



COMMUNICATIONS RECEIVERS



SIMPLY THE BEST

Icom Inc.

Professional communications receiver with high performance spectrum scope



PROFESSIONAL COMMUNICATIONS RECEIVER
0.005 – 3335MHz coverage*¹
IC-R9500



Wideband coverage

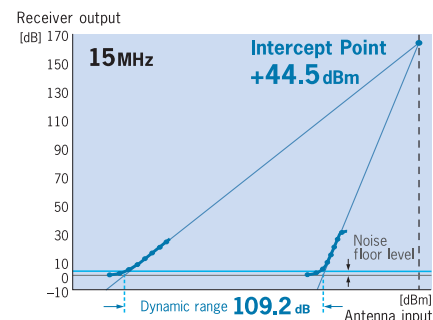
The IC-R9500 covers 0.005–3335MHz*¹ in SSB, AM, FM, WFM, CW, FSK and P25*² modes. It is suitable for a wide variety of radio monitoring and listening activities.

*¹ Frequency range differs depending on version.

*² Optional UT-122 digital unit is required.

Superb receiver performance

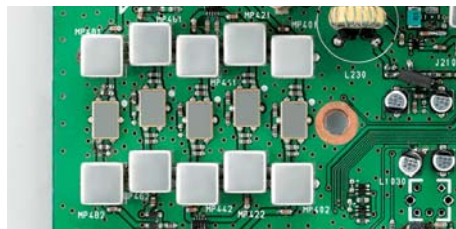
The IC-R9500 achieves its amazing performance by using a D-MOS FET array in the 1st mixer (below 30MHz) and an excellent IMD roofing filter. The IC-R9500 has +40dBm IP3 and 109dB dynamic range at 14.1MHz. IP3 performance is +9.8dBm at 50MHz and +6.2dBm at 620MHz (+5dBm (typical) from 30MHz to 3335MHz).



Five roofing filters

The IC-R9500 has 5 independent roofing filters (240, 50, 15, 6 and 3kHz) for improved selectivity. In very crowded RF spectrum conditions, it is extremely important to prevent overload from strong signals. The 3kHz roofing filter provides a 130dB (approx.)* blocking dynamic range.

* At 15MHz reception, with 5kHz signal separation.



±0.05ppm high frequency stability

The IC-R9500 uses an OCXO (Oven Control Crystal Oscillator) unit which provides ±0.05ppm frequency stability from 0°C to 50°C. The 10MHz reference frequency can either be supplied to or input from external equipment.

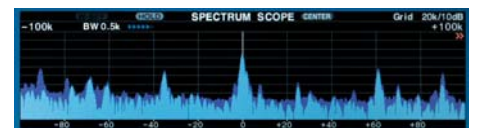


Multi function spectrum scope

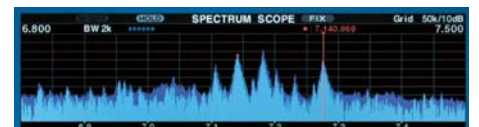
Using a dedicated DSP unit improves the dynamic range of the spectrum scope. The IC-R9500 has four different display modes such as normal/wide and center/fixed width. The spectrum scope normally covers a range from ±2.5kHz to ±5MHz, while the wide band spectrum scope* observes up to ±500MHz (±10MHz, ±25MHz, ±50MHz, ±100MHz ±250MHz and ±500MHz selectable). When using the normal spectrum scope mode, the digital scope's filter width can vary from 200Hz to 20kHz with a variable sweep speed.

The peak search function automatically moves the display marker to the strongest signal on the scope screen. In addition to these features, the scope has 3 levels of attenuation (10dB, 20dB, 30dB).

* While using the wide band scope function, AF output is muted.



Example of spectrum scope centered on the receiving frequency.



Example of fixed spectrum scope range.



7-inch wide color TFT LCD

The large 7-inch wide (800 × 480 pixels) active matrix display delivers quick response time, high resolution and has a wide viewing angle. The multi-function spectrum scope is displayed in vivid color. The background color is selectable from black or blue for your preference. In addition, the IC-R9500 has a VGA connector allowing you to connect an external monitor.

Multiple RSSI

S-meter, dBμ, dBμ (emf) and dBm meter types are selectable in the IC-R9500. The dBμ, dBμ (emf) and dBm meter have ±3dB of accuracy*.

(* 10 to 70dBμ signal from 100kHz to 3335MHz at 25°C)

Digital voice recorder

The IC-R9500 has two types of digital voice recorders. One is the regular recorder, recording for long periods in "WAV" format to the built-in CF memory or an external USB memory. The sampling rate is variable from 8kHz (SQ1) to 48kHz (SHQ). In SQ1 mode, up to 130 minutes (approx.) of recorded audio can be stored into the CF memory. The other recorder is the short term voice recorder that saves the previous 15 seconds of radio audio into RAM, allowing you to play back the audio instantly.

