



HF+50 MHz ALL MODE COMMUNICATIONS RECEIVER

IC-R75



Icom Inc.



WIDE FREQUENCY COVERAGE AND

Expanded frequency coverage

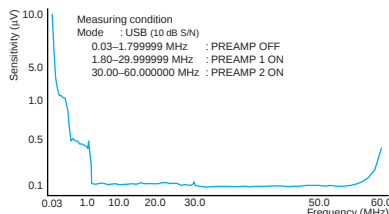
The IC-R75 covers a frequency range that's wider than other HF receivers; 0.03–60.000000 MHz*. This wide frequency coverage allows you to listen to a variety of communications including marine communications, amateur radio, short wave radio broadcasts and more.

*Guaranteed 0.1–29.99 MHz and 50–54 MHz only

High stability receiver circuit

ICOM's latest wide band technology provides highly stable receive sensitivity over the entire receive frequency range. The IC-R75 makes it easy to catch communications world wide.

• Receive sensitivity characteristics example



Superior dynamic range

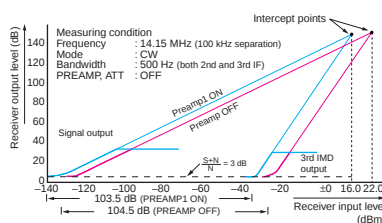
A wide dynamic range of more than 100 dB^{*1}, 104.5 dB^{*2} for 14 MHz band, 102.5 dB^{*2} for 50 MHz band, and a well-designed triple conversion system help min-

imize image and spurious responses for better signal fidelity.

*¹ Not guaranteed.

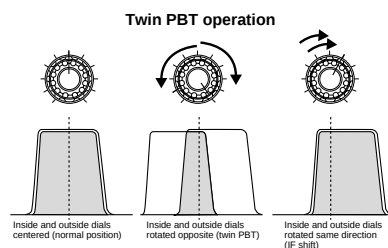
*² Not guaranteed; When PREAMP OFF; CW narrow 500 Hz bandwidth; 100 kHz channel spacing

• Dynamic range characteristics example



Twin PBT capability

The PBT (passband tuning) function narrows and moves the IF passband at two stages to efficiently eliminate interfering signals.



DSP capabilities

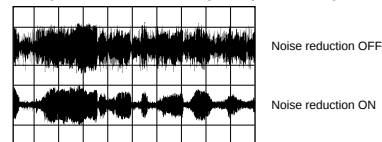
DSP (Digital Signal Processor) filtering in the AF stage is available with the optional UT-106 DSP UNIT*. The DSP provides the following functions:

* Already installed with some versions.

Noise reduction:

Pulls desired AF signals from noise. Outstanding S/N ratio is achieved, providing clean audio in SSB, AM and FM. Pull weak signals right out of the noise.

Comparison of receive signal speaker output



Automatic Notch filter:

This automatically minimizes beat signals and protects the receive signal. Also, the notch frequency is automatically adjusted to follow interfering beat signals—reducing interference from RTTY signals during SSB operation for example.

FM mode standard

Unlike many other HF/50 MHz receivers there is no need to install an additional unit for FM mode reception on the 29 and 50 MHz bands.

The IC-R75 covers a wide frequency range from 0.03 to 60 MHz allowing you to listen in to a world of information. With innovative features such as twin passband tuning, DSP capabilities, remote PC control and more — shortwave listening is easier than ever. All this comes in a compact, lightweight package that can be conveniently used in your ham shack, den or vehicle.

HF+50 MHz ALL MODE COMMUNICATIONS RECEIVER

IC-R75

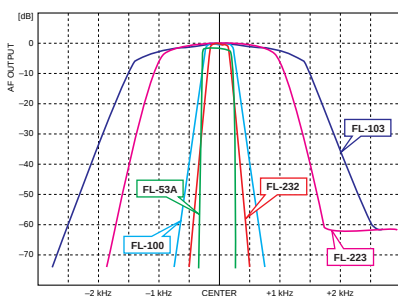
INNOVATIVE FEATURES...

Flexible filter selection

Up to two optional filters* can be installed, providing flexible band width selection and filter combinations.

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

	1st IF 9 MHz stage	2nd IF 455 kHz stage
SSB	FL-103 (2.8 kHz) FL-223 (1.9 kHz)	FL-222 (1.8 kHz) FL-257 (3.3 kHz)
CW/RTTY	FL-100 (500 Hz) FL-101 (250 Hz) FL-232 (350 Hz)	FL-52A (500 Hz) FL-53A (250 Hz)



Alphanumeric readout

The function display has an alphanumeric readout that indicates up to 8-character memory names for easy recognition.

Selectable RF gain/squelch control

The RF gain and/or squelch control can be set to the [SQL] control in *set mode* to match your operating preference.

Other outstanding features...

