

  
ICOM

# COMMUNICATIONS RECEIVERS



**SIMPLY THE BEST**

Icom Inc.

# Professional communications receiver

## with high performance spectrum scope



PROFESSIONAL COMMUNICATIONS RECEIVER  
0.005 – 3335MHz coverage\*<sup>1</sup>  
**IC-R9500**



### Wideband coverage

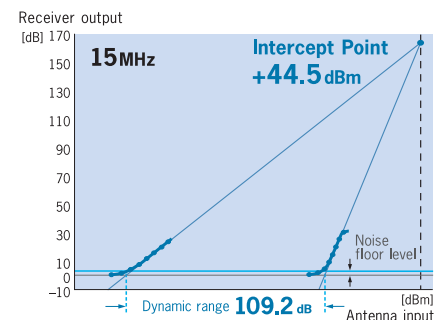
The IC-R9500 covers 0.005–3335MHz\*<sup>1</sup> in SSB, AM, FM, WFM, CW, FSK and P25\*<sup>2</sup> modes. It is suitable for a wide variety of radio monitoring and listening activities.

\*<sup>1</sup> Frequency range differs depending on version.

\*<sup>2</sup> 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

Various modes are supported for listening not only to amateur bands, FM or TV Broadcast stations, but also marine and aviation communications. The IC-R8500 covers a wide frequency range — continuously from 0.1 to 1999.99999MHz\* with 10Hz resolution.

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

### 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.

### Versatile scanning functions

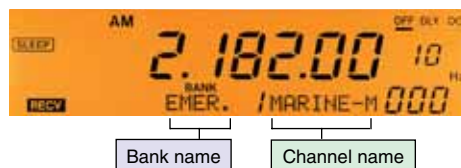
Basic scanning, memory, priority and program scans are available. For more advanced needs, specific scans can also be selected. VSC (voice scan control) provides efficient scanning by skipping unmodulated signals.

### 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.

### 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. 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.



### Other outstanding features

- REC and REC-Remote terminals for tape 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
- Optional UT-102 Voice Synthesizer
- 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 connector

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

### PC remote control

The optional RS-R8500 software allows you to control the IC-R8500 from your PC. All the receiver functions can be accessed from the front panel screen. The memory channel list and program scan list makes it easier to edit the contents, and the band scope screen provides a special function the IC-R8500 does not provide. When you find a busy frequency, clicking on the screen will tune to that frequency.



Front Panel Screen



Band scope Screen



Rear view

# HF/50MHz coverage and innovative features...



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

## IC-R75

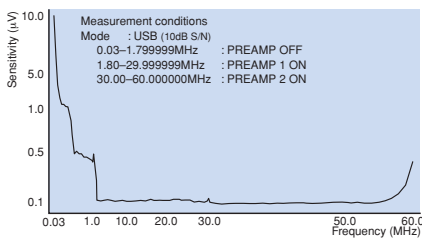


### High sensitivity receiver circuit

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.

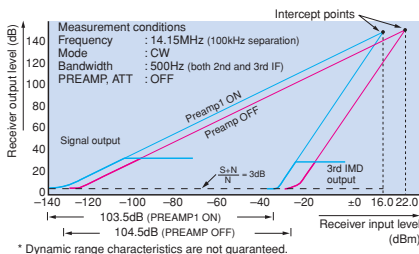
#### • Receive sensitivity characteristics example



### 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



\* Dynamic range characteristics are not guaranteed.

### Twin PBT capability

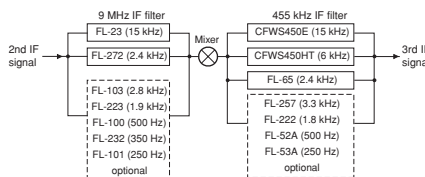
The twin PBT (Passband Tuning) function electronically narrows or moves the IF passband widths at two stages to avoid or remove interfering signals.

