICE" can also be set when you install the optional VS-3 {TS-2000 page 91}.

Note:

- *You cannot send DX information to a node using the P.C.T. mode.*
- *The DX Packet Cluster data in memory is retained when the transceiver is turned OFF. However, the sub-receiver's frequency display returns to the receiving frequency of the DX Packet Cluster node.*

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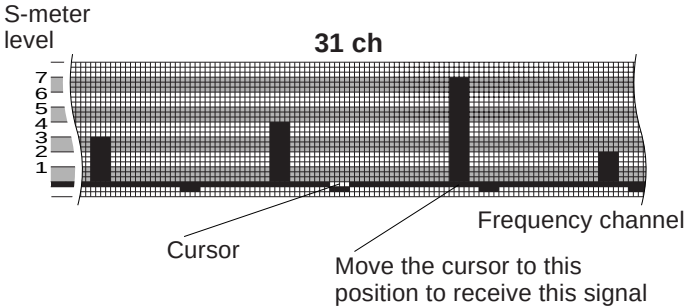
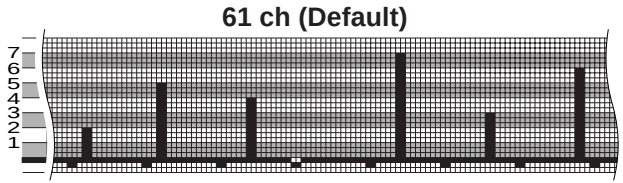
OVERVIEW

While you are receiving, Visual Scan allows you to monitor frequencies near the current operating frequency. Visual Scan graphically and simultaneously shows how all frequencies in the selected range are busy. You will see up to 21 segments, for each channel, that represent 7 S-meter levels (3 segments per level).

You can determine the scan range by selecting the center frequency and the number of channels. The default number of channels is 61.





SELECTING THE NUMBER OF CHANNELS

1. Press **[F1] (1 s)** until you select group A.
2. Press **[F1]** until you select A–3.
3. Press **[MENU]**.
4. Turn the **MULTI/ CH** control to select Menu No. 11.
5. Press **[+]**/ **[–]** to select 31, 61 (default), 91, or 181.
6. Press **[OK]** to complete the setting.

USING VISUAL SCAN

1 Select your desired frequency using the **Tuning** control.

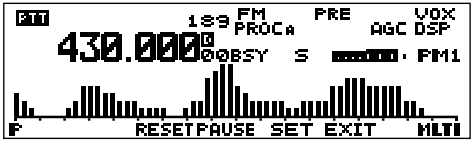
2 Turn the **Tuning** control or press Mic **[UP]**/ **[DWN]** to select the operating frequency.

- This frequency will be used as the center frequency for the Visual Scan.

3 Press **[F1] (1 s)** until you select group B.

4 Press **[F1]** until you select B–3.

5 Press **[VISUAL]** to start the Visual Scan.



- To pause the Scan, press **[PAUSE]**. “P” appears on the display. Press **[PAUSE]** again to resume scanning.

6 To change the center frequency, turn the **Tuning** control or press Mic **[UP]**/ **[DWN]**.

- The displayed frequency changes and the cursor moves.
- Press **[SET]** to use the changed operating frequency as the center frequency.
- Press **[RESET]** to restore the original center frequency.

7 To quit Visual Scan, press **[EXIT]**.

Note:

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- *You can press the **Tuning** control to change the **Tuning** control and **MULTI/ CH** control to adjust the operating frequency. “TUN” or “MLTI” appears to indicate which control mode is selected.*
- *If you start Visual Scan in Memory Recall mode, the memory channel frequencies will be scanned.*
- *Visual Scan stops while transmitting.*
- *During the Visual Scan, the scanning frequency cannot be monitored through the speaker.*
- *Depending on conditions, Visual Scan and the conventional S-meter may indicate different signal strength levels.*

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Programmable Memory (PM) stores virtually all settings currently set on the transceiver. This transceiver provides 5 PM channels to store 5 sets of transceiver configurations. Later you can quickly recall one of these memories, depending on the operations you have in mind or the operating environment.