- Compact body
- Digital bar S-meter with peak hold
- Front mounted speaker for easy listening
- Internal clock with ON/OFF, sleep timer
- Numeric keypad for direct frequency or memory channel input
- Attenuator
- 2-level preamp
- Selectable AGC (FAST/SLOW/OFF)
- Noise blanker
- 99 memories plus 2 program scan edges
- Ample scanning functions available
- CW pitch control and CW reverse mode and more...

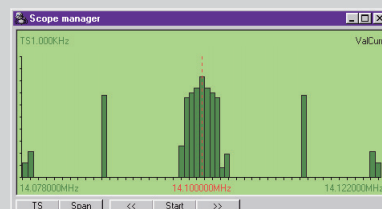
Rear panel view



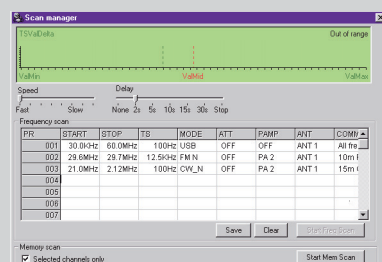
Optional PC remote control —RS-R75



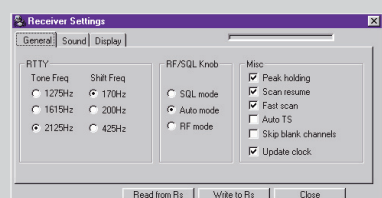
FRONT PANEL—gives you access to all switches and controls on the front panel of the IC-R75.



BAND SCOPE—shows signal conditions around a specified frequency.



SCAN MANAGER—used to graphically display scans in progress and to control scan functions.



SETTINGS—allows you to adjust settings in 3 categories: General, Sound and Display, to suit your operating preferences.

Cn	Sc	Description	Cn	Sc	Description
00	00	Sets frequency (transceive)	10	00	Sets 9 kHz tuning step
01	00	Sets mode (transceive)	06	06	Sets 10 kHz tuning step
02	00	Reads band edge frequencies	07	07	Sets 12.5 kHz tuning step
03	00	Reads frequency	08	08	Sets 20 kHz tuning step
04	00	Reads mode	09	09	Sets 25 kHz tuning step
05	00	Sets frequency	10	10	Sets 30 kHz tuning step
06	00	Sets USB mode	11	11	Sets 1 MHz tuning step
01	01	Sets USB mode	12	12	Turns attenuator OFF
02	02	Sets AM mode	13	13	Turns attenuator ON
03	03	Sets CW mode	14	14	Selects ANT1
04	04	Sets RTTY mode	15	15	Selects ANT2
05	05	Sets FM mode	16	16	Speech all contents
06	06	Sets CW R mode	17	17	Speech operating freq. +S level
07	07	Sets RTTY R mode	18	18	Speech operating mode
08	08	Selects VFO operation	19	19	Reads/Sets AF level
09	09	Selects memory operation	20	20	Reads/Sets RF gain level
10	10	Set memory channel	21	21	Reads/Sets RFB gain level
11	11	Writes to memory	22	22	Reads/Sets NR level
12	12	Transfer memory contents to VFO	23	23	Reads/Sets TWH PBT (inside)
13	13	Clears the memory channel	24	24	Reads/Sets TWH PBT (outside)
14	14	Scans scan	25	25	Reads/Sets CW FITCH level
15	15	Starts program/memory scan	26	26	Reads the squelch condition
16	16	Starts program scan	27	27	Reads signal strength level
17	17	Starts auto memory write scan	28	28	Reads/Sets the preamp
18	18	Starts memory scan	29	29	Reads/Sets the AGC
19	19	Starts select memory scan	30	30	Reads/Sets the noise blanker
20	20	Turns a "select" setting OFF	31	31	Reads/Sets the noise reduction
21	21	Turns a "select" setting ON	32	32	Reads/Sets the auto notch
22	22	Turns scan resume OFF	33	33	Turns power OFF
23	23	Turns scan resume ON	34	34	Turns power ON
24	24	Sets 10 kHz tuning step	35	35	Reads receiver's ID code
25	25	Sets 0.1 kHz tuning step	36	36	Reads/Writes memory contents
26	26	Sets 1 kHz tuning step	37	37	Reads/Sets the IF filter
27	27	Sets 5 kHz tuning step	38	38	Reads/Sets SET mode
28	28	Sets 6.25 kHz tuning step			

All available functions can be controlled and simple memory editing from a PC running the optional RS-R75 REMOTE CONTROL SOFTWARE. In addition, this software also provides a simple bandscope function. Icom's current CI-V capability will allow you to control the IC-R75 with other programs.

