ICOM

INSTRUCTION MANUAL

COMMUNICATIONS RECEIVER

IC-R8500

Icom Inc.

IMPORTANT

READ THIS INSTRUCTION MANUAL CAREFULLY before attempting to operate the receiver.

SAVE THIS INSTRUCTION MANUAL. This instruction manual contains important safety and operating instructions for the IC-R8500.

EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠WARNING!	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

CE Versions of the IC-R8500 which display the "CE" symbol on the serial number label, comply with the essential requirements of the European Radio and Telecommunication Terminal Directive 1999/5/EC, and that any applicable Essential Test Suite measurements have been performed.

PRECAUTIONS

⚠**WARNING! NEVER** connect the receiver to an AC outlet directly. This may pose a fire hazard or result in an electric shock. Always use an optional AC adapter or connect to a 13.8 V DC power source.

⚠**WARNING! NEVER** connect to an AC outlet that exceeds the suggested voltage for each AC adapter version. This could cause a fire or ruin the AC adapter and/or receiver.

⚠**WARNING! NEVER** connect the receiver to a power source of more than 16 V DC or use reverse polarity. This could cause a fire or damage the receiver.

⚠**WARNING! NEVER** use non-rated fuses. Non-rated fuses could cause a fire or ruin the receiver.

⚠**WARNING! NEVER** let metal, wire or other objects touch any internal part or connectors on the rear panel of the receiver. This will cause electric shock.

**INDOOR USE ONLY! NEVER** expose the IC-R8500 or AC adapter to rain, snow or any liquids.

DO NOT use or place the receiver in areas with temperatures below −10°C (+14°F) or above +50°C (+122°F).

DO NOT place the receiver in excessively dusty environments or in direct sunlight.

DO NOT place the receiver against walls or putting anything on top of the receiver. This will obstruct heat dissipation.

RESPECT other people's privacy. Information overheard but not intended for you cannot lawfully be used in any way.
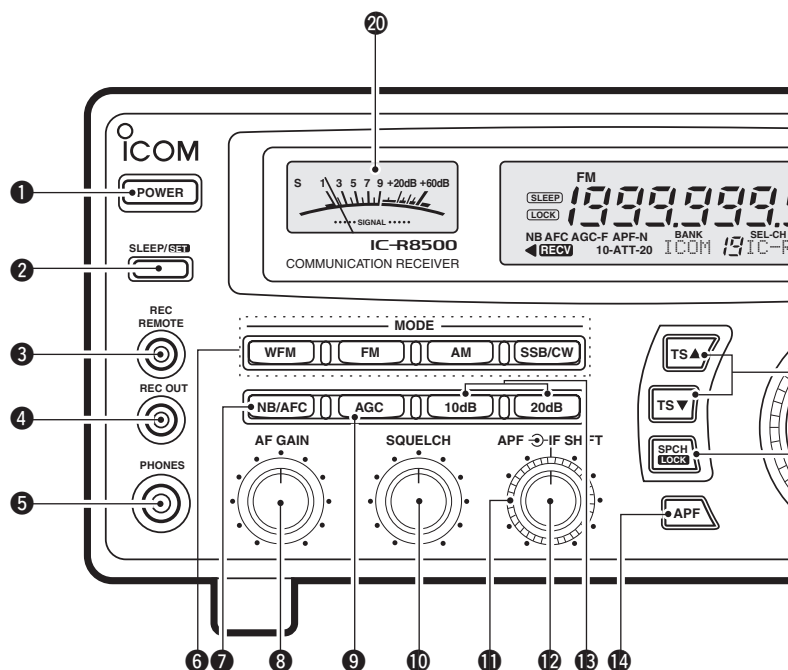
UNPACKING
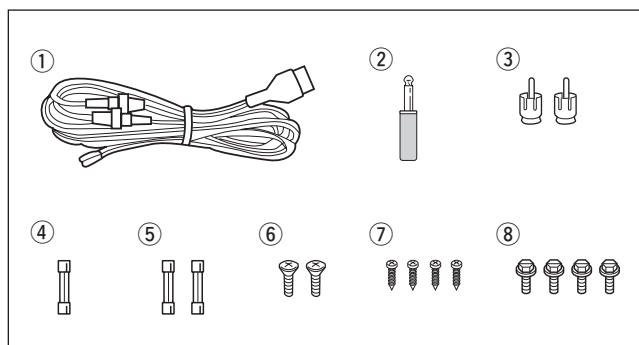
Accessories included with the IC-R8500:

	Qty.
① DC power cable	1
② Mini plug (2-conductor, 3.5d)	1
③ Phono (RCA) plugs	2
④ Fuse (FGMB 125 V 3 A; internal use)	1
⑤ Fuses (FGB 3 A; for DC cable)	2
⑥ Screws (M4 × 12 for optional MB-23)	2
⑦ Screws (C0 3 × 8 for optional MB-23 feet)	4
⑧ Allen bolts (M5 × 8 for optional MB-12)	4

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1 PANEL DESCRIPTION

■ Front panel

❶ POWER SWITCH [POWER]
Turns power ON and OFF.