PROGRAMMABLE INFORMATION

The following settings can be separately stored for the main transceiver and sub-receiver:

VFO A/ B frequency	VFO A/ B selection
Operating mode (MAIN)	VFO frequency (SUB)
Operating mode (SUB)	N.R. 1 level
Memory Group setting	Signalling settings (FM)
ANT 1 or ANT 2	Break-in delay
Electric keyer speed	ATT/ PRE ON/ OFF
ASC ON/ OFF	Scanning speed
Visual Scan mode	Noise Reduction setting
Repeater offset frequency	MULTI/ CH control frequency step

The following settings are shared by both the main transceiver and the sub-receiver:

1MHz Up/ Down ON/ OFF	1MHz Up/ Down frequency step
AT ON/ OFF	AGC ON/ OFF
Satellite mode ON/ OFF	VOX ON/ OFF
CW break-in ON/ OFF	FINE ON/ OFF
RIT/ XIT ON/ OFF	Sub-receiver ON/ OFF
N.B. ON/ OFF	N.B. level
A.N./ B.C. ON/ OFF	A.N./ B.C. level data
M.B.C. ON/ OFF	M.B.C. frequency data
TX monitor level	Carrier level
Output power	VOX gain level
VOX delay time	Mic gain level
Speech Processor level	Dimmer level
Beep level	Negative/ Positive display
Contrast level	Auto mode ON/ OFF
Display status when it is switched OFF	

APPLICATION EXAMPLES

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The following are examples of how you might use Programmable Memory.

Situation 1

You share your transceiver with other members in your family or club. However, each individual has personal preferences for how they like to set various functions. You have to keep changing many settings each time you use the transceiver.

Solution

Because 5 PM channels are available, up to 5 persons can separately program the transceiver and store their customized environment. Then each person can quickly change to his or her favorite settings simply by recalling a PM channel.
It is too much trouble to change back the settings after somebody else has reconfigured them. So this application may avoid having a feature-rich transceiver but never using many useful features.

Situation 2

While operating mobile on the way to work every morning, you prefer a silent transceiver that does not interrupt the morning calm. In addition, you feel that a bright display is a waste of electricity in sunlight.
At night when driving home, you realize the Beep function truly serves a purpose and you feel it is nice to see a bright display after dark.

Solution

In two PM channels, store the same operating data such as frequency, offset, tone, etc., and store different settings for the Display Dimmer and Beep functions. Then you can quickly recall the best settings for day or night operating.

PM CHANNEL DEFAULT VALUES

The default values of the PM channels are set as follows.

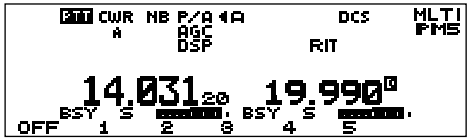
PM Channel	Freq. and Mode (MAIN)	Freq. and Mode (SUB)	Display	Dimmer	Beep	Key Group
PM1	14 MHz/ USB	144 MHz/ FM	Negative	3	4	A–1
PM2	21 MHz/ USB	144 MHz/ FM	Positive	3	4	A–2
PM3	50 MHz/ USB	430 or 440 MHz/ FM	Negative	3	4	A–3
PM4	144 MHz/ FM	144 MHz/ FM	Negative	2	4	B–1
PM5	430 or 440 MHz/ FM	430 or 440 MHz/ FM	Positive	2	4	B–3

STORING DATA IN PM CHANNELS

1 Confirm that the following conditions have been satisfied:
   - The transceiver is in the receive mode.
   - Scan is not being used.
   - The Microphone Control is OFF.

2 Configure the transceiver as you like.
   - For the items that can be stored, see page 41.

3 Press **[PM]**, **[P.IN]**.
   - PM channel numbers 1 to 5 appear and blink at the bottom of the display.



4 Press **[1]** to **[5]** corresponding to your desired PM channel.
   - The settings listed on page 41 are stored in the PM channel.
   - Press **[OFF]** to cancel.