### 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 provide 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

- Optional PC remote control software RS-R75
- 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



# Dualwatch, wideband receiver & PC control software



Tool bar

Multi-function receiver screen

**COMMUNICATIONS RECEIVER**  
0.01 – 3299MHz coverage\*4

# IC-R2500



With optional UT-122

## Dualwatch capability

The IC-R2500 has a dualwatch receive capability\*1, allowing you to receive two bands simultaneously. It covers 0.01–3299.999 MHz in AM, FM, WFM, SSB, CW, DV\*2 and P25\*3 on the main band, while the sub-band covers 50–1300MHz in AM, FM and WFM modes.

\*1 Two antennas are required for dualwatch receive. \*2 Optional UT-118 required. \*3 Optional UT-122 required. Already installed with some versions. \*4 Frequency range differs depending on version.

## Diversity receive capability

The diversity receive\* mode is useful for mobile operation where the receive conditions change continuously. It compares the signal strength and dynamically chooses the antenna with better signal strength to maintain good sound quality.

\* Two antennas are required. Available in FM/DV/P25 mode between 50–1300MHz only. Cannot use the diversity receive function while using the dualwatch function.

## Digital mode reception

The optional UT-118 D-STAR digital unit and UT-122\* P25 digital unit provide the latest digital mode reception. Catch the action in digital communications!

\* Already installed with some versions.

## Both remote controller and PC control software are available

The IC-R2500 provides two types of configuration as mobile and PC control receiver.

## 3 selectable interface screens

USB cable is employed for PC to receiver connection. Choose the look you want from three user interface screens. “Multi-function receiver”, “Component” and “Simple” screen are selectable. You can record audio in WAV format directly through the USB port.

## Multi channel monitor function

You can monitor up to 25 channels. The software tracks the channel activities with S-meter levels. Simply click the busy channel and the IC-R2500 tunes to the active channel.



## Other features (common to PC and remote controller)

- Optional AF DSP capability with UT-106
- CTCSS/DTCS tones and duplex mode
- Weather alert function (USA and Canada versions only)
- VSC (Voice squelch control)
- IF filter width selection
- IF shift function (SSB, CW mode only)
- Noise blanker (SSB, CW, AM mode only)
- AFC function follows signal frequency drift in FM mode (BW: 6kHz or 15kHz)
- Fast/slow AGC setting
- RF attenuator (below 1300MHz)
- Short/long squelch delay

## PC control software features

- Band scope and time-line scope
- DTMF remote control capability
- S-meter squelch
- Auto memory write scan stores detected frequency and mode into the PC memory.
- Up to 2600 memory channels per file

## Remote controller features

- Wide LCD display for independent band control
- Amber and green LCD backlight
- 1000 alphanumeric memory channels
- 30 min–2 hour auto power off timer

## IC-R2500 PC requirements

- Microsoft® Windows Vista® and Windows® 7/XP
  - Intel® Pentium® III 450MHz or faster (Pentium® 4 recommended)
  - USB 1.1 or 2.0
  - Hard disk with at least 50 MB of free disk space
  - At least 128 MB of memory (256MB or more recommended)
  - Display with 1024 × 768 pixel resolution, high color
  - CD-ROM or DVD drive for software installation
  - Additional hard disk space is required for recording sound or storing scope data
- Please note: USB audio dropouts or gaps may occur because of a lack of PC power

## Supplied accessories

- AD-113S\* • Controller cable, 3.5m; 11.5ft • Antenna
- USB cable • Software CD • Controller head

\* This receiver consumes vehicle battery power in stand-by mode. We advise you to turn off the main unit power switch after use.

# Scan, monitor, record!

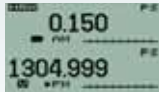
COMMUNICATIONS RECEIVER  
0.150 – 3304.999MHz coverage\*1

## 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 analog TV audio 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)



### 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.

\*3 In VFO mode.

### Other superior features...

- Alphanumeric memory channels
- CTCSS, DTCS tone signaling
- 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 TV and shortwave channels

# Icom's fastest scanning wideband portable receiver

COMMUNICATIONS RECEIVER  
0.100 – 1309.995MHz coverage\*1

## IC-R6



### 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 insusceptible 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.