❷ SLEEP/SET SWITCH [SLEEP/SET]
➡ Push momentarily to set the sleep timer (p. 29).
   • Selectable times are 30, 60, 90, 120 min. or OFF.
   • "(SLEEP)" appears in the function display when the sleep timer is set.
➡ Push for 1 sec. to enter quick set mode (p. 30).
   • Use the [M-CH] selector and main dial to select items and contents, respectively.

❸ RECORDER REMOTE JACK [REC REMOTE] (p. 10)
Controls the running of a tape recorder for recording. Connects to the REMOTE jack on a tape recorder.

❹ RECORDER JACK [REC OUT] (p. 10)
Outputs an audio signal. Connect to the AUX or LINE IN jack on a tape recorder.

❺ HEADPHONE JACK [PHONES]
Accepts headphones with 4–16 Ω impedance.
• When headphones are connected, no receive audio comes from the speaker.
• Stereo headphones can be connected, however, output is monaural.

❻ MODE SWITCHES [WFM]/[FM]/[AM]/[SSB/CW] (p. 13)
➡ Push to select an operating mode.
   • The following keys toggle between several modes:
     [FM] .... FM, FM narrow
     [AM] .... AM, AM narrow, AM wide
     [SSB/CW] .... USB, LSB, CW, optional CW narrow
➡ When SSB/CW mode is selected, push [SSB/CW] for 1 sec. to adjust the BFO frequency. (p. 15).

❼ NOISE BLANKER/AFC SWITCH [NB]/[AFC]
Activates the noise blanker function or automatic frequency control function.
• The noise blanker is used for removing pulse-type noise when SSB, CW or AM mode is selected (p. 15).
• The automatic frequency control tunes the displayed frequency automatically when an off-center frequency is received. It activates when FM or WFM is selected (p. 14).

❽ AUDIO FREQUENCY GAIN CONTROL [AF GAIN] (p. 13)
Rotate clockwise to increase the audio output; rotate counterclockwise to decrease the audio output.
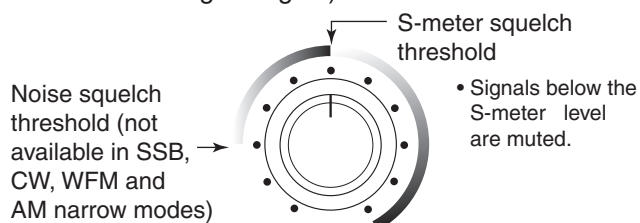
❾ AUTOMATIC GAIN CONTROL [AGC] (p. 15)
Toggles the time constant of the AGC circuit between "slow" and "fast."
• When "fast" is selected, "AGC-F" appears.
• Cannot be used in FM or WFM modes.

❿ SQUELCH CONTROL [SQUELCH] (p. 14)
Varies the squelch threshold level (to mute noise when receiving no signal).

S-meter squelch threshold

Noise squelch threshold (not available in SSB, CW, WFM and AM narrow modes)

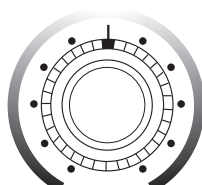• Signals below the S-meter level are muted.

⓫ IF SHIFT CONTROL [IF SHIFT] (p. 14)
Shifts the center frequency of the receiver's IF passband to reject interfering signals.
• Cannot be used in FM, WFM and AM modes.

⑫ **AUDIO PEAK FILTER CONTROL [APF]** (p. 15)
Adjusts the audio peak filter setting to pick up a desired audio frequency. Only valid when the [APF] switch is ON.
• Clockwise rotation adjusts the filter setting higher; counterclockwise rotation adjusts the filter setting lower.

Center frequency is shifted down.　　　Center frequency is shifted up.

⑬ **ATTENUATOR SWITCHES [10dB]/[20dB]**
Push to activate one of the attenuators.
◗ Push [10dB] to activate the 10 dB attenuator.
◗ Push [20dB] to activate the 20 dB attenuator.
◗ Push [10dB] + [20dB] to activate the 30 dB attenuator.
• 10 dB and 30 dB attenuator cannot be used below 500 kHz.

⑭ **AUDIO PEAK FILTER SWITCH [APF]** (p. 15)
➥ Push momentarily to toggle the audio peak filter circuit ON and OFF.
• Use the [APF] control to adjust the center of the audio peak passband.
➥ When the audio peak filter circuit is ON, push for 1 sec. to toggle the filter setting between *normal* and *narrow*.
• 'Narrow' is available for SSB, CW and AM only.

⑮ **SPEECH/LOCK SWITCH [SPCH/LOCK]**
➥ Push momentarily to activate the voice synthesizer function and have the displayed frequency announced.
• An optional UT-102 SPEECH SYNTHESIZER UNIT is necessary to activate the voice synthesizer function (p. 38).

• Automatic announcement at signal detection during scan is available. Refer to the "REC SPCH" item on p. 31 for details.
➥ Push for 1 sec. to activate the lock function (p. 12).
• Push for 1 sec. again to cancel the lock function.
• The lock function action can be selected in set mode to cover the main dial only, or to cover both the main dial and front panel switches.