Dual DSP

The IC-R9500 incorporates two independent, 32-bit floating point DSP units, a dedicated DSP unit for receiver functions and another for the spectrum scope. By using the power of two independent DSP units, the radio can respond to operator changes in an instant.

Other outstanding features

[Receive assist functions]

- Digital IF filter • Digital twin PBT
- Noise blanker • Noise reduction
- Notch filter • Synchronous AM detection
- FSK demodulator and decoder
- 10 VFOs • 1220 memory channels
- Multiple-scan functions
- Voice synthesizer • USB connector
- SSB/CW/AM mode auto tuning function

- AFC function compensates for frequency shifts (FM/WFM mode only)
- CW-R (reverse) mode
- Preamp and attenuator
- 1/4 tuning step function and dial click function
- APF (Audio Peak Filter)
- AGC (Automatic Gain Control)
- VSC (Voice Squelch Control)
- Input overload protection (HF bands only)
- Optional P25 digital mode reception
- CI-V interface and RS-232C for PC remote control
- Analog TV tuner (NTSC/PAL/SECAM)*1
- 4 antenna connectors: an SO-239, a phono (RCA) connector and two type-N connectors
- S/P DIF output jack
- Video input/output*1
- Clock function
- IF output jack (10.7MHz)
- CTCSS and DTCS tone squelch
- Simplified frequency calibration using WWV or WWVH

*1 TV tuner and video output are not available in the USA version except for export or to authorized government users. Contact Icom America for details.



Discover a world of information and intrigue



COMMUNICATIONS RECEIVER
0.1 – 1999.99999MHz coverage*

IC-R8500

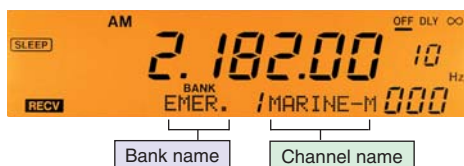
Various modes for wide range Rx

The IC-R8500 covers a wide frequency range — continuously from 0.1 to 1999.99999MHz* with 10Hz resolution. The IC-R8500's all mode capability allows you to receive signals in many different modes, from the world over. SSB (USB, LSB), CW, AM, FM and WFM are included, and, several 'specialty' modes, CW narrow,* AM wide, AM narrow and FM narrow are available to receive a variety of signals that require a matched passband width.

* Guaranteed 0.1–1000MHz and 1240–1300MHz only ; Cellular bands are blocked in the USA version.

Ample 1000 memory channels

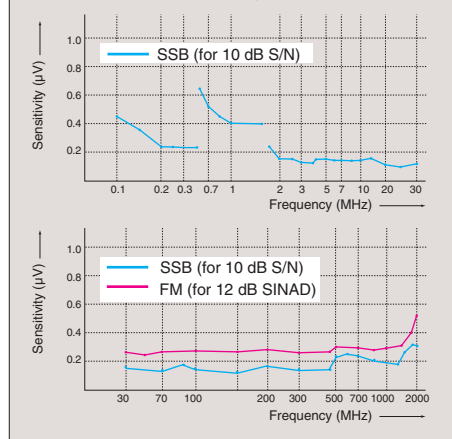
The IC-R8500 has 800 memory channels divided into 20 banks (40 channels each), plus an auto memory write area of 100 channels and a skip area of 100 channels. Each memory channel can store a frequency, mode (including passband width) and tuning step, etc. Alphanumeric names can be assigned to the channels (up to 8 characters) and banks (up to 5 characters) for easy recognition. There are also 20 scan edge memory channels to store 10 sets of frequencies for programmed scan plus 1 priority channel for priority scan.



Superior receive characteristics

The IC-R8500 has superior receive sensitivity over its entire range and the built-in, high quality crystal oscillator (TCXO) provides good frequency stability of less than 100Hz drift below 30MHz; less than 3ppm above 30MHz. The variable tuning system employed in the front-end tuning circuit improves multi-signal characteristics, ensuring enhanced receiving performance.

Sensitivity characteristics (values are typical and not guaranteed)



IF shift and APF function

The IF shift function works efficiently to reject interference from nearby signals, especially in SSB mode. APF adjusts the peak frequency of the received audio, particularly in CW mode.

Versatile scanning functions

Basic scanning, memory, priority and program scans are available. For more advanced needs, specific scans can also be selected. VSC (voice scan control) provides efficient scanning by skipping unmodulated signals.

