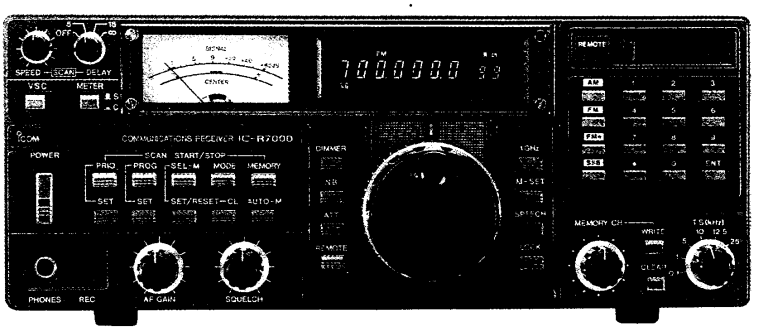
ICOM

INSTRUCTION MANUAL

COMMUNICATIONS RECEIVER

IC-R7000



Icom Inc.

FOREWORD

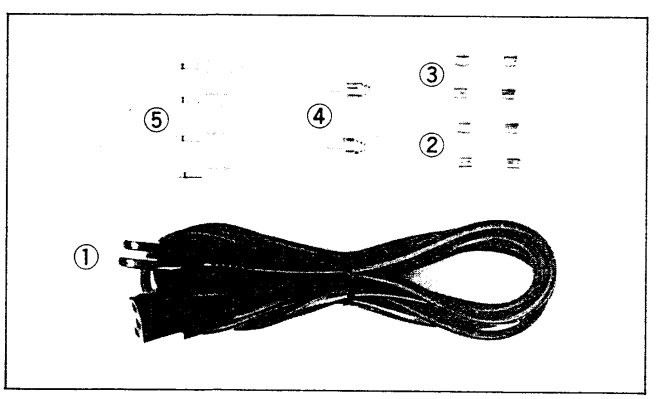
Thank you very much for selecting the new IC-R7000 from ICOM.

The most sophisticated, continuous coverage receiver on the market today, the IC-R7000 is the result of both advanced ICOM engineering and state-of-the-art computer interface technology from ICOM such as the new CI-V System: a feature that allows for easy and convenient computer control of your IC-R7000.

Equipped with 99 internal memories that are completely owner-programmable, the IC-R7000 is unmatched in scanning and coverage versatility within the 25 to 1300MHz range and may even cover frequencies up to 2000MHz. Low band, aircraft, marine, business, FM, amateur radio, emergency services, government, and television bands - all are conveniently available and immediately accessible with the IC-R7000.

To fully understand and appreciate the utility of your new IC-R7000, please study this instruction manual carefully prior to operation. If you have additional questions regarding operation of the IC-R7000, feel free to contact your nearest authorized ICOM dealer or Service Center.

UNPACKING



1. AC Power cable 1
2. Fuses (2A) 2
3. *Fuses 2
4. RCA plugs 2
5. Earphone plugs 4

* USA version : 1A
Australia, Europe, France version : 0.5A

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SECTION 1 DESCRIPTION

■ WIDE RANGE COMMUNICATIONS RECEIVER

The IC-R7000 is a sophisticated communications receiver designed for a wide variety of users, covering HF, VHF, and UHF bands all in one single, compact unit. The IC-R7000 also comes installed with a crystal converter that makes Amateur radio reception possible in the entire 1240 to 1300MHz frequency range.

■ ALL MODES INCORPORATED

The IC-R7000 incorporates an AM mode, an FM mode using both wide and narrow filters, and an SSB mode that offers both LSB and USB selection, making a wide variety of reception possible.

■ BUILT-IN, 99-CHANNEL LARGE MEMORY CAPACITY

A total of 99 memory channels are available in the IC-R7000 for convenient storage of both received frequencies and the reception modes. VFO operations are possible when using any memory channel.

■ STATION SELECTION VERSATILITY

With the IC-R7000 you not only have normal tuning capability with the front panel tuning control: you can also shift quickly to a desired frequency by using the keyboard to program frequency data. In addition, tuning pitch can be selected between the following frequencies: 100Hz, 1kHz, 5kHz, 10kHz, 12.5kHz, and 25kHz.

