



COMMUNICATIONS RECEIVER

# IC-R2500

Rugged  
MIL-STD 810



With optional UT-122

## Dualwatch, Digital Mode, Diversity Receiver

### Dualwatch capability

The IC-R2500 has dualwatch receive capability<sup>\*1</sup>, allowing you to receive two bands simultaneously. It covers 0.01–3299.999 MHz in AM, FM, WFM, SSB, CW, DV<sup>\*2</sup> and P25<sup>\*3</sup> modes on the main receiver, while the sub-receiver covers 50–1300MHz in AM, FM and WFM modes<sup>\*4</sup>.

<sup>\*1</sup> Two antennas are required for dualwatch receive. <sup>\*2</sup> Optional UT-118 required. <sup>\*3</sup> Optional UT-122 required. Already installed with some versions.

<sup>\*4</sup> Frequency range differs depending on version.

### Diversity receive capability

The diversity receive<sup>\*</sup> mode is useful for mobile operation where the received signal changes continuously. It compares the signal strength and chooses the antenna with the better signal to maintain good sound and receive quality.

<sup>\*</sup> Two antennas are required. Available in FM/DV/P25 mode between 50–1300MHz only. Diversity reception is not available while using dualwatch.

### Wide LCD display for independent band control

The wide LCD display shows both main/sub receiver settings in an easy-to-read symmetric side-by-side layout. The controller provides separate tuning, volume, squelch knobs and function buttons for the left (Main) and right (Sub) receivers. The LCD backlit color is selectable between amber and green for your preference.

### Digital mode reception

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

<sup>\*</sup> Already installed with some versions.

### 1000 alphanumeric memory channels

With Icom's Dynamic Memory Scan, DMS, you have a versatile memory channel management system at your command. The 1000 memory channels can be arranged by service or personal preference in the 21 memory banks. Selectively link the channels together to scan depending on your needs. Programming the memory channels and 6 character memory names is simple with your PC.

### Other features

- Weather alert function (U.S.A. and Canada versions only)
- Optional DSP capability with UT-106
- VSC (Voice Squelch Control) ignores unmodulated signals or heterodynes
- IF filter selection for changing IF filter width
- Noise blanker eliminates pulse type noise (SSB, CW, AM mode only)
- AFC function automatically follows an FM signal when the signal's frequency drifts (BW: 6kHz or 15kHz)
- IF shift function (SSB, CW mode only)

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• 30 min – 2 hour auto power off timer • Fast/slow AGC setting • Short/long squelch delay • RF attenuator attenuates 20dB (approx.) (below 1300MHz) • CTCSS/DTCS tones and duplex mode operation for monitoring a repeater • All IC-PCR2500 functions are available when connected to a PC • Cloning function allows you to read/write memory contents from your PC. Sharing data with IC-PCR2500 is also possible.

• U.S.A. Customers check out [www.icomreceivers.com](http://www.icomreceivers.com) for frequency lists in your neighborhood and region. (Based on FCC licensee database.)

**Turn off the Main unit power switch when not using the IC-R2500 while installed in a vehicle. The IC-R2500 has standby power consumption that will drain the vehicle battery over a period of time.**

## SPECIFICATIONS

### GENERAL

• Frequency coverage and mode :

|               | Frequency coverage                                | Mode                        |
|---------------|---|-----------------------------|
| Main receiver | 0.010–3299.999MHz*1<br>(Guaranteed 0.495–3000MHz) | AM, FM, WFM,<br>DV*2, P25*3 |
|               | 0.495–1300MHz*1                                   | USB, LSB, CW                |
| Sub-receiver  | 50–1300MHz*1                                      | AM, FM, WFM                 |

\*1 Some frequency bands are blocked in the U.S.A. version.  
\*2 Optional UT-118 required. \*3 Optional UT-122 required.  
France 0.010–29.999\*1, 50.200–51.200, 87.500–107.999,  
144–146, 430–440, 1240–1300MHz

- \*4 Main receiver only. Guaranteed range 0.495–29.999MHz.
- Usable temperature range : -10°C to +60°C; +14°F to +140°F  
When using with a PC 0°C to +60°C; +32°F to +140°F
- Frequency stability : Less than ±3ppm on the basis of 25°C (-10°C to +60°C)
- Tuning steps : 10Hz (minimum with controller)  
1Hz (minimum with PC)
- Power supply : 12.0V DC ±15%
- Current drain (at 12.0V DC) :  
Max. audio Less than 1.5A (Dual mode)  
Stand-by 0.85A typ. (Dual mode)
- Antenna Impedance : 50Ω (BNC)
- Dimensions (W×H×D; projections are not included) :  
Main unit 146×41×206 mm; 5¾×1½×8½ in  
Controller 140×50×39 mm; 5½×1¾×1½ in
- Weight (approx.) :  
Main unit 1350g; 3lb  
Controller 250g; 8.8oz (including cable)