Other outstanding features

- REC and REC-Remote terminals for recorder control and for recording received signals
- SO-239 type and phono (RCA) antenna connectors for HF bands and type-N for VHF/UHF
- S-meter squelch
- Sleep timer (30, 60, 90, 120 min. selectable)
- Noise blanker, RF attenuator, and selectable AGC
- AFC function tunes the receiving frequency to the center of FM or WFM signals
- RS-232C serial interface

* For sale in the US to qualifying agencies or export only.



HF/50MHz coverage and innovative features...



HF+50MHz COMMUNICATIONS RECEIVER
0.03 – 60MHz coverage*¹

IC-R75

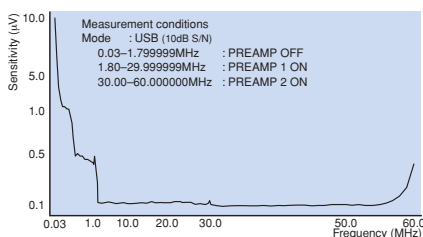


High sensitivity receiver circuit

Icom's wide-band technology provides a consistent receiver sensitivity over the entire receive frequency range: 0.03–60MHz*¹. The IC-R75 makes it easy to receive communications world wide.

*¹ Guaranteed 0.1–29.99MHz and 50–54MHz only ; Some versions have restricted coverage.

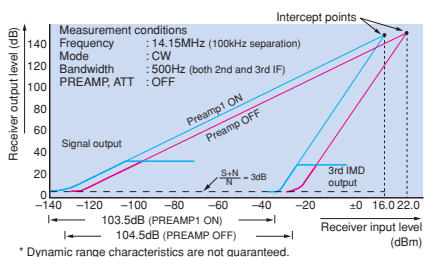
• Receive sensitivity characteristics example



Superior dynamic range

A wide dynamic range of over 100dB, and a well-designed triple conversion system help minimize image and spurious responses for better signal fidelity.

• Dynamic range characteristics example



Twin PBT capability

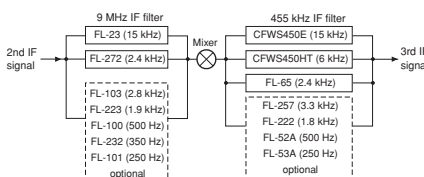
The twin PBT (Passband Tuning) function electronically narrows or moves the IF passband widths at two stages to avoid or remove interfering signals.

Flexible filter selection

Up to two optional filters*² can be installed, providing flexible bandwidth selection.

*² One each for 9MHz and 455kHz IF stage.

• Filter Construction



DSP capability

With the optional UT-106 DSP unit installed,* you can activate a noise reduction function that improves the S/N ratio. And the automatic notch filter automatically cuts interference from carriers. These digital functions pull desired signals out of noise, and provide superior receive quality.

* Already installed with some versions.

Front mounted loud speaker

The IC-R75 has the speaker mounted on the front panel. With the speaker facing the operator, audio is heard clearly and directly while operating.

Simple operation

The function display has a large alphanumeric readout that indicates up to 8-character memory names for easy recognition. Often-used keys such as mode switches, filter and tuning step have been placed above the tuning dial for easy access.

Other features

- Internal clock with ON/OFF, sleep timer
- 20dB attenuator and 2-level preamplifier
- 99 memories and 2 program scan edges with 8-digit memory name
- Selectable AGC (FAST/SLOW/OFF)
- Noise blanker for eliminating pulse type noise
- RTTY/CW reverse mode and CW pitch control
- Various scanning functions
- Adjustable LCD backlighting
- CI-V capability for computer control
- RS-232C serial interface connector



Scan, monitor, record!

COMMUNICATIONS RECEIVER
0.150 – 3304.999MHz coverage*1

IC-R20



2 for 1, Dualwatch receive

Until the IC-R20, the capability of monitoring two frequencies required two radios. Whether you need to monitor local public safety, air traffic control, or listening to two drivers at the track, even listen to play by play from both FM broadcast and radio!

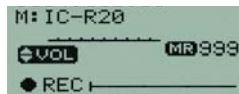


Shortwave to microwave, Wideband coverage

The IC-R20 covers 150kHz to 3304.999MHz*1 in SSB, CW, AM, FM and WFM modes. When receiving in dualwatch, the combination of channels is limited to 150kHz to 469.999MHz (VFO A) and 118MHz to 174.999MHz or 330MHz to 1304.999MHz in AM, FM, WFM modes (VFO B). *1 Depending on version, U.S.A. version is cellular blocked.

