TRIO-KENWOOD

LIMITED WARRANTY

Trio-Kenwood is proud of the quality and workmanship of its communication equipment. If properly installed and operated in accordance with our instruction manual, it should give reliable performance. Trio-Kenwood extends to you as an owner of a new Trio-Kenwood product the warranty set forth below.

SCOPE OF WARRANTY – FREE PARTS AND LABOR

All of the Trio-Kenwood communications products are warranted against defects in material and workmanship. During the warranty period, Trio-Kenwood or an authorized Trio-Kenwood service station will provide to you free of charge both parts (except tubes) and labor necessary to correct any defect in material or workmanship.

Periodic checkups, voltage conversion are not covered by this warranty. All implied warranties, except to the extent prohibited by applicable law, shall have no greater duration than the warranty period set forth for the applicable unit. No warranties whether express or implied, including warranties of merchantability or fitness, shall apply to this product after the warranty period has expired. Under no circumstances shall Kenwood be held liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, this product. Some states do not allow limitations on how long an implied warranty lasts and exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

WARRANTY PERIOD

Trio-Kenwood communications products are warranted for ninety days from the date of the original purchase.

PURCHASER'S RESPONSIBILITIES

You as the purchaser of a new Trio-Kenwood communications product must do the following to qualify for warranty service.

1. Retain your sales slip or other proof of purchase or send in your warranty registration card to avoid unnecessary difficulties in determining your eligibility for warranty work.
2. Notify your nearest authorized Trio-Kenwood service center or Trio-Kenwood as soon as possible after discovery of a possible defect with the model, serial, and warranty registration (if any) numbers and a detailed description of the problem, including details on the electrical connection to associated equipment and the list of such equipment.
3. Make your Trio-Kenwood product available to an authorized Trio-Kenwood service center for inspection and approved warranty service or ship your Trio-Kenwood product, in its original container or equivalent, fully insured and shipping charges prepaid, to Trio-Kenwood.

PROPER MAINTENANCE AND USE

Proper maintenance and use are important to the performance level of all Trio-Kenwood products. Therefore, you should read your Owner's Manual. This warranty will not apply to any failure that Trio-Kenwood determines is due to any of the following:

1. Improper maintenance or repair, including the installation of parts or accessories that do not conform to the quality and specification of the original parts.
2. Misuse, abuse, neglect, including improper installation.
3. Accidental or intentional damage.

KENWOOD

warranty certificate

LIMITED WARRANTY

please read it carefully

NOTE: WE SUGGEST YOU ATTACH YOUR SALES RECEIPT OR OTHER PROOF OF PURCHASE TO THIS CARD FOR YOUR FUTURE NEEDS.

Purchase Date 6/28/82

Dealer's Name MADISON

Model KM-76

Serial No. 940174

PLEASE SEE REVERSE SIDE FOR TERMS AND CONDITIONS.

KENWOOD

MICROPROCESSOR
CONTROL UNIT

Model RM-76

OPERATING MANUAL

A product of
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#940174

INTRODUCTION

Model RM-76 is a Microprocessor Control UNIT for use in combination with your TR-7625 OR 7600 transceiver.

– CONTENTS –

FEATURES

* Select any 2-meter frequencies (800 channels in 5-kHz steps)
* Store frequencies in six memories.
* Scan all memory channels.
* Automatically scan up all frequencies in 5-kHz steps.
* Manually scan up or down in 5-kHz steps.
* Set lower and upper scan frequency limits.
* Scan reset to 144 MHz.
* Scan stop (with HOLD button).
* Scan cancel (with CLEAR button, for transmitting).
* Automatic scan stop on first busy or open channel.
* Operates on MARS (143.95 MHz simplex).
* Selectable repeater mode (Simplex, +600 kHz transmit offset, −600 kHz offset, +1 MHz offset, −1 MHz offset, or one "odd" transmit frequency in memory 6 for a nonstandard-split repeater).