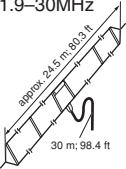



### Other features

- Multiple power choices
- CI-V remote control capability
- VSC (Voice Squelch Control)
- Built-in audio low pass filter
- ±1.0ppm 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



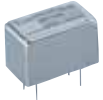




- Automatic LCD backlight
- Dial speed acceleration
- Built-in RF attenuator
- Auto memory write scan stores the detected frequency, mode and tone into a specified memory
- Reversible up/down buttons and dial knob for volume, frequency, memory channel, scan direction and set mode settings
- Weather channel receive with weather alert (USA version only)












# OPTIONS FOR BASE RECEIVERS

	AC ADAPTER	EXTERNAL SPEAKERS			EXTERNAL ANTENNAS		MOBILE BRACKETS		CARRYING HANDLE
MODEL NAME	AD-55 <sup>*1</sup>	SP-20	SP-21	SP-23	AH-8000 100–3335MHz	AH-710 1.9–30MHz	IC-MB5	MB-12	MB-23
									
IC-R9500		✓			✓				
IC-R8500	✓	✓	✓	✓	✓	✓		✓	✓
IC-R75	✓	✓	✓	✓		✓	✓		✓










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

	REMOTE CONTROL SOFTWARE	CI-V CONVERTER	HIGH STABILITY CRYSTAL UNITS		VOICE SYNTHESIZER	DSP UNIT	P25 DIGITAL UNIT	DC POWER CABLE	
MODEL NAME	RS-R75	RS-R8500	CT-17	CR-282 ±0.5ppm	CR-293 ±0.5ppm	UT-102	UT-106	UT-122	OPC-023
									
IC-R9500			✓					✓	
IC-R8500		✓	✓		✓	✓			✓
IC-R75	✓		✓	✓		✓			

	9MHz FILTERS					455kHz FILTERS			
MODEL NAME	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.

# OPTIONS FOR MOBILE RECEIVER

	AC ADAPTER	EXTERNAL SPEAKER	EXTERNAL ANTENNA	CIGARETTE LIGHTER CABLE	DC POWER CABLE	CONTROLLER BRACKET	MOUNTING BASE	EXTENSION CABLE	DSP UNIT
MODEL NAME	AD-113 <sup>*2</sup>	SP-10	AH-8000 100–3335MHz	CP-12L	OPC-254L	MB-84	MB-120	OPC-1156 3.5m; 11.5ft	UT-106
									
IC-R2500	✓	✓	✓ <sup>*3</sup>	✓	✓	✓	✓ <small>(Use with MB-84)</small>	✓	✓




\*2 AD-113S USA version and Europe version available.

\*3 The AH-8000 has a Type-N connector. Please arrange a separate antenna connector adapter.

: Applicable     : Not applicable












# OPTIONS FOR MOBILE RECEIVER

	DTMF DECODER UNIT	D-STAR DIGITAL UNIT	P25 DIGITAL UNIT
MODEL NAME	<b>UT-108</b>	<b>UT-118</b>	<b>UT-122</b>
			
<b>IC-R2500</b>	✓ <sup>*4</sup>	✓ <sup>*4</sup>	✓

<sup>\*\*</sup> Either of UT-108 or UT-118 can be installed.








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


# OPTIONS FOR HANDHELD RECEIVERS

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

<sup>\*5</sup> BC-156 USA/Europe versions available.