### RECEIVER

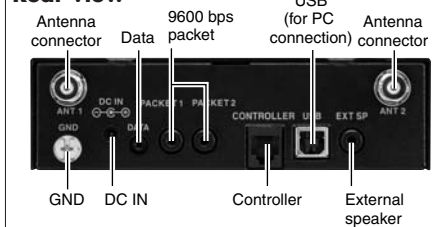
- Receiver system : Triple-conversion super-heterodyne + Down converter
- Intermediate frequencies : 1st 266.70MHz  
2nd 10.70MHz  
3rd 450kHz (Except WFM)
- Sensitivity (Less than) :

|                    | SSB, CW | AM    | FM       | WFM   |
|--------------------|---------|-------|----------|-------|
| 0.495–1.799MHz     | 5.0μV   | 25μV  | –        | –     |
| 1.8–49.999MHz      | 0.5μV   | 2.5μV | 0.63μV*2 | –     |
| 50–699.999MHz      | 0.4μV   | 2μV   | 0.5μV    | 1.4μV |
| 700–1300.000MHz    | 0.5μV   | 2.5μV | 0.63μV   | 1.8μV |
| 1300*1–2299.999MHz | –       | –     | 5.6μV    | 18μV  |
| 2300–3000.000MHz   | –       | –     | 18μV     | 56μV  |

- \*1 1300.000001MHz \*2 28–49.999MHz  
SSB, CW BW=2.8kHz, AM BW=6.0kHz at 10dB S/N  
FM BW=15kHz, WFM BW=230kHz at 12dB SINAD
- Selectivity (typical) :  
SSB, CW, AM More than 2.8kHz/–6dB  
SSB, CW, AM, FM More than 6.0kHz/–6dB  
FM, AM More than 15kHz/–6dB  
FM, AM, WFM More than 50kHz/–6dB  
WFM More than 230kHz/–6dB
- Audio output power : More than 500mW at 10% distortion with an 8Ω load
- External SP connector : 2-conductor 3.5 (d) mm (1/8")/8Ω

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

### Rear view



### PC requirements (For use with PC control software)

- Microsoft® Windows® XP/2000/ME/98SE • USB 1.1 or 2.0
- Intel® Pentium® III 450MHz or faster (Pentium® 4 recommended)
- 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 is required for software installation
- USB audio dropouts or gaps may occur because of a lack of PC power
- Additional hard disk space is required for recording sound or storing scope data

### Supplied accessories (\* Depending on version)



### Applicable U.S. Military Specifications

| Standard        | MIL 810 C |          | MIL 810 D |         | MIL 810 E |         | MIL 810 F |       |
|-----------------|-----------|----------|-----------|---------|-----------|---------|-----------|-------|
|                 | Method    | Proc.    | Method    | Proc.   | Method    | Proc.   | Method    | Proc. |
| Low Pressure    | 500.1     | I        | 500.2     | I, II   | 500.3     | I, II   | 500.4     | I, II |
| High Temp.      | 501.1     | I        | 501.2     | I, II   | 501.3     | I, II   | 501.4     | I, II |
| Low Temp.       | 502.1     | I        | 502.2     | I, II   | 502.3     | I, II   | 502.4     | I, II |
| Temp. Shock     | 503.1     | I        | 503.2     | I       | 503.3     | I       | 503.4     | I     |
| Solar Radiation | 505.1     | I        | 505.2     | I       | 505.3     | I       | 505.4     | I     |
| Humidity        | 507.1     | I, II    | 507.2     | II, III | 507.3     | II, III | 507.4     | –     |
| Dust Blowing    | 510.1     | I        | 510.2     | I       | 510.3     | I       | 510.4     | I     |
| Vibration       | 514.2     | VIII, X  | 514.3     | I       | 514.4     | I       | 514.5     | I     |
| Shock           | 516.2     | I, II, V | 516.3     | I, IV   | 516.4     | I, IV   | 516.5     | I, IV |

## OPTIONS

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

- **UT-106 DSP UNIT**  
Provides noise reduction and auto notch functions.
- **UT-108 DTMF DECODER UNIT**  
DTMF decode function for Sub-receiver. Either UT-108 or UT-118 can be installed in the receiver.
- **UT-118 D-STAR DIGITAL UNIT**  
Provides D-STAR DV mode reception. Either UT-108 or UT-118 can be installed in the receiver.
- **UT-122 P25 DIGITAL UNIT**  
Provides APCO P25 digital mode reception.
- **OPC-1156 CONTROLLER EXTENSION CABLE**  
Extends the supplied separation cable by 3.5 m (11.5 ft). A modular connector is supplied with the cable.
- **SP-10 EXTERNAL SPEAKER**  
To better direct the audio where you want it.
- **MB-84 REMOTE CONTROL BRACKET**  
Mounts the controller in a convenient location.
- **MB-65 MOUNT BASE**  
Mounts the controller with the MB-84. Adjustable angle and direction for optimum positioning.
- **CP-12L CIGARETTE LIGHTER CABLE**  
12V DC, 2A output from 12V cigarette lighter socket.
- **AD-113A/E AC ADAPTOR**  
10.5V DC, 1.8A/1.5A (A/E) output. Same as supplied.
- **OPC-254L DC POWER CABLE**  
For use with an external power supply. (12V DC required)



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