RECALLING A PM CHANNEL

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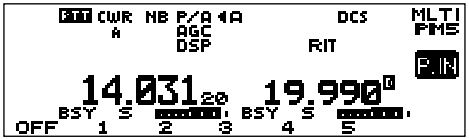
1 Press **[PM]**.
   - PM channel numbers 1 to 5 appear at the bottom of the display.



2 Press **[1]** to **[5]** corresponding to your desired PM channel.
   - The contents of the selected PM channel are recalled.
   - The recalled PM channel number appears in the upper right corner.
   - To exit PM Recall mode, press **[PM]**, then press **[OFF]**.

Note: *You cannot recall a PM channel while transmitting.*

AUTO PM CHANNEL SAVE

After you recalled a PM channel, the function automatically overwrites the current PM channel with the present operating environment when:

- You recall another PM channel.
- You press **[OFF]** in PM channel recall mode.
- You switch the transceiver OFF.

Note: *You cannot switch this function OFF.*

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The Sky Command II+ allows you to remotely control a TS-570, TS-870, or TS-2000 series HF transceiver from a separate location. Before operating Sky Command II+ with the RC-2000, read the Sky Command II+ section of the TS-2000(X)/ TS-B2000 instruction manual, starting on page 83. After completing the setup, refer to pages 84 ~ 88 of the TS-2000(X)/ TS-B2000 instruction manual for the control operations using a TM-D700A, TH-D7A, or another TS-2000(X) transceiver.

PROGRAMMING CALL SIGNS

The TS-2000(X)/ TS-B2000 can serve as either Commander or Transporter. Program the same callsign for both Commander and Transporter. Refer to page 83 of the TS-2000/ TS-B2000 instruction manual for the possible callsign entries.

On the TRANSPORTER:

1 Press **[F1] (1 s)** until you select group A.

2 Press **[F1]** until you select A–3.

3 Press **[MENU]**.

4 Turn the **MULTI/ CH** control to select Menu No. 62.

5 Press **[SUB]**.

6 Turn the **MULTI/ CH** control to select Menu No. 62A.

7 Press **[OK]**.

- The Commander callsign entry prompt appears.

8 Turn the **Tuning** control to select a character.

- You can enter 0 to 9, A to Z, and –.

9 Press **[⬅]/ [➡]** to move the cursor. Press **[DEL]** to delete the character at the cursor. Press **[CLR]** to cancel the entry.

10 Press **[OK]** to store the callsign.

On the COMMANDER:

1 Press **[F1] (1 s)** until you select group A.

2 Press **[F1]** until you select A–3.

3 Press **[MENU]**.

4 Turn the **MULTI/ CH** control to select Menu No. 62.

5 Press **[SUB]**.

6 Turn the **MULTI/ CH** control to select Menu No. 62B.

7 Press **[OK]**.

- The Transporter callsign entry prompt appears.

8 Turn the **Tuning** control to select a character.

- You can enter 0 to 9, A to Z, and –.

9 Press **[⬅]/ [➡]** to move the cursor. Press **[DEL]** to delete the character at the cursor. Press **[CLR]** to cancel the entry.

- The callsign must match the Transporter callsign to perform Sky Command II+ operation.

10 Press **[OK]** to store the callsign.

PROGRAMMING A TONE FREQUENCY

You must also program the CTCSS tone to operate the Sky Command II+. Select the same CTCSS tone for both the Commander and the Transporter.

1 Press **[F1] (1 s)** until you select group A.

2 Press **[F1]** until you select A–3.

3 Press **[MENU]**.

4 Turn the **MULTI/ CH** control to select Menu No. 62.

5 Press **[SUB]**.

6 Turn the **MULTI/ CH** control to select Menu No. 62C.

7 Press **[–]/ [+]** to select a CTCSS tone frequency for the Sky Command II+ operation.

8 Press **[OK]** to store the CTCSS tone frequency for the Sky Command II+ operation. Press **[CLR]** to cancel the selection.