4-hour digital recorder

The IC-R20 has an internal 32MB digital recorder capable of storing received communications. This feature is useful in a variety of ways, like recording wireless microphone audio at a meeting. There is also a USB port to download to a computer for storage or to forward to a friend. (PC playback not possible)



Alphanumeric memory channels

With 1,000 regular memory channels, 200 automatic memory scan channels and 25 pairs of frequency scan edges, the IC-R20 makes it easy to identify received signals with the capability of assigning a name to each channel.

CTCSS, DTCS tone signaling

When multiple users share the same channel, they must use specialized signaling to reduce interference from other users. The two popular signaling formats, CTCSS and DTCS, are standard in the IC-R20.

11 hours of continuous receive*2

Icom's energy efficient design allows the IC-R20 11*2 hours of continuous reception from the internal Li-Ion battery pack. Also, the IC-R20 can operate with 3 AA Alkaline cells for longer operation. Charging of the internal battery pack is possible from either an optional cigarette lighter cable or the supplied AC adapter.

*2 Single receive in FM mode at Max. AF audio.

See your signals

Sometimes hearing a signal is not enough, so the IC-R20 includes a band scope. The band scope enables you to see signals around a monitored frequency. An additional function of the band scope is the ability to hear the signal while sweeping a range, so you can see if the signal is modulated.



Scan features

The IC-R20 is Icom's fastest receiver with 100*3 channels per second scanning speed. You can tag memory channels into dynamic banks, ranging from a maximum of 100 channels per bank (Max. 26 banks) as well as link multiple banks for customized memory bank scanning. Additionally, the IC-R20 offers multiple scanning controls such as scan delay and scan resume for received signal notification. *3 In VFO mode.

Other superior features...

- VSC (Voice Squelch Control) opens the squelch only when a modulated signal is detected.
- Offset monitor capability
- Auto squelch and squelch monitor capability
- Built-in attenuator and RF gain control
- Noise blanker, ANL (Auto Noise Limiter), AF filter
- AFC (Auto Frequency Control) function
- PC remote control capability with optional CT-17
- Built-in ferrite bar antenna for AM broadcast
- FM earphone cord antenna capability
- Dial speed-up function
- Auto power off and power save functions
- Reversible rotary selector and up/down buttons
- Weather channel* (* U.S.A. version only)
- Preprogrammed shortwave channels



Icom's fastest scanning wideband portable receiver

COMMUNICATIONS RECEIVER
0.100 – 1309.995MHz coverage*¹

IC-R6

Rugged
MIL-STD 810

100kHz–1309.995MHz* wideband coverage

While the IC-R6 receives an ultra wideband frequency range, the radio provides superior sensitivity and receiver characteristics that is unsusceptible to interference. Amateur stations, AM, FM, short wave broadcasts, TV audio* and a variety of utility communications can be caught and listened to.

* Frequency range depends on version. Analog TV audio only. Cannot decode digital TV audio.

100 Ch/Sec. high speed scan

The IC-R6 has 100 channels per second high speed scan capability*. This superior scanning power allows the utmost efficiency when searching over 1300MHz of spectrum!

* VFO mode scanning.

15 hours of continuous receive capability*

The IC-R6 is energy-efficient, designed to provide many hours of listening enjoyment on a single charge. With the supplied rechargeable Ni-MH cells (1400mAh x2), the IC-R6 provides up to 15 hours of continuous receive capability*.

* At 50mW output using external speaker.

1300 memory channels with 22 memory banks

With 1300 alphanumeric memory channels, 50 scan edges and 200 auto write memories, the IC-R6 gives you flexible scanning. Use the bank link scan feature to choose from and connect any of the 22 memory banks.

Multiple power choices

The IC-R6 can be powered by rechargeable Ni-MH cells, or with alkaline batteries. Run the IC-R6 using the AC adapter, BC-196SA/SD, or opt for a cigarette lighter cable, CP-18A/E. When used the optional drop-in charger stand BC-194 and the AC adapter or cigarette lighter cable, you can easily start charging the Ni-MH cells, while on the move.

CI-V remote control capability

When used with the optional CT-17 CI-V remote controller, the IC-R6 can be controlled from a PC. You can change frequencies, mode, volume level, etc.,

VSC (Voice Squelch Control)






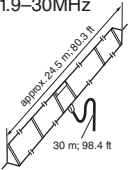



The VSC opens the squelch only when a modulated signal is detected and ignores unmodulated beat noise. It is a handy feature for those listeners who are scanning for talk, news and music, but not data bursts or beacons.

More outstanding features...