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

	CLONING CABLES			CLONING SOFTWARE		ANTENNA ADAPTER	EARPHONES		HEADPHONE
MODEL NAME	<b>OPC-474</b> Receiver-to-receiver	<b>OPC-478</b> Receiver to PC RS-232C cable	<b>OPC-478UC</b> Receiver to PC USB cable	<b>CS-R6</b>	<b>CS-R20</b> With USB cable	<b>AD-925MA</b> BNC to SMA	<b>SP-13</b>	<b>SP-27</b> Tube earphone	<b>HP-4</b>
									
<b>IC-R20</b>					✓		✓	✓	
<b>IC-R6</b>	✓	✓	✓	✓		✓	✓	✓	✓

	CI-V CONVERTER
MODEL NAME	<b>CT-17</b>
	
<b>IC-R20</b>	✓
<b>IC-R6</b>	✓

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



**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.

: Applicable     : Not applicable

# SPECIFICATIONS FOR BASE RECEIVERS

	IC-R9500	IC-R8500	IC-R75	
General	<b>Frequency coverage</b> (Differs according to version)	0.005–3335.000000MHz* <sup>1</sup>	0.1–1999.999999MHz Guaranteed range 0.1–1000, 1240–1300MHz	30kHz–60MHz Guaranteed range 0.1–29.99 and 50–54MHz
	<b>Mode</b>	USB, LSB, CW, FSK, AM, FM, WFM, P25* TV** (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
	<b>Frequency stability</b>	±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)
	<b>Maximum current drain</b>	100VA (Power consumption)	2.0A at 13.8V DC	1.1A at 13.8V DC
	<b>Power supply requirement</b>	100, 120, 230, 240V AC	13.8V DC ±15% or 117, 220, 240V AC with AD-55	13.8V DC ±15% or 117, 220, 240V AC with AD-55
	<b>Antenna connector</b>	SO-239 (50Ω for HF) Phono (RCA: 500Ω for HF) Type-N × 2* <sup>3</sup> (50Ω)	SO-239 (50Ω for HF) Phono (RCA: 500Ω for HF) Type-N (50Ω for above 30MHz)	SO-239 (50Ω) 500Ω terminals
	<b>Number of memory channels</b>	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)
	<b>Dimensions</b> (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
	<b>Weight</b> (approx.)	20kg; 44.1lb	7.0kg; 15.4lb	3.0kg; 6.6lb
Receiver	<b>Sensitivity</b> (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)
	<b>Selectivity</b>	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 FM: 12kHz/–6dB 30kHz/–50dB
	<b>Spurious and image rejection</b>	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)
	<b>AF power</b> (at 10% distortion)	2.6W with an 8Ω load	2.0W with an 8Ω load	2.0W with an 8Ω load
<b>External speaker connector</b>	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	

\*<sup>1</sup> USA version: 0.005–821.999, 851–866.999, 896–3335MHz. \*<sup>2</sup> TV tuner is not available in the USA version except for export or to authorized government users. \*<sup>3</sup> 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.

IC-R8500 is for sale in the US to qualifying agencies or export only.