PROGRAMMING COMMUNICATION SPEED

You must configure the same TNC communication speed between the Commander and the Transporter.

1 Press **[F1] (1 s)** until you select group A.

2 Press **[F1]** until you select A–3.

3 Press **[MENU]**.

4 Turn the **MULTI/ CH** control to select Menu No. 62.

5 Press **[SUB]**.

6 Turn the **MULTI/ CH** control to select Menu No. 62D.

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7 Press **[–]/ [+]** to select either 1200 bps or 9600 bps.

8 Press **[OK]** to store the TNC communication speed for the Sky Command II+ operation. Press **[CLR]** to cancel the selection.

Note: *9600 bps can be used only when you use TS-2000(X)/ TS-B2000 for both the Commander and the Transporter.*

CONFIGURING A TNC BAND

If you are using a TS-2000(X)/ TS-B2000, confirm that the built-in TNC is assigned to the sub-receiver.

1 Press **[F1] (1 s)** until you select group A.

2 Press **[F1]** until you select A–3.

3 Press **[MENU]**.

4 Turn the **MULTI/ CH** control to select Menu No. 46.

5 Press **[–]/ [+]** to select “SUB”.

6 Press **[OK]** to store the TNC band for the Sky Command II+ operation. Press **[CLR]** to cancel the selection.

STARTING SKY COMMAND II+ OPERATION

1 Select an open 144 MHz frequency on the main transceiver.

2 Select an open 440 MHz frequency for the sub-receiver.

3 Press **[F1] (1 s)** until you select group A.

4 Press **[F1]** until you select A–3.

5 Press **[MENU]**.

6 Turn the **MULTI/ CH** control to select Menu No. 62.

7 Press **[SUB]**.

8 Turn the **MULTI/ CH** control to select Menu No. 62E.

9 Press **[–]/ [+]** to select either “COMMAND” (Commander) or “T-PORTER” (Transporter).

10 The Sky Command II+ operation starts.

Note: *“CLIENT” is used when you use another TM-D700A or TH-D7A for the Transporter of the Sky Command operation. Refer to “USING A SEPARATE TRANSPORTER” {TS-2000 page 88}.*

TO EXIT SKY COMMAND II+ OPERATION

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1 Press **[MENU]**.

2 Press **[–]/ [+]** and select “OFF” to exit the Sky Command II+ operation.

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USB/ LSB mode

Function	GROUP	RC-2000 page	TS-2000 page	Function	GROUP	RC-2000 page	TS-2000 page	Function	GROUP	RC-2000 page	TS-2000 page
[A/B]	A–2	15	18	[MENU]	A–3	16	21	[SET]	A–5	17	67
[A=B]	A–2	15	38	[METER]	B–4	20	19	[SG SEL]	B–3	20	69
[AGC]	A–3	16	38, 103	[MG SEL]	A–4	16	64	[SPLIT]	A–2	15	31
[A.N.]	C–3	22	56	[MIC]	C–1	21	28	[STEP]	A–3	16	37
[ANT1/2]	B–1	19	72	[M.IN]	A–4	17	58	[TF SET]	A–2	15	31
[ATT]	B–1	19	57, 73	[MODE]	A–1	15	19	[T-MON]	C–1	22	79
[AUTO]	B–3	20	73	[M>V]	A–4	16	61	[UP]	A–1	15	10
[B.C.]	C–3	22	56	[NB]	A–3	16	57	[VISUAL]	B–3	39	70
[CH1]	B–2	19	89	[N.R.]	C–3	22	56	[V DLY]	C–2	22	39
[CH2]	B–2	19	89	[OPEN]	A–5	17	62	[V GAIN]	C–2	22	39
[CH3]	B–2	19	89	[P.C.T.]	B–1	37	53	[V/M]	A–4	17	59
[CLOSE]	A–5	17	62	[PF]	A–3	16	77	[VOX]	C–2	22	39
[CLR]	A–4	16	10, 62	[PRE]	B–1	19	57	[XIT]	A–2	15	40
[CTRL]	B–4	20	45	[PROC]	C–1	21	40	[1MHz]	A–1	15	37
[DOWN]	A–1	15	10	[PWR]	C–1	22	20, 79				
[DUAL]	B–4	20	45	[Q.M]	B–4	20	65				
[FILTER]	C–3	24	55	[REC]	B–2	19	89				
[FINE]	A–1	15	38	[RF]	C–2	24	18				
[LOCK]	B–4	20	—	[SATL]	B–1	19, 31	53				
[M.B.C.]	C–3	24	56	[SCAN]	B–3	20	66 ~ 69				