- Built-in audio low pass filter
- ± 1.0 ppm high frequency stability (at 25°C)
- Earphone cord antenna for AM aviation as well as FM broadcast
- Ferrite bar antenna for AM broadcast
- 150mW loud audio with internal speaker
- DTCS and CTCSS tone squelch and reverse tone squelch
- Priority watch function with priority beep
- PC programmable with optional CS-R6
- Receiver-to-receiver cloning (optional OPC-474 required)
- Auto power OFF (0.5–2 hours and end of busy signal)
- Compact, drip-resistant construction
- Duplex operation monitoring
- Automatic LCD backlight
- Dial speed acceleration
- Built-in RF attenuator
- Auto memory write scan stores the detected frequency, mode and tone into a specified memory
- Reversible up/down buttons and dial knob for volume, frequency, memory channel, scan direction and set mode settings
- Weather channel receive with weather alert (USA version only)












OPTIONS FOR BASE RECEIVERS

MODEL NAME	AC ADAPTER	EXTERNAL SPEAKERS			EXTERNAL ANTENNAS		CARRYING HANDLE	HIGH STABILITY CRYSTAL UNITS	
	AD-55S*1	SP-21	SP-23	SP-34	AH-8000 100-3335MHz	AH-710 1.9-30MHz	MB-23	CR-282 ±0.5ppm	CR-293 ±0.5ppm
									
IC-R9500				✓	✓				
IC-R8500	✓	✓	✓		✓	✓	✓		✓
IC-R75	✓	✓	✓			✓	✓	✓	

*1 AD-55S USA version and Europe version available.

MODEL NAME	CI-V CONVERTER	DSP UNIT	P25 DIGITAL UNIT	DC POWER CABLE
	CT-17	UT-106	UT-122	OPC-023D
				
IC-R9500	✓		✓	
IC-R8500	✓			✓
IC-R75	✓	✓		

MODEL NAME	9MHz FILTERS					455kHz FILTERS			
	FL-100 CW/RTTY narrow; 500Hz/-6dB	FL-101 CW narrow; 250Hz/-6dB	FL-103 SSB wide; 2.8kHz/-6dB	FL-223 SSB narrow; 1.9kHz/-6dB	FL-232 CW/RTTY narrow; 350Hz/-6dB	FL-52A CW/RTTY narrow; 500Hz/-6dB	FL-53A CW narrow; 250Hz/-6dB	FL-222 SSB narrow; 1.8kHz/-6dB	FL-257 SSB wide; 3.3kHz/-6dB
									
IC-R9500									
IC-R8500						✓			
IC-R75	✓ <small>(One of these 9MHz filters)</small>	✓ <small>(One of these 9MHz filters)</small>	✓ <small>(One of these 9MHz filters)</small>	✓ <small>(One of these 9MHz filters)</small>	✓ <small>(One of these 9MHz filters)</small>	✓ <small>(One of these 455kHz filters)</small>	✓ <small>(One of these 455kHz filters)</small>	✓ <small>(One of these 455kHz filters)</small>	✓ <small>(One of these 455kHz filters)</small>

* Some options may not be available in some countries. Please ask your dealer for details.

: Applicable : Not applicable

OPTIONS FOR HANDHELD RECEIVERS

MODEL NAME	BATTERY ASSEMBLY	CHARGERS		AC ADAPTER	CHARGER STAND	CIGARETTE LIGHTER CABLES		CARRYING CASES	
	BP-206 (Li-Ion) 3.7V/1920mAh (min.), 2100mAh (typ.)	BC-153SA/SE WALL CHARGER	BC-156 * ⁵ RAPID CHARGER	BC-196SA/SD * ⁶	BC-194	CP-18A/E	CP-23L	LC-146A	LC-158
IC-R20	✓	✓	✓			✓	✓		✓
IC-R6				✓	✓ (Use with BC-196 or CP-18)	✓	✓ (Use with BC-156)	✓	

*⁵ BC-156 USA/Europe versions available.

*⁶ BC-196SA/SD for exclusive use with the IC-R6 and BC-194 only.

MODEL NAME	CLONING CABLES			CLONING SOFTWARE		ANTENNA ADAPTER	EARPHONES		CI-V CONVERTER
	OPC-474 Receiver-to-receiver	OPC-478 Receiver to PC RS-232C cable	OPC-478UC Receiver to PC USB cable	CS-R6	CS-R20 With USB cable	AD-925MA BNC to SMA	SP-13	SP-27 Tube earphone	CT-17
IC-R20					✓		✓	✓	✓
IC-R6	✓	✓	✓	✓		✓	✓	✓	✓

* Some options may not be available in some countries. Please ask your dealer for details.

: Applicable : Not applicable



Applicable U.S. Military Specifications
Icom makes rugged products that have been tested to and passed the MIL-STD requirements and strict environmental standards for shock (MIL-810C, D, E or F) and vibration (MIL-810C, D, E or F).
Look for this logo to determine which models meet these requirements.