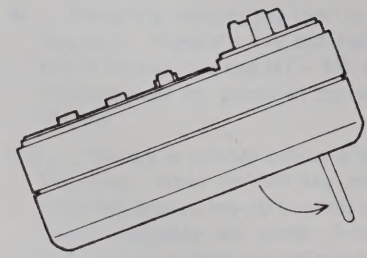
SPECIFICATIONS

Semiconductors.....	Transistors	17
	ICs	7
	Diodes	38
	Microprocessor	1
Operating Temperature	−20° ~ +50°C	
Operating Voltage..	+11.5V DC~+16.0V DC (+13.8V DC standard)	
DC Current	Less than 200 mA	
Memory back-up DC Current	Less than 50 mA	
External Memory Back-up Voltage..	7.5V DC	
Grounding.....	Negative ground	

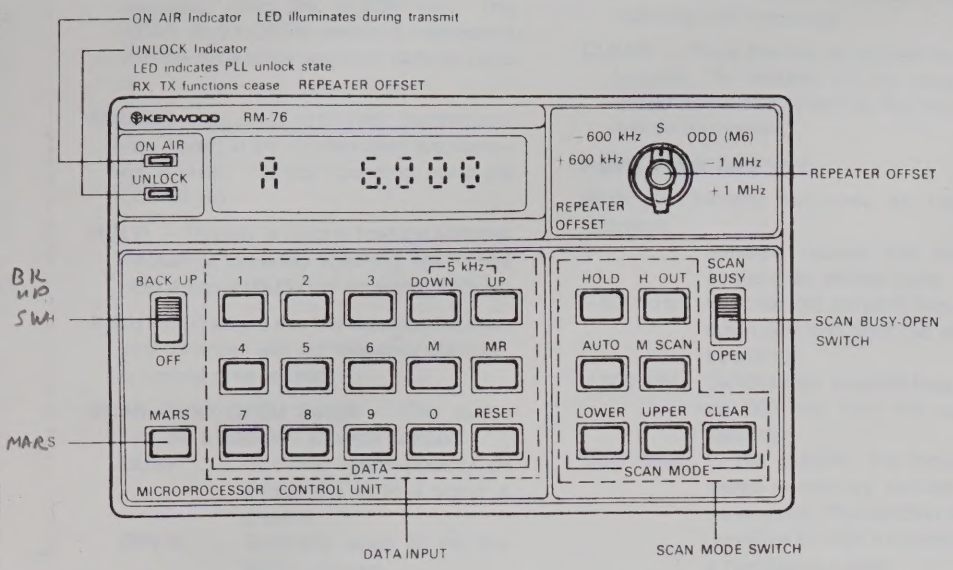
1. Connections

Connect the RM-76 cable to the remote connector at the rear of the transceiver. Cable connection and disconnection should be made with the transceiver power switch in the OFF position.

For table top operation, extend the stand as shown in **Fig. 1**.



Fig,1



Fig,2

2. Operation

Place the remote control switch on the rear of the transceiver ON; and the RM-76 will display 4.000 (144.000 MHz), indicating the transceiver is ready for remote-control operation. The indicator will always display 4.000 when the transceiver power switch is turned ON, provided no frequency has been stored in the memory.

Back-up Switch – Turn the switch ON and the memory circuit remains operative even when the transceiver power switch is turned OFF (Providing the power source remains ON).

MARS – Press this key and the operating frequency will switch to 143.950 MHz. Pressing the key again will reset the frequency to the 2-meter channel previously selected.

DATA Section

DATA INPUT (1 ~ 0) Keys – Press these keys to set your desired frequency. These keys are also used to select memory channels.

DOWN – Press this key momentarily and the frequency goes down by 5 kHz. Hold the key and the frequency goes down continuously in 5 kHz steps.

UP – Press this key momentarily and the frequency goes up by 5 kHz. Hold the key and the frequency goes up continuously in 5 kHz steps.