CW mode

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Function	GROUP	RC-2000 page	TS-2000 page	Function	GROUP	RC-2000 page	TS-2000 page	Function	GROUP	RC-2000 page	TS-2000 page
[A/B]	A–2	15	18	[LOCK]	B–4	20	—	[SCAN]	B–3	20	66 ~ 69
[A=B]	A–2	15	38	[M.B.C.]	C–3	24	56	[SET]	A–5	17	67
[AGC]	A–3	16	38, 103	[MENU]	A–3	16	21	[SG SEL]	B–3	20	69
[ANT1/2]	B–1	19	72	[METER]	B–4	20	19	[SPLIT]	A–2	15	31
[ATT]	B–1	19	57, 73	[MG SEL]	A–4	16	64	[STEP]	A–3	16	37
[AUTO]	B–3	20	73	[M.IN]	A–4	17	58	[TF SET]	A–2	15	31
[BK DLY]	C–2	24	42	[MODE]	A–1	15	19	[UP]	A–1	15	10
[CH1]	B–2	19	43	[M>V]	A–4	16	61	[VISUAL]	B–3	39	70
[CH2]	B–2	19	43	[NB]	A–3	16	57	[V/M]	A–4	17	59
[CH3]	B–2	19	43	[N.R.]	C–3	22	56	[VOX]	C–2	24	42
[CLOSE]	A–5	17	62	[OPEN]	A–5	17	62	[XIT]	A–2	15	40
[CLR]	A–4	16	10, 62	[P.C.T.]	B–1	37	53	[1MHz]	A–1	15	37
[CTRL]	B–4	20	45	[PF]	A–3	16	77				
[CAR]	C–1	23	30	[PRE]	B–1	19	57				
[CW TUN]	C–1	23	30	[PWR]	C–1	22	20, 79				
[DOWN]	A–1	15	10	[Q.M]	B–4	20	65				
[DUAL]	B–4	20	45	[REC]	B–2	19	43, 89				
[FILTER]	C–3	24	55	[REV]	C–1	23	—				
[FINE]	A–1	15	38	[RF]	C–2	24	18				
[KEY]	C–2	24	42	[SATL]	B–1	19, 31	53				