SPECIFICATIONS FOR BASE RECEIVERS

	IC-R9500	IC-R8500	IC-R75	
General	Frequency coverage (Differs according to version)	0.005–3335.000000MHz* ¹	0.1–1999.99999MHz Guaranteed range 0.1–1000, 1240–1300MHz	30kHz–60MHz Guaranteed range 0.1–29.99 and 50–54MHz
	Mode	USB, LSB, CW, FSK, AM, FM, WFM, P25* TV* ² (NTSC M, PAL B/G, PAL I, PAL D and SECAM K) * Optional UT-122 required.	USB, LSB, AM, AM-N, AM-W, CW, CW-N*, FM, FM-N, WFM * Optional CW narrow filter required.	USB, LSB, CW, RTTY, AM, FM
	Frequency stability	±0.05ppm (25°C; after 5 min. warm up)	±100Hz (below 30MHz) ±3ppm (above 30MHz)	±7ppm (25°C; from 1 min. to 60 min. after power ON)
	Maximum current drain	100VA (Power consumption)	2.0A at 13.8V DC	1.1A at 13.8V DC
	Power supply requirement	100, 120, 230, 240V AC	13.8V DC 15% or 117, 220, 240V AC with AD-55S	13.8V DC 15% or 117, 220, 240V AC with AD-55S
	Antenna connector	SO-239 (50Ω for HF) Phono (RCA: 500Ω for HF) Type-N × 2* ³ (50Ω)	SO-239 (50Ω for HF) Phono (RCA: 500Ω for HF) Type-N (50Ω for above 30MHz)	SO-239 (50Ω) 500Ω terminals
	Number of memory channels	1220 (including 100 auto memory write, 100 memory scan skip and 20 scan edges)	1021 (including 20 scan edges, 1 priority)	101 (including 2 scan edges)
	Dimensions (W×H×D; Projections are not included)	424×149×340 mm; 16.69×5.87×13.39 in	287×112×309 mm; 11.3×4.41×12.17 in	241×94×229 mm; 9.49×3.7×9.02 in
	Weight (approx.)	20kg; 44.1lb	7.0kg; 15.4lb	3.0kg; 6.6lb
Receiver	Sensitivity (typical) SSB, CW, RTTY, AM: at 10dB S/N FM, WFM: at 12dB SINAD	SSB, CW, FSK (BW=2.4kHz): 0.1–1.799MHz 0.5μV (Preamp1 ON) 1.8–29.999MHz 0.2μV (Preamp1 ON) 30–2999.999MHz 0.32μV (Preamp ON) 3000–3335MHz 1.0μV (Preamp ON) AM (6.0kHz): 0.1–1.799MHz 6.3μV (Preamp1 ON) 1.8–29.999MHz 2.5μV (Preamp1 ON) 30–2999.999MHz 3.5μV (Preamp ON) 3000–3335MHz 11μV (Preamp ON) FM (15kHz): 28–29.999MHz 0.5μV (Preamp1 ON) 30–2999.999MHz 0.5μV (Preamp ON) 3000–3335MHz 1.6μV (Preamp ON) FM50k (50kHz): 28–29.999MHz 0.71μV (Preamp1 ON) 30–2999.999MHz 0.71μV (Preamp ON) 3000–3335MHz 2.2μV (Preamp ON) WFM (180kHz): 30–2999.999MHz 1.4μV (Preamp ON) 3000–3335MHz 4.5μV (Preamp ON)	SSB, CW, RTTY: 0.1–0.5MHz 1.0μV 0.5–1.8MHz 2.0μV 1.8–2.0MHz 0.25μV 2.0–30MHz 0.2μV 30–1000MHz 0.32μV 1240–1300MHz 0.32μV AM: 0.1–0.5MHz 6.3μV 0.5–1.8MHz 13μV 1.8–2.0MHz 3.2μV 2.0–1000MHz 2.5μV 1240–1300MHz 2.5μV AM-N: 1.8–2.0MHz 2.5μV 2.0–1000MHz 2.0μV 1240–1300MHz 2.0μV AM-W: 30–1000MHz 3.2μV 1240–1300MHz 3.2μV FM: 28–1000MHz 0.5μV 1240–1300MHz 0.5μV WFM: 30–1000MHz 1.4μV 1240–1300MHz 2.0μV	SSB, CW, RTTY: 0.1–1.8MHz 2.0μV (Preamp OFF) 1.8–29.99MHz 0.16μV (Preamp1 ON) 50–54MHz 0.13μV (Preamp2 ON) AM: 0.1–1.8MHz 5.6μV (Preamp OFF) 1.8–29.99MHz 1.6μV (Preamp1 ON) 50–54MHz 1.0μV (Preamp2 ON) FM: 28–29.99MHz 0.22μV (Preamp1 ON) 50–54MHz 0.2μV (Preamp2 ON)
	Selectivity	SSB, FSK: 2.4kHz/–3dB (BW=2.4kHz*) 3.6kHz/–60dB CW (500Hz): 500Hz/–3dB 700Hz/–60dB AM (6kHz): 6.0kHz/–3dB 15.0kHz/–60dB FM (15kHz): 12kHz/–3dB 25kHz/–60dB WFM: 180kHz/–6dB *variable between 50Hz and 3.6kHz	SSB, AM-N, RTTY: 2.2kHz/–6dB AM, FM-N: 5.5kHz/–6dB AM-W, FM: 12kHz/–6dB WFM: 150kHz/–6dB	SSB, CW, RTTY: 2.1kHz/–6dB 4.0kHz/–60dB AM: 6.0kHz/–6dB 20kHz/–50dB 12kHz/–6dB 30kHz/–50dB FM:
	Spurious and image rejection	More than 70dB (0.1–30MHz) More than 50dB (30–2500MHz) More than 40dB (2500–3000MHz)	More than 60dB (1.8–30MHz) 50dB typical (above 30MHz)	More than 70dB (Except IF point and 50MHz band)
	AF power (at 10% distortion)	2.6W with an 8Ω load	2.0W with an 8Ω load	2.0W with an 8Ω load
External speaker connector	2-conductor 3.5 (d) mm (1/8")/8Ω	2-conductor 3.5 (d) mm (1/8")/4–8Ω	2-conductor 3.5 (d) mm (1/8")/8Ω	