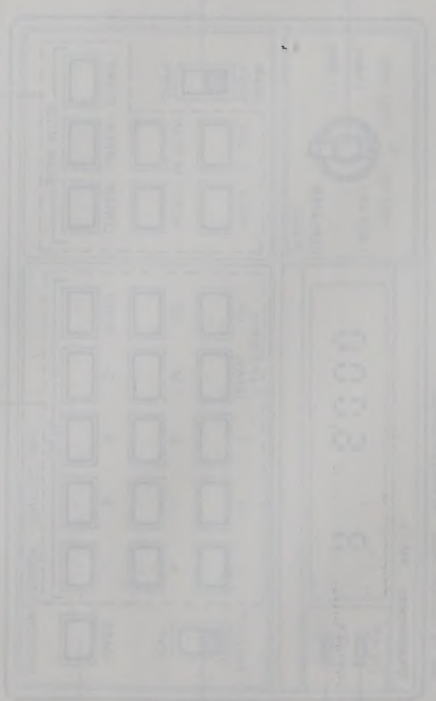
M – This is the memory key used to store a frequency. Press this key and then press one of the keys marked M1 – M6, and the frequency will be stored in the selected channel.

MR – This key is used to call-up a memory frequency. Press the MR key and then press the desired key (M1 – M6) and the stored frequency will recall. Frequency and channel number are indicated on the digital frequency display.

RESET – This key resets the operating frequency to 144.000 MHz.

SCAN MODE Section

These switches are used for scanning functions.



AUTO – Press this key and the 2-meter band will be scanned in 5-kHz steps. To stop scanning, press the CLEAR key. The SCAN BUSY/OPEN switch is interlocked with the transceiver squelch. Refer to page 8.

M SCAN – By pressing this key, the frequencies stored in the six memories are scanned in order. To stop scanning, press the CLEAR key.

HOLD – This key is used to hold the scanned frequency, provided scanning has locked onto a signal (BUSY) or no signal (OPEN).

H OUT – Pressing this key resumes the scan and continues with the frequency previously locked onto or held.

SCAN BUSY/OPEN Switch – This switch sets the transceiver squelch function.

BUSY ..... Scanning stops (exactly on frequency) when a signal is present.

OPEN ..... Scanning stops at the first empty channel.

LOWER – Press this key to preset the lower scanning limit frequency.

UPPER – Press this key to preset the upper scanning limit frequency.

CLEAR – Press this key to release the scan function. To transmit on the frequency locked onto while scanning, this key must first be depressed.

REPEATER OFFSET

Shifts the transmit frequency for repeater operation.

S ..... Simplex; receive and transmit frequencies are the same.

−600 kHz... Switches the transmit frequency down 600 kHz from the receive frequency.

+600 kHz... Switches the transmit frequency up 600 kHz from the receive frequency.

ODD (M6)... In this position, the frequency stored in memory number 6 is transmitted. This function allows operation through a repeater with a nonstandard split.

−1 MHz ..... Switches the transmit frequency down 1 MHz from the receive frequency.

+1 MHz ..... Switches the transmit frequency up 1 MHz from the receive frequency.

2.1 Entering a frequency

Example 1: Enter 144.600 MHz

Press key 4 ..... 4.
Press key 6 ..... 4.6
Press key 0 ..... 4.60
Press key 0 ..... 4.600

Example 2: Enter 145.240 MHz

Press key 5 ..... 5.
Press key 2 ..... 5.2
Press key 4 ..... 5.24
Press key 1–4 (or 0)..... 5.240

Example 3: Enter 146.785 MHz

Press key 6 6
Press key 7 ..... 6.7
Press key 8 ..... 6.78
Press key 5–9..... 6.785

The last digit is always either "0" or "5".
To display "0", press 1–4 or 0.
To display "5", press 5–9.

2.2 Memory channel

Six memory channels, M1 through M6, are included for convenient selection of your favourite frequencies.

Example 4: Storing a frequency

To store 146.710 MHz in channel M1, proceed:

Press key M 6.710
Press key M1 ..... 6.710

Store frequencies in the remaining channels, 2 through 6, in the same manner.

If you desired to change a frequency, repeat the above procedure; the previously stored frequency cancels and the new frequency is stored.

When no frequency is stored in a memory, the digital frequency display for that memory indicates 4.000 (144.00 MHz).

Example 5: Calling-up the stored frequency

To call-up frequency stored in channel M3, first press the MR key and then press the M3 key.

Continuous shifting (up or down) of frequency

Up shift

Press the UP key momentarily and the frequency will go up by 5 kHz. To continuously advance the frequency in fast 5 kHz steps, hold the key in the depressed position.

When the frequency is shifted up and reaches 7.995, it returns to 4.000 and continues scanning.