■ VARIETY OF SCANNING FUNCTIONS

The IC-R7000 incorporates a total of six separate scanning functions for easy access to a wide range of frequencies.

- PRIORITY SCAN eliminates the need for channel searching by automatically monitoring programmed channels while you listen to your main operating channel.
- PROGRAMMED SCAN offers detailed coverage of a specific frequency range by repeatedly scanning it.
- SELECTED MEMORY SCAN allows you to continuously scan your favorite programmed memory channels.
- SELECTED MODE MEMORY SCAN automatically monitors all memories which contain programmed frequencies with a similar mode.
- MEMORY CHANNEL SCAN repeatedly scans the entire 99-Channel Memory in sequence.
- AUTO-WRITE MEMORY SCAN monitors the specified frequency range contained in PROGRAMMED SCAN and automatically writes any incoming signals within that frequency range to Memory Channels 80 through 99, the AUTO MEMORY WRITE AREA.

■ VSC FUNCTION FOR IMPROVED RECEPTION

The VSC (VOICE SCAN CONTROL) function in the IC-R7000 allows you to skip all frequencies with inaudiable voice signals while concentrating on those that are clear.

■ S-METER SQUELCH

In addition to regular squelch capability, the IC-R7000 incorporates an S-Meter Squelch function which squelches all incoming signals stronger than the level indicated by the S-Meter. Incoming signals less than the S-Meter reading will not be squelched.

SECTION 2 SPECIFICATIONS

- Receive frequency range

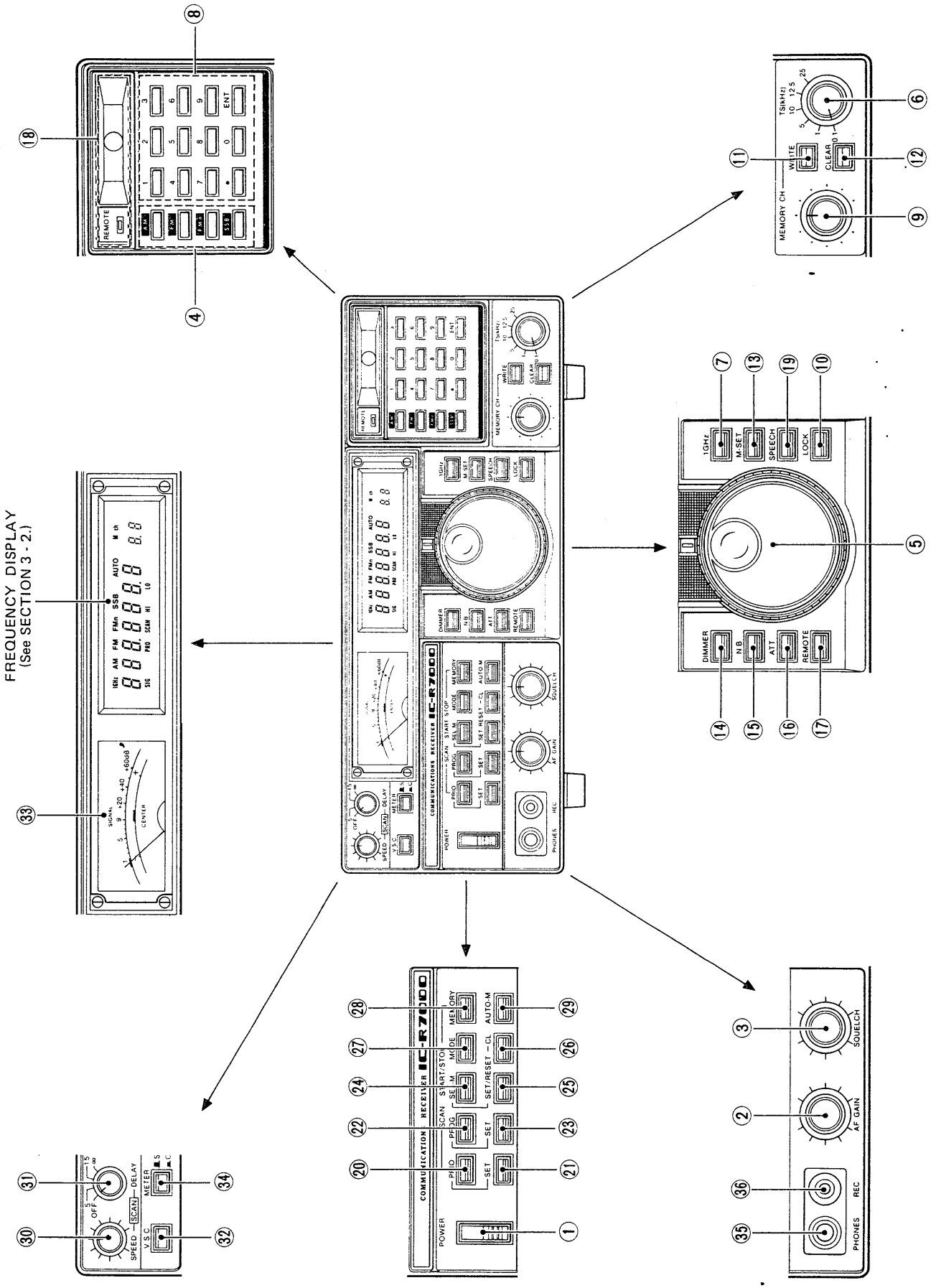
VERSION	FREQUENCY COVERAGE (MHz)
USA and EUROPE	25 ~ 999.999 *1025 ~ 1999.999
AUSTRALIA and FRANCE	**25 ~ 999.999 *1025 ~ 1999.999