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-R2500	IC-R20	IC-R6	
General	<b>Frequency coverage</b> (Differs according to version, Unit: MHz)	Main band: 0.010–3299.999* <sup>1</sup> Sub band: 50–1300* <sup>1</sup> Guaranteed range 0.495–3000	0.150–1304.999, 1305–3304.999* <sup>2</sup> (VFO A): 0.150–469.999 (VFO B): 118–174.999, 330–1304.999	0.100–1309.995* <sup>3</sup>
	<b>Mode</b>	Main band: FM, WFM, AM, SSB* <sup>4</sup> , CW* <sup>4</sup> , DV* <sup>5</sup> , P25* <sup>6</sup> Sub band: FM, WFM, AM	FM, WFM, AM, USB* <sup>7</sup> , LSB* <sup>7</sup> , CW* <sup>7</sup> * 0.150–469.999MHz only.	FM, WFM, AM
	<b>Frequency stability</b>	±3ppm (Controller operation, –10°C to +60°C; +14°F to +140°F)	±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)
	<b>Current drain</b>	1.5A (Dualwatch mode)	Rated audio output* <sup>7</sup> : 150mA typ. (at 3.7V DC)	Rated audio output* <sup>8</sup> : 130mA typ. (at 3.0V DC)
	<b>Battery pack or cells</b>	–	BP-206, 3 × LR6 (AA) alkaline cells	2 × R6 (AA) size Ni-MH or alkaline cells
	<b>Power supply requirement</b>	12.0V DC ±15%	6.0V DC (with BC-153 or CP-18A/E)	4.5V DC (with BC-196SA/SD or CP-18A/E)
	<b>Antenna connector</b>	BNC × 2 (50Ω)	BNC (50Ω)	SMA (50Ω)
	<b>Number of memory channels</b>	Controller operation: 1000 PC operation: Unlimited (2600 channels/file)	1000 memory channels, 200 auto write memory channels, and 50 scan edges	1300 memory channels, 200 auto write memory channels and 50 scan edges
	<b>Dimensions</b> (W×H×D; Projections are not included)	Main unit: 146×41×206 mm; 5.75×1.61×8.11 in Controller: 140×50×27.5 mm; 5.51×1.97×1.08 in	60×142×34.8 mm; 2.36×5.59×1.37 in	58×86×29.8 mm; 2.2×3.39×1.17 in
	<b>Weight</b> (approx.)	Main unit: 1.35kg; 3lb Controller: 250g; 8.8oz	320g; 11.3oz (With antenna and BP-206)	200g; 7.1oz (With antenna and battery cells)
Receiver	<b>Sensitivity</b> (less than, except spurious points)	FM (12dB SINAD) : 28–49.999MHz 0.63μV 50–699.999MHz 0.5μV 700–1300.000MHz 0.63μV 1300–2299.999MHz 5.6μV 2300–3000.000MHz 18μV WFM (12dB SINAD) : 50–699.999MHz 1.4μV 700–1300.000MHz 1.8μV 1300–2299.999MHz 18μV 2300–3000.000MHz 56μV AM (10dB S/N) : 0.495–1.799MHz 25μV 1.8–49.999MHz 2.5μV 50–699.999MHz 2.0μV 700–1300MHz 2.5μV SSB, CW (10dB S/N): 0.495–1.799MHz 5.0μV 1.8–49.999MHz 0.5μV 50–699.999MHz 0.4μV 700–1300MHz 0.5μV	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
	<b>Selectivity</b>	SSB, CW, AM: 2.8kHz/–6dB AM, FM, SSB, CW: 6.0kHz/–6dB AM, FM: 15kHz/–6dB AM, FM, WFM: 50kHz/–6dB WFM: 230kHz/–6dB	AM, FM: 12kHz/–6dB 30kHz/–60dB WFM: 150kHz/–6dB SSB, CW: 1.8kHz/–6dB	AM, FM: 12kHz/–9dB 30kHz/–60dB WFM: 150kHz/–6dB
	<b>AF power</b> (at 10% distortion)	500mW with an 8Ω load	100mW typ. with an 8Ω load	150mW with a 16Ω load (Int. SP) 80mW typ. with an 8Ω load (Ext. SP)
	<b>External speaker connector</b>	2-conductor 3.5 (d) mm (1/8")/8Ω	2-conductor 3.5 (d) mm (1/8")/8Ω	2-conductor 3.5 (d) mm (1/8")/8Ω

\*<sup>1</sup> USA version : 0.01–809.999, 851–866.999, 896–1300, 1300.000001–1810.999, 1852–1867.999, 1897–2305.899, 2357–2811.999, 2853–2868.999, 2898–3109.799, 3136–3154.799, 3181–3299.999MHz.

\*<sup>2</sup> USA version : 0.150–821.999, 851–866.999, 896–1304.999, 1305–3304.999MHz. \*<sup>3</sup> USA version : 0.100–821.995, 851–866.995, 896–1309.995MHz.

\*<sup>4</sup> 0.495–1300MHz only. \*<sup>5</sup> With optional UT-118 \*<sup>6</sup> With optional UT-122 \*<sup>7</sup> Single receive mode, IC recorder OFF \*<sup>8</sup> External SP, backlight OFF.

\* 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.

\* The IC-R2500 has stand-by power consumption that will drain the vehicle battery over a period of time.

Please turn off the main unit power switch when not using the receiver while installed in a vehicle.