FM mode

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Function	GROUP	RC-2000 page	TS-2000 page	Function	GROUP	RC-2000 page	TS-2000 page	Function	GROUP	RC-2000 page	TS-2000 page
[A/B]	A–2	15	18	[LOCK]	B–4	20	—	[RF]	C–2	24	18
[A=B]	A–2	15	38	[M.B.C.]	C–4	24	56	[SATL]	B–1	19, 31	53
[AGC]	A–3	16	38, 103	[MENU]	A–3	16	21	[SCAN]	B–3	20	66 ~ 69
[ALT]	C–3	26	72	[METER]	B–4	20	19	[SET]	A–5	17	67
[ANT1/2]	B–1	19	72	[MG SEL]	A–4	16	64	[SG SEL]	B–3	20	69
[ASC]	C–1	25	34	[M.IN]	A–4	17	58	[SHIFT]	C–3	26	32
[ATT]	B–1	19	57, 73	[MODE]	A–1	15	19	[SPLIT]	A–2	15	31
[AUTO]	B–3	20	73	[M>V]	A–4	16	61	[STEP]	A–3	16	37
[CH1]	B–2	19	89	[NAR]	C–2	26	29	[TF SET]	A–2	15	31
[CH2]	B–2	19	89	[NB]	A–3	16	57	[T-MON]	C–1	22	79
[CH3]	B–2	19	89	[N.R.]	C–4	22	56	[TONE]	C–3	26	33
[CLOSE]	A–5	17	62	[OPEN]	A–5	17	62	[T.SEL]	C–4	26	33
[CLR]	A–4	16	10, 62	[P.C.T.]	B–1	37	53	[UP]	A–1	15	10
[CTRL]	B–4	20	45	[PF]	A–3	16	77	[VISUAL]	B–3	39	70
[CTCSS]	C–3	26	35	[PRE]	B–1	19	57	[V DLY]	C–2	22	39
[DCS]	C–3	26	36	[PROC]	C–1	21	40	[V GAIN]	C–2	22	39
[DOWN]	A–1	15	10	[PWR]	C–1	22	20, 79	[V/M]	A–4	17	59
[DUAL]	B–4	20	45	[Q.M]	B–4	20	65	[VOX]	C–2	22	39
[FILTER]	C–4	24	55	[REC]	B–2	19	89	[XIT]	A–2	15	40
[FINE]	A–1	15	38	[REV]	C–1	25	34	[1MHz]	A–1	15	37

FSK mode

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Function	GROUP	RC-2000 page	TS-2000 page	Function	GROUP	RC-2000 page	TS-2000 page	Function	GROUP	RC-2000 page	TS-2000 page
[A/B]	A–2	15	18	[METER]	B–4	20	19	[SPLIT]	A–2	15	31
[A=B]	A–2	15	38	[MG SEL]	A–4	16	64	[STEP]	A–3	16	37
[AGC]	A–3	16	38, 103	[M.IN]	A–4	17	58	[TF SET]	A–2	15	31
[ANT1/2]	B–1	19	72	[MODE]	A–1	15	19	[T-MON]	C–1	27	79
[ATT]	B–1	19	57, 73	[M>V]	A–4	16	61	[UP]	A–1	15	10
[AUTO]	B–3	20	73	[NB]	A–3	16	57	[VISUAL]	B–3	39	70
[CAR]	C–1	23	51	[N.R.]	C–3	22	56	[V/M]	A–4	17	59
[CH1]	B–2	—	—	[OPEN]	A–5	17	62	[XIT]	A–2	15	40
[CH2]	B–2	—	—	[P.C.T.]	B–1	37	53	[1MHz]	A–1	15	37
[CH3]	B–2	—	—	[PF]	A–3	16	77				
[CLOSE]	A–5	17	62	[PRE]	B–1	19	57				
[CLR]	A–4	16	10, 62	[PWR]	C–1	22	20, 79				
[CTRL]	B–4	20	45	[Q.M]	B–4	20	65				
[DOWN]	A–1	15	10	[REC]	B–2	—	—				
[DUAL]	B–4	20	45	[REV]	C–1	27	51				
[FILTER]	C–3	24	55	[RF]	C–2	24	18				
[FINE]	A–1	15	38	[SATL]	B–1	19, 31	53				
[LOCK]	B–4	20	—	[SCAN]	B–3	20	66 ~ 69				
[M.B.C.]	C–3	24	56	[SET]	A–5	17	67				
[MENU]	A–3	16	21	[SG SEL]	B–3	20	69				