SPECIFICATIONS

GENERAL

- Frequency coverage : 0.03–60.000000 MHz*
*0.03–29.999999 MHz only for Asia version; specifications guaranteed 0.1–29.99 MHz and 50–54 MHz only
- Mode : USB, LSB, CW, RTTY, AM, FM
- Number of memory channels : 101 (99 regular, 2 scan edges)
- Frequency stability : Less than ± 7 ppm from 1 min. to 60 min. after power on. After that rate of stability less than ± 1 ppm/hr. at +25°C (+77°F). Temperature fluctuations 0°C to +50°C (+32°F to +122°F) less than ± 5 ppm.
- Power supply requirement : 13.8 V DC $\pm 5\%$ (negative ground)
- Current drain (at 13.8 V DC) : Standby 0.9 A
Max. audio 1.1 A
- Antenna connector : SO-239 (50 Ω), push connection terminal (500 Ω)
- Dimensions : 241(W) $\times$ 94(H) $\times$ 229(D) mm
(projections not included)
- Weight (approx.) : 3.0 kg; 6 lb 10 oz
- REMOTE connector : RS-232C D-sub 9-pin
- CI-V connector : 2-conductor 3.5 (d) mm ($\frac{1}{8}$ ")

RECEIVER

- Receive system : Triple-conversion superheterodyne system
- Intermediate frequencies :

Mode	1st (MHz)	2nd (MHz)	3rd (kHz)
USB*/LSB*	69.0115	9.0115	455
CW*	69.0106	9.0106	455.9
RTTY*	69.0105	9.0105	456
AM*	69.0100	9.0100	450
FM	69.0115	9.0115	450

*May differ according to selected IF filter.

• Sensitivity

Frequency range	SSB/CW/RTTY 10 dB S/N	AM 10 dB S/N	FM 12 dB SINAD
0.1–1.8 MHz* ¹	2.0 μ V	5.6 μ V	—
1.8–28 MHz* ²	0.16 μ V	1.6 μ V	—
28–29.99 MHz* ²	0.16 μ V	1.6 μ V	0.22 μ V
50–54 MHz* ³	0.13 μ V	1.0 μ V	0.2 μ V

*1Preamp: OFF; *2Preamp 1: ON; *3Preamp 2: ON

- SQL sensitivity (threshold) : SSB, CW, RTTY Less than 5.6 μ V *¹
FM Less than 0.32 μ V *²
*1Preamp 1: ON; *2preamp 2: ON
- Selectivity : SSB, CW, RTTY More than 2.1 kHz/–6 dB
Less than 4.0 kHz/–60 dB
AM More than 6 kHz/–6 dB
Less than 20 kHz/–50 dB
FM More than 12 kHz/–6 dB
Less than 30 kHz/–40 dB
- Spurious and image rejection ratio: More than 70 dB (except IF through/50 MHz band)
- Audio output power : More than 2.0 W at 10% distortion with an 8 Ω load (at 13.8 V DC)
- PHONES connector : 3-conductor 6.35 (d) mm ($\frac{1}{4}$ ")
- External SP connector : 2-conductor 3.5 (d) mm ($\frac{1}{8}$ ")/8 Ω

The IC-R75 has been tested to and passed the MIL-STD requirements and strict environmental standards for shock (MIL 810C, D, E) and vibration (MIL 810C, D, E).

Supplied accessories:

- AC adapter or DC power cable (depending on version)
- Spare fuse

All stated specifications are typical and subject to change without notice or obligations.

OPTIONS



CR-282 HIGH STABILITY CRYSTAL UNIT

Contains a temperature-compensating oven heater and crystal unit for improved frequency stability. Frequency stability: ± 0.5 ppm



UT-102 VOICE SYNTHESIZER

Announces the operating mode, frequency, signal strength level and the time.



UT-106 DSP UNIT

Provides AF DSP functions such as noise reduction and auto notch. Already installed with some versions.



CT-17 CI-V LEVEL CONVERTER

For remote receiver control using a PC equipped with an RS-232C port.

RS-R75 REMOTE CONTROL SOFTWARE

Supplied items;

- Application CD-ROM
- RS-232C serial interface cable

Allows you to control the receiver from your PC (for Microsoft® Windows® 95 or Windows® 98).

Microsoft and Windows are registered trademarks of Microsoft Corporation.



9 MHz filters

FL-100 CW/RTTY narrow;
500 Hz/–6 dB

FL-101 CW narrow; 250 Hz/–6 dB

FL-103 SSB wide; 2.8 kHz/–6 dB

FL-223 SSB narrow; 1.9 kHz/–6 dB

FL-232 CW/RTTY narrow;
350 Hz/–6 dB



455 kHz filters

FL-52A CW/RTTY narrow;
500 Hz/–6 dB

FL-53A CW narrow; 250 Hz/–6 dB

FL-222 SSB narrow; 1.8 kHz/–6 dB

FL-257 SSB wide; 3.3 kHz/–6 dB

IC-MB5 MOBILE BRACKET
Communications receiver bracket for mobile operation.

MB-23 CARRYING HANDLE
For easy portable operation.

AD-55/A/V AC DAPTER

Allows you to power the receiver via domestic AC.

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