* Specifications guaranteed from 1240 to 1300MHz.
** Excluding 87.5 to 108MHz.

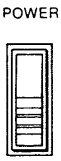
- Receive modes : A3E (AM), F3E (FM), J3E (SSB)
- Sensitivity : 25 ~ 999.999MHz
  FM : Less than 0.5μV for 12dB SINAD
  FM (wide) : Less than 1.0μV for 12dB SINAD
  AM : Less than 1.0μV for 10dB S/N
  SSB : Less than 0.3μV for 10dB S/N
  1240 ~ 1300MHz
  FM : Less than 0.5μV for 12dB SINAD
  FM (wide) : Less than 2.0μV for 12dB SINAD
  AM : Less than 2.0μV for 10dB S/N
  SSB : Less than 0.3μV for 10dB S/N
- Squelch sensitivity : FM (Threshold) Less than 0.2μV for noise squelch
  FM (Tight) More than 32mV for meter squelch at S9+60dB
  SSB (Threshold) More than 3.0μV for meter squelch
- Selectivity : FM, AM ±7.5kHz minimum at −6dB
  FM (narrow), AM (narrow) ±3.0kHz minimum at −6dB
  FM (wide) ±75kHz minimum at −6dB
  SSB ±1.4kHz minimum at −6dB
- Spurious and image response rejection : More than 60dB
- Frequency stability : 25 ~ 999.999MHz ±5ppm at 0°C ~ +50°C
  1240 ~ 1300MHz ±10ppm at 0°C ~ +50°C
- Receive system : 25 ~ 999.999MHz
  FM, AM, SSB Triple-conversion superheterodyne
  FM (wide) Double-conversion superheterodyne
  1240 ~ 1300MHz:
  FM, AM, SSB Quadruple-conversion superheterodyne
  FM (wide) Triple-conversion superheterodyne
- Intermediate frequencies : 25 ~ 512MHz:
  1st 778.7MHz
  2nd 10.7MHz
  3rd 455kHz excluding FM (wide) mode
  512 ~ 999.999MHz
  1st 266.7MHz
  2nd 10.7MHz
  3rd 455kHz excluding FM (wide) mode
- Frequency control : CPU based 100Hz step digital PLL synthesizer
- Number of memory channels : 99 channels
- Supply voltage : 117, 220 or 234V AC (50/60Hz)
- Current drain : Receiving 1.7A at maximum audio output
  Squelched 1.4A
- Antenna impedance : 50 ohms
- Audio output : More than 2.5W at 10% distortion with an 8 ohm load
- Audio output impedance : 4 ~ 8 ohms
- Usable temperature : −10°C ~ +60°C
- Dimensions : 286(303)mm(W) x 110(127)mm(H) x 276(319)mm(D)
  Bracketed values include projections.
- Weight : Approximately 8.0kg (excluding options)

- All stated specifications are subject to change without notice or obligation.