AM mode

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Function	GROUP	RC-2000 page	TS-2000 page	Function	GROUP	RC-2000 page	TS-2000 page	Function	GROUP	RC-2000 page	TS-2000 page
[A/B]	A–2	15	18	[MENU]	A–3	16	21	[SCAN]	B–3	20	66 ~ 69
[A=B]	A–2	15	38	[METER]	B–4	20	19	[SET]	A–5	17	67
[AGC]	A–3	16	38, 103	[MG SEL]	A–4	16	64	[SG SEL]	B–3	20	69
[ANT1/2]	B–1	19	72	[MIC]	C–1	21	29	[SPLIT]	A–2	15	31
[ATT]	B–1	19	57, 73	[M.IN]	A–4	17	58	[STEP]	A–3	16	37
[AUTO]	B–3	20	73	[MODE]	A–1	15	19	[TF SET]	A–2	15	31
[B.C.]	C–3	22	56	[M>V]	A–4	16	61	[T-MON]	C–1	22	79
[CAR]	C–1	23	29	[NAR]	C–2	30	29	[UP]	A–1	15	10
[CH1]	B–2	19	89	[NB]	A–3	16	57	[VISUAL]	B–3	39	70
[CH2]	B–2	19	89	[N.R.]	C–3	22	56	[V DLY]	C–2	22	39
[CH3]	B–2	19	89	[OPEN]	A–5	17	62	[V GAIN]	C–2	22	39
[CLOSE]	A–5	17	62	[P.C.T.]	B–1	37	53	[V/M]	A–4	17	59
[CLR]	A–4	16	10, 62	[PF]	A–3	16	77	[VOX]	C–2	22	39
[CTRL]	B–4	20	45	[PRE]	B–1	19	57	[XIT]	A–2	15	40
[DOWN]	A–1	15	10	[PROC]	C–1	21	40	[1MHz]	A–1	15	37
[DUAL]	B–4	20	45	[PWR]	C–1	22	20, 79				
[FILTER]	C–3	24	55	[Q.M]	B–4	20	65				
[FINE]	A–1	15	38	[REC]	B–2	19	89				
[LOCK]	B–4	20	—	[RF]	C–2	24	18				
[M.B.C.]	C–3	24	56	[SATL]	B–1	19, 31	53				

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GENERAL INFORMATION

This product has been factory aligned and tested to specification before shipment. Attempting service or alignment without factory authorization can void the product warranty.

SERVICE

When returning this product to your dealer or service center for repair, pack it in its original box and packing material. Include a full description of the problem(s) experienced. Include your telephone number along with your name and address in case the service technician needs to call you; if available, also include your fax number and e-mail address. Don't return accessory items unless you feel they are directly related to the service problem.

You may return this product for service to the authorized **KENWOOD** dealer from whom you purchased it, or any authorized **KENWOOD** service center. Please do not send subassemblies or printed circuit boards only. Send the complete product. A copy of the service report will be returned with the product.

SERVICE NOTE

If you desire to correspond on a technical or operational problem, please make your note legible, short, complete, and to the point. Help us help you by providing the following:

- Model name
- Question or problem you are having
- Other equipment in your station pertaining to the problem

CAUTION

Do not pack the equipment in crushed newspapers for shipment! Extensive damage may result during rough handling or shipping.

Note:

- *Record the date of purchase and the name of the dealer from whom this product was purchased.*
- *For your own information, retain a written record of any maintenance performed on this product.*
- *When claiming warranty service, please include a photocopy of the bill of sale or other proof-of-purchase showing the date of sale.*

CLEANING

To clean the case of this product, use a neutral detergent (no strong chemicals) and a damp cloth.

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RC-2000 MOBILE CONTROLLER

General	RC-2000 Control Panel
Supply Voltage	9.5 V DC ±0.5 V
Current	Less than 200 mA
Usable temperature range	–20°C ~ +60°C (–4°F ~ +140°F)
Dimension (W x H x D Projections included)	140 x 60 x 49.3 mm/ 5.5" x 2.4" x 2.0"
Weight	Approx. 180 g/ 0.4 lb

EXTERNAL SPEAKER

General	External Speaker
Speaker impedance	4Ω ±15 %
Input power	3 W (nominal), 5 W (maximum)
Output audio level	85 ±2 dB/ W
Frequency response	300 ~ 9000 Hz
Dimension (W x H x D Projections included)	113 x 66 x 58.5 mm/ 4.5" x 2.6" x 2.3"
Weight	Approx. 360 g/ 0.79 lb

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RESETTING MEMORY DATA

You can reset the stored memory data to the factory default values if necessary. By performing the reset, you will lose all the relative contents of memory data. So, we recommend you write down any important memory data before performing the reset. To perform the reset, first switch the transceiver OFF.