⑯ **TUNING STEP SWITCHES [TS▲]/[TS▼]** (p. 12)
Select the tuning step for the main dial. Push [TS▲] to select a larger tuning step; push [TS▼] to select a smaller tuning step.
• 10 Hz, 50 Hz, 100 Hz, 1 kHz, 2.5 kHz, 5 kHz, 9 kHz, 10 kHz, 12.5 kHz, 20 kHz, 25 kHz, 100 kHz and 1 MHz are selectable.
• Programmable tuning steps can be set between 0.5 and 199.5 kHz.
➡ To set programmable tuning steps, enter the desired steps via the keypad, then push [TS▲]or [TS▼].

⑰ **MAIN DIAL**
Changes the operating frequency, set mode contents, etc.

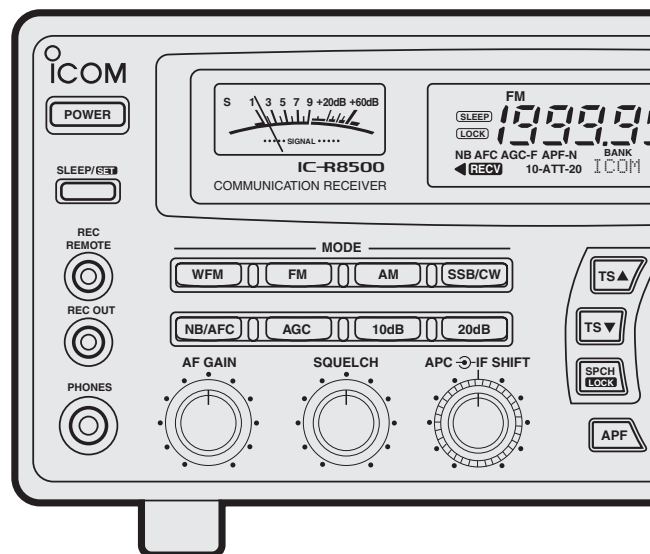⑱ **BRAKE ADJUSTMENT SCREW**
Adjusts the main dial tension.

⑲ **FUNCTION DISPLAY** (p. 6)
Shows the selected frequency, mode, memory name, etc.

⑳ **S-METER**
➥ Shows the strength of the received signal.
➥ Shows the squelch threshold level when the [SQUELCH] is rotated past the center position.

㉑ MEMORY SET SWITCH [M-SET] (p. 19)
Used to 'copy and paste' the displayed frequency into another memory channel.
• The first push is used to copy (Ⓜ appears), and the second push is used to paste (Ⓜ disappears).
• Frequency, mode, tuning step, memory name, etc. can be programmed into a temporary memory.

㉒ MEMORY CLEAR SWITCH [M-CL] (p. 19)
Push and hold to clear the contents of the displayed memory.
• Bank names cannot be cleared.

㉓ MEMORY WRITE SWITCH [MW] (p. 19)
Push and hold to store the displayed frequency, mode, tuning step, etc. into the selected memory channel.

㉔ BANK SWITCH [BANK] (p. 17)
➡ Push momentarily to toggle the bank limit function ON and OFF (p. 18).
• While "BANK" appears, only memory channels within the selected bank can be selected via the [M-CH] selector.
➡ Push for 1 sec. to increase/decrease the number of memory channels in the selected bank (p. 21).

㉕ MEMORY CHANNEL SELECTOR [M-CH] (p. 18)
➡ Selects a memory channel in normal use.
• Clockwise rotation selects higher memory channel numbers; counter clockwise rotation selects lower memory channel numbers.
➡ Selects a set mode item when quick set mode or initial set mode is selected (p. 30).

㉖ DELAY/SPEED CONTROL [DELAY/SPEED] (p. 28)
Adjusts the scan delay time or scan speed depending on the [DLY D/S] switch setting.

• When scan delay time is assigned, this control adjusts the scan delay time (scan pausing interval) during signal reception. This setting is effective when " OFF DLY ∞ " is selected for the scan resume condition.
• When scan speed is assigned, this control adjusts the scan speed. In this case, scan delay time is determined while setting.

㉗ SCAN SWITCHES [SCAN SCAN SET]
All of these switches are related to the scan function in some way as follows:

[MEMO] (p. 23)
➡ Push momentarily to start/stop memory scan.
➡ Push numeral keys, then this key to start memory scan in the specified bank.
➡ Push this key, then a mode switch to activate mode select scan function.
➡ Push for 1 sec. to set automatic bank and skip functions.
• The bank limit function and/or memory skip functions are activated automatically when "AUTO" is selected and scan is started.

[SEL] (p. 23)
➡ Push momentarily to start/stop memory select scan.
➡ Push for 1 sec. to set the memory channel as a *select* channel.

[PROG] (p. 24)
➡ Push momentarily to start/stop programmed scan.
➡ Push numeral keys, before or after pushing this key to start programmed scan using the specified scan edge group.
• 10 scan edge groups are available.
➡ Push for 1 sec. to program scan edges for programmed scan.

Count on us!

Icom Inc.

#33 EUR

<Intended Country of Use>			
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■ NOR			