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

# FUNCTIONS COMPARISON CHART

	IC-R9500	IC-R8500	IC-R75	IC-R2500	IC-R20	IC-R6
<b>Frequency coverage*1</b>						
<b>Low band edge</b>	5kHz	100kHz	30kHz	10kHz	150kHz	100kHz
<b>HF</b>	✓	✓	✓	✓	✓	✓
<b>50MHz</b>	✓	✓	✓	✓	✓	✓
<b>144MHz</b>	✓	✓	–	✓	✓	✓
<b>430/440MHz</b>	✓	✓	–	✓	✓	✓
<b>800MHz*1</b>	✓	✓	–	✓	✓	✓
<b>1200MHz</b>	✓	✓	–	✓	✓	✓
<b>2400MHz</b>	✓	–	–	✓	✓	–
<b>High band edge</b>	3335.000MHz	1999.999MHz	60.000MHz	3299.999MHz	3304.999MHz	1309.995MHz
<b>FM, AM, WFM</b>	✓	✓	✓	✓	✓	✓
<b>SSB, CW</b>	✓	✓	✓	✓	✓	–
<b>S-AM</b>	✓	–	–	–	–	–
<b>P25</b>	✓ (With UT-122)	–	–	✓ (With UT-122)	–	–
<b>D-STAR DV</b>	–	–	–	✓ (With UT-118)	–	–
<b>TV (Image)</b>	✓*3	–	–	–	–	–
<b>Memory channels</b>	1220	1021	101	1000 (with controller)*4	1250	1550
<b>Memory banks</b>	13	20	–	21 (with controller)*4	26	22
<b>10-key pad</b>	✓	✓	✓	✓ (With PC)	✓	–
<b>Pass band tuning</b>	✓	IF shift	✓	IF shift (With PC)	–	–
<b>Minimum tuning step</b>	1Hz	10Hz	1Hz	1Hz (With PC)*5	10Hz	5kHz
<b>8.33 tuning step</b>	–	–	–	✓	✓	✓
<b>Dualwatch</b>	–	–	–	✓	✓	–
<b>Band scope</b>	✓	✓ (With RS-R8500)	✓ (With RS-R75)	✓ (With PC)	✓	–
<b>Recorder</b>	✓	–	–	✓ (With PC)	✓	–
<b>PC control software</b>	–	RS-R8500	RS-R75	✓	–	–
<b>PC cloning</b>	–	–	–	✓	CS-R20	CS-R6
<b>USB connector</b>	✓	–	–	✓	✓	–
<b>CI-V connection</b>	CT-17	CT-17	CT-17	–	CT-17	CT-17
<b>Auto frequency control</b>	✓	✓	–	✓	✓	–
<b>Auto notch</b>	✓	–	✓ (With UT-106)	✓ (With UT-106)	–	–
<b>Noise blanker</b>	✓	✓	✓	✓	✓	–
<b>Noise reduction</b>	✓	–	✓ (With UT-106)	✓ (With UT-106)	–	–
<b>Voice squelch control</b>	✓	✓	–	✓	✓	✓
<b>DSP</b>	✓ (IF DSP)	–	UT-106	UT-106	–	–
<b>DTMF decoder</b>	–	–	–	✓ (With PC)*6	–	–
<b>Optional filter</b>	(DSP filter)	✓	✓	–	–	–
<b>Tone squelch</b>	✓	–	–	✓	✓	✓
<b>DTCS squelch</b>	✓	–	–	✓	✓	✓
<b>Weather alert</b>	–	–	–	✓	✓	✓
<b>Diversity antenna</b>	–	–	–	✓	–	–
<b>AM bar antenna</b>	–	–	–	–	✓	✓
<b>FM earphone antenna</b>	–	–	–	–	✓	✓
<b>Scan speed (Max.)*2</b>	50 ch/sec.	40 ch/sec.	20 ch/sec.	60 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. \*4 2600 channels per file, 26 banks, when used with a PC. \*5 10Hz, when used with the controller. \*6 UT-108 is required for sub-band.

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