*¹ USA version: 0.005–821.999, 851–866.999, 896–3335MHz. *² TV tuner is not available in the USA version except for export or to authorized government users. *³ One each for 30–1149.999MHz, 1150–3335MHz
* The LCD display may have cosmetic imperfections that appear as small or dark spots. This is not a malfunction or defect, but a normal characteristic of LCD displays.

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

If re-exporting the **IC-R9500**, it is your responsibility to check you are in compliance with the export regulations of your country or the country you are exporting to. Export regulations can be highly restrictive in relation to some of the technology implemented in this product. Your failure to comply with export regulations may subject you to fines or penalties. Please consult with the relevant Government Department in your country.

SPECIFICATIONS FOR MOBILE AND HANDHELD RECEIVERS

	IC-R20	IC-R6	
General	Frequency coverage (Differs according to version)	0.150–1304.999, 1305–3304.999MHz*1 (VFO A): 0.150–469.999MHz (VFO B): 118–174.999, 330–1304.999MHz	0.100–1309.995MHz*2
	Mode	FM, WFM, AM, USB*, LSB*, CW* * 0.150–469.999MHz only.	FM, WFM, AM
	Frequency stability	±6ppm (–10°C to +60°C; +14°F to +140°F)	±1.0ppm (at 25°C; +77°F) ±2.5ppm (–10°C to +60°C; +14°F to +140°F on the basis of 25°C; +77°F)
	Current drain	Rated audio output*3 : 150mA typ. (at 3.7V DC)	Rated audio output*4 : 130mA typ. (at 3.0V DC)
	Battery pack or cells	BP-206, 3 × LR6 (AA) alkaline cells	2 × R6 (AA) size Ni-MH or alkaline cells
	Power supply requirement	6.0V DC (with BC-153 or CP-18A/E)	4.5V DC (with BC-196SA/SD or CP-18A/E)
	Antenna connector	BNC (50Ω)	SMA (50Ω)
	Number of memory channels	1000 memory channels, 200 auto write memory channels, and 50 scan edges	1300 memory channels, 200 auto write memory channels and 50 scan edges
	Dimensions (W×H×D; Projections are not included)	60×142×34.8 mm; 2.36×5.59×1.37 in	58×86×29.8 mm; 2.2×3.39×1.17 in
	Weight (approx.)	320g; 11.3oz (With antenna and BP-206)	200g; 7.1oz (With antenna and battery cells)
Receiver	Sensitivity (less than, except spurious points)	FM (at 12dB SINAD): 1.620–4.999MHz 0.56μV 5.000–221.999MHz 0.4μV 330–832.999MHz 0.56μV 833–1304.999MHz 0.71μV 1330–2304.999MHz 5.6μV 2330–2999.999MHz 18μV WFM (at 12dB SINAD): 76–108.000MHz 1.8μV 175–221.999MHz 1.8μV 470–769.999MHz 2.5μV AM (at 10dB S/N): 0.495–4.999MHz 2.2μV 5.000–29.999MHz 1.4μV 118–135.999MHz 1.4μV SSB, CW (at 10dB S/N): 0.495–4.999MHz 0.4μV 5.000–29.999MHz 0.25μV 50–53.999MHz 0.25μV 118–146.999MHz 0.25μV 330–469.999MHz 0.32μV	FM (typical at 12dB SINAD): 1.625–4.995MHz 0.32μV 5.000–29.995MHz 0.25μV 30–117.995MHz 0.18μV 118–246.995MHz 0.18μV 247–469.995MHz 0.18μV 470–832.995MHz 0.32μV 833–1029.995MHz 0.28μV 1030–1309.995MHz 0.35μV WFM (typical at 12dB SINAD): 76–108.000MHz 1.1μV 175–221.995MHz 1.1μV 470–770.000MHz 1.8μV AM (typical at 10dB S/N): 0.495–4.995MHz 1.3μV 5.000–29.995MHz 0.89μV 118–136.000MHz 0.63μV 222–246.995MHz 0.63μV 247–329.995MHz 0.79μV
	Selectivity	AM, FM: 12kHz/–6dB 30kHz/–60dB WFM: 150kHz/–6dB SSB, CW: 1.8kHz/–6dB	AM, FM: 12kHz/–9dB 30kHz/–60dB WFM: 150kHz/–6dB
	AF power (at 10% distortion)	100mW typ. with an 8Ω load	150mW with a 16Ω load (Int. SP) 80mW typ. with an 8Ω load (Ext. SP)
	External speaker connector	2-conductor 3.5 (d) mm (1/8")/8Ω	2-conductor 3.5 (d) mm (1/8")/8Ω