3 - 1 FRONT PANEL

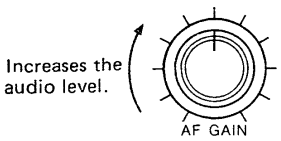


① POWER SWITCH



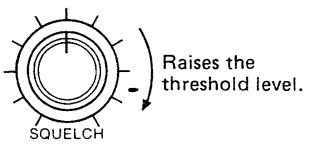
This a push-lock switch which controls the input AC power to the IC-R7000.

② AF GAIN CONTROL



This control varies the audio output level of the IC-R7000. Clockwise rotation increases the level.

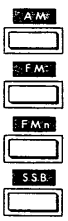
③ SQUELCH CONTROL



This control sets the squelch threshold level, muting incoming signals. To set the squelch threshold level, turn the control clockwise.

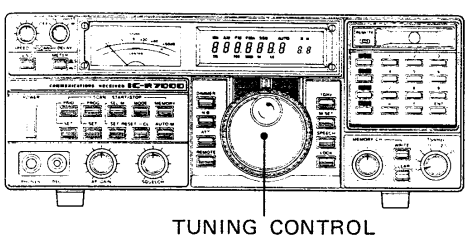
When a signal is completely muted the illuminated "SIG" indicator on the FREQUENCY DISPLAY will go out.

④ MODE SELECT SWITCHES



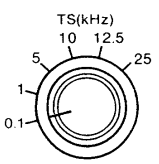
These switches select any of the four operating modes for the IC-R7000: AM, FM, FMn, or SSB. Press the appropriate switch for the desired mode.

⑤ TUNING CONTROL



Rotate this control clockwise to increase frequency numbers and counterclockwise to decrease them.

⑥ TUNING STEP SELECTOR CONTROL [TS]



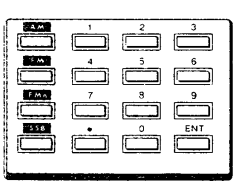
This control allows you to select frequency steps in six different increments for all four operating modes: 0.1kHz, 1kHz, 5kHz, 10kHz, 12.5kHz, and 25kHz.

⑦ 1GHz BAND SWITCH [1GHz]

This switch is for band setting when operating in the 1240 ~ 1300MHz frequency range and allows you to operate at a frequency 1GHz greater than that displayed on the FREQUENCY DISPLAY.

The "1GHz" indicator lights up on the FREQUENCY DISPLAY when the 1GHz band is being used.

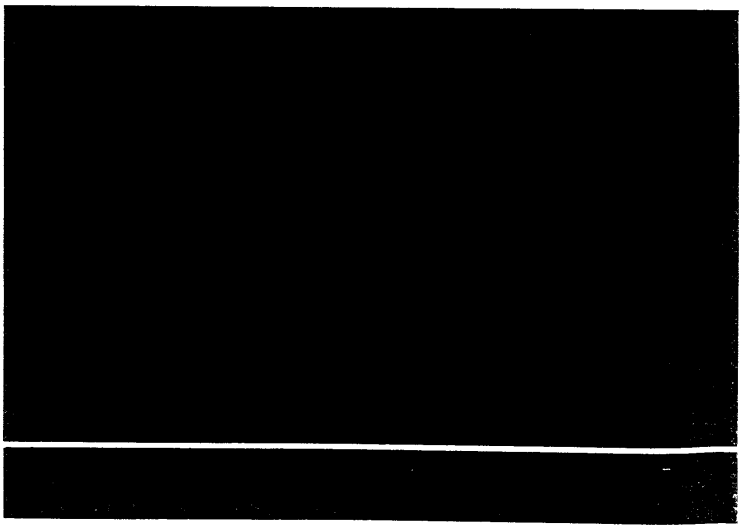
⑧ KEYBOARD



Both operating frequency and memory channel numbers can be set directly by using the KEYBOARD on the front panel. The KEYBOARD consists of number keys 0 through 9, a decimal point key [.], and an enter key [ENT].

For a detailed description of how to set frequencies and memory channels, see SECTIONS 5 - 3 FREQUENCY SETTING and 5 - 4 MEMORY OPERATION.

Count on us!



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