DOWN shift

Press the DOWN key momentarily and the frequency will go down by 5 kHz. To continuously advance the frequency downward in fast 5-kHz steps, the key in the depressed position.

When the frequency is shifted down and reaches 4.000, it is switched to 7.995 and continues scanning.

2.4 Scanning

2.4.1 Scanning all frequencies

Press the AUTO key. An " A " displays while the band is scanned continuously in 5-kHz steps.

When the displayed frequency reaches 7.995, it returns to 4.000 and scanning continuous. Two scan modes are available, each being selected by the SCAN switch.

(1) Scanning to locate a frequency being used:
Set the SCAN switch to BUSY.
Turn the transceiver SQUELCH control to the point where internal noise disappears. Press the AUTO key and, when an input signal is present (squelch circuit opens), scanning stops. When the signal goes off, scanning resumes. To hold a scanned frequency, press the HOLD key. This frequency will be retained regardless of SQUELCH or signal condition.
When the H OUT key is depressed, scanning is resumed from the frequency retained by the HOLD key. To stop scanning, press the CLEAR key; the " R " sign will go off. The CLEAR key must first be depressed to transmit a frequency retained by the HOLD key.

(2) Scanning to locate an empty frequency
Set the SCAN switch to OPEN.
Adjust the transceiver SQUELCH control for no-signal quieting. Press the AUTO key and scanning will start. The first empty channel frequency (squelch closed) will stop the scan. Use the HOLD, H OUT, and CLEAR key in the same manner as previously described in Item (1) above.

2.4.2 Scanning a selected frequency range

Use the LOWER and UPPER keys.

Example: Scan between 146.235 and 146.780 MHz.

Press keys 6, 2, 3 and 5..... [6.235]

Press LOWER function key..... [L 6.235]

Press keys 6, 7, 8 and 0..... [6.780]

Press UPPER function key..... [U 6.780]

Press AUTO function key
..... Frequencies of between 146.235 and 146.780 are continuously scanned.

Note:

When the CLEAR key is pressed, the LOWER and UPPER scan frequency limits disappear. To resume scanning within the desired frequency range, the function keys should be pressed again.

The HOLD, H OUT and CLEAR keys function the same as described in Item (1) Section 2.4.1.

2.4.3 Scanning the memory

Press the M SCAN key
..... Memory channels 1 through 6 are scanned in sequence.

The scanning operation is the same as described in Section 2.4.1.

3. Use of REPEATER OFFSET

The REPEATER OFFSET, used mainly for repeater operation, has six positions.

S ..... Your transceiver operates in the usual simplex mode.
That is receive and transmit frequencies are the same.

−600 kHz... The receiver frequency is as indicated on the digital frequency display, while the transmitter frequency is 600 kHz lower than the receiver frequency.

+600 kHz... The receiver frequency is as indicated on the digital frequency display, while the transmitter frequency is 600 kHz higher than the receiver frequency.

ODD (M6)... The receiver frequency is as indicated on the digital frequency display, but the transmitter frequency is the frequency stored in the No. 6 memory channel.

Note:
When no frequency is stored in the No. 6 memory channel, the digital frequency display indicates 144.000 MHz.

−1 MHz ..... The receiver frequency is as indicated on the digital frequency display, while the transmitter frequency is 1 MHz lower than the receiver frequency.

+1 MHz ..... The receiver frequency is as indicated on the digital frequency display, while the transmitter frequency is 1 MHz higher than the receiver frequency.

Note:
If the transmitter frequency is out of band in any mode, the transceiver automatically returns to the simplex mode, while the digital frequency display indicates E.EEE (error).

5. Digital Frequency Display

The digital frequency display indicates the following signs and numbers when the function keys are pressed.

A ..... By pressing the AUTO key, the sign " A " appears, indicating the scan mode.

Note:
Transmission is not possible while this sign is displayed. To transmit, first press the CLEAR key (the " A " sign disappears).

1 – 6 ..... Memory channels are displayed when the MR and M1–M6 keys are pressed. They are displayed in sequence, when the M SCAN key is pressed.

L ..... This sign appears when the LOWER key (lower scan frequency limit) is pressed.

U ..... This sign appears when the UPPER key (upper scan frequency limit) is pressed.