*1 USA version : 0.150–821.999, 851–866.999, 896–1304.999, 1305–3304.999MHz. *2 USA version : 0.100–823.995, 851–866.995, 896–1309.995MHz.

*3 Single receive mode, IC recorder OFF *4 External SP, backlight OFF.

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FUNCTIONS COMPARISON CHART

Model Name	IC-R9500	IC-R8500	IC-R75	IC-R20	IC-R6
Frequency coverage*1 Low band edge	5kHz	100kHz	30kHz	150kHz	100kHz
HF	✓	✓	✓	✓	✓
50MHz	✓	✓	✓	✓	✓
144MHz	✓	✓	-	✓	✓
430/440MHz	✓	✓	-	✓	✓
800MHz*1	✓	✓	-	✓	✓
1200MHz	✓	✓	-	✓	✓
2400MHz	✓	-	-	✓	-
High band edge	3335.000MHz	1999.999MHz	60.000MHz	3304.999MHz	1309.995MHz
FM, AM, WFM	✓	✓	✓	✓	✓
SSB, CW	✓	✓	✓	✓	-
S-AM	✓	-	-	-	-
P25	✓ (With UT-122)	-	-	-	-
Analog TV (Image)	✓*3	-	-	-	-
Memory channels	1220	1021	101	1250	1550
Memory banks	13	20	-	26	22
10-key pad	✓	✓	✓	✓	-
Pass band tuning	✓	IF shift	✓	-	-
Minimum tuning step	1Hz	10Hz	1Hz	10Hz	5kHz
8.33 tuning step	-	-	-	✓	✓
Dualwatch	-	-	-	✓	-
Band scope	✓	-	-	✓	-
Recorder	✓	-	-	✓	-
PC cloning	-	-	-	CS-R20	CS-R6
USB connector	✓	-	-	✓	-
CI-V connection	CT-17	CT-17	CT-17	CT-17	CT-17
Auto frequency control	✓	✓	-	✓	-
Auto notch	✓	-	✓ (With UT-106)	-	-
Noise blanker	✓	✓	✓	✓	-
Noise reduction	✓	-	✓ (With UT-106)	-	-
Voice squelch control	✓	✓	-	✓	✓
DSP	✓ (IF DSP)	-	UT-106	-	-
Optional filter	(DSP filter)	✓	✓	-	-
Tone squelch	✓	-	-	✓	✓
DTCS squelch	✓	-	-	✓	✓
Weather alert	-	-	-	✓	✓
AM bar antenna	-	-	-	✓	✓
FM earphone antenna	-	-	-	✓	✓
Scan speed (Max.)*2	50 ch/sec.	40 ch/sec.	20 ch/sec.	100 ch/sec.	100 ch/sec.

*1 Frequency range shows working range. Some frequency ranges are not guaranteed. Cellular bands are blocked in the USA version.

*2 Scan speed differs depending on operating conditions. *3 Depending on version.

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