Instruction	Function
Press **[R1]+ [⏻]** (POWER)	Resets the contents of PM (Programmable Memory) to the factory default values {page 42}.
Press **[L2]+ [⏻]** (POWER)	Performs a Partial Reset {TS-2000 page 92}.
Press **[L3]+ [⏻]** (POWER)	Performs a Full Reset {TS-2000 page 92}.

When a confirmation message appears, press **[OK]** to proceed. Otherwise, press any other key to cancel the operation.

DEMONSTRATION MODE

The RC-2000 mobile controller and the transceiver can be configured to enter demonstration mode for display purposes. To enter the demonstration mode:

1 Press **[F1]+[⏻]** (POWER) on the RC-2000 to switch the transceiver ON.

2 To exit the demonstration mode, first turn the transceiver OFF, then press **[F1]+[⏻]** (POWER) on the RC-2000 to turn the transceiver ON.

Note: *You cannot exit the demonstration mode by simply switching the transceiver OFF or performing a full reset {TS-2000 page 92}.*

CONFIGURING THE AUTO MODE FREQUENCY TABLE

To configure the Auto Mode frequency table:

1 Press **[F6]+[⏻]** (POWER) on the RC-2000 to switch the transceiver ON.

2 Use the following controls to configure the table.

Tuning control: Adjust the frequency
MULTI/ CH control: Change the channel number
[MODE]/ **[REV]**: Change the operating mode
[UP]/ **[DWN]**/ **[1MHz]**: Change the operating band

3 Press **[OK]** to store the settings.

CONCERNING THE TM-D700A/E PANEL

The RC-2000 control panel can be used in place of the TM-D700A/E panel. Switch the TM-D700A/E OFF then remove the TM-D700A/E panel. Plug the RC-2000 panel and press **[⏻]** (POWER). The RC-2000 panel automatically detects the TM-D700A/E transceiver and will operate the same as the original TM-D700A/E panel.

NOTICES TO THE USER

One or more of the following statements may be applicable:

FCC WARNING

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

INFORMATION TO THE DIGITAL DEVICE USER REQUIRED BY THE FCC

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 generate 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 the 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 to an outlet on a circuit different from that to which the receiver is connected.*
- *Consult the dealer for technical assistance.*

When condensation occurs inside the controller:

Condensation may occur inside the controller in such cases where the room is warmed using a heater on cold days or where the controller is quickly moved from a cold room to a warm room. When condensation occurs, the microcomputer and/or other circuits may become unstable, resulting in transceiver malfunction. If this happens, unplug the controller and wait for a while. When the condensed droplets disappear, the controller will function normally.

CAUTIONS

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Please observe the following cautions to prevent fire, personal injury, and transceiver damage:

- Do not attempt to configure your transceiver while driving; it is too dangerous.
- Be aware of local laws pertaining to the use of headphones/headsets while driving on public roads. If in doubt, do not wear headphones while mobiling.
- Do not modify this mobile controller unless instructed by this manual or by other **KENWOOD** documentation.
- Do not expose the mobile controller to long periods of direct sunlight nor place it close to heating appliances.
- Do not place the mobile controller in excessively dusty, humid, or wet areas, nor on unstable surfaces.
- If an abnormal odor or smoke is detected coming from the mobile controller or transceiver, turn OFF the power immediately. Contact a **KENWOOD** service station or your dealer.
- The mobile controller is designed only to work with compatible **KENWOOD** transceivers. Never attempt to connect the mobile controller to other transceivers.

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