

ICOM

HF+50 MHz ALL MODE COMMUNICATIONS RECEIVER

# IC-R75



Icom Inc.



# WIDE FREQUENCY COVERAGE AND

## Expanded frequency coverage

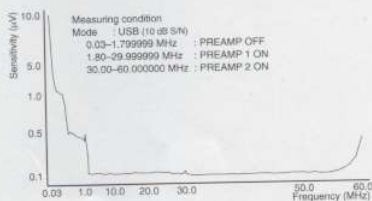
The IC-R75 covers a frequency range that's wider than other HF receivers; 0.03–60.000000 MHz\*. This wide frequency coverage allows you to listen to a variety of communications including marine communications, amateur radio, short wave radio broadcasts and more.

\*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

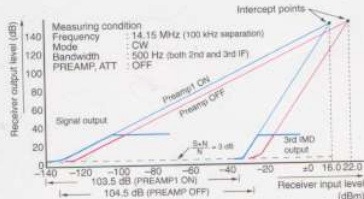
A wide dynamic range of more than 100 dB\*<sup>1</sup>, 104.5 dB\*<sup>2</sup> for 14 MHz band, 102.5 dB\*<sup>2</sup> for 50 MHz band, and a well-designed triple conversion system help min-

imize image and spurious responses for better signal fidelity.

\*<sup>1</sup> Not guaranteed.

\*<sup>2</sup> Not guaranteed; When PREAMP OFF; CW narrow 500 Hz bandwidth; 100 kHz channel spacing

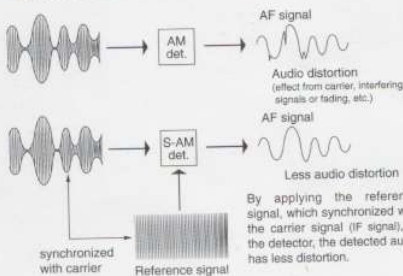
### • Dynamic range characteristics example



## Synchronous AM detection

Synchronous AM detection (or S-AM) prevents audio distortion while receiving AM broadcasts, etc. This provides high quality AM receive as an additional mode.

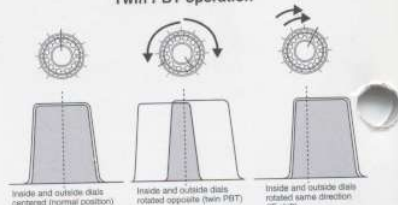
### • Difference between AM and S-AM detection



## Twin PBT capability

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

### Twin PBT operation



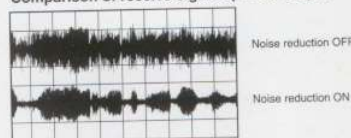
## DSP capabilities

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

### 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



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, synchronous AM detection, 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...

### Automatic Notch filter:

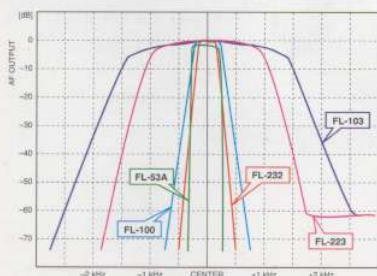
This automatically minimizes beat signals and protects the receive signal. Also, the notch frequency is automatically adjusted to follow interfering beat signals—reducing interference from RTTY signals during SSB operation for example.

### Flexible filter selection

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-96 (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-52A (500 Hz)
	FL-101 (250 Hz)	FL-53A (250 Hz)
	FL-232 (350 Hz)	



### 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.

### 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...

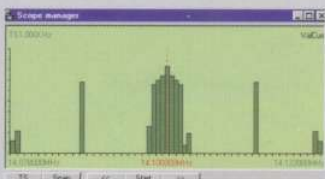
- Compact body
- Digital bar S-meter
- Front mounted speaker for easy listening
- Internal clock with ON/OFF, sleep timer
- Numeric keypad for direct frequency or memory channel input
- Attenuator
- 2-level preamp
- Selectable AGC (FAST/SLOW/OFF)
- Noise blanker
- 99 memories plus 2 program scan edges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



### 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.

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 provides a simple bandscope function. Icom's current CI-V capability will allow you to control the IC-R75 with other programs.



**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.

Control command for user made program

Cmd	Description
01	Power (Transceive)
02	Scan mode (Transceive)
03	Band edge frequencies
04	Bandwidth
05	Filter
06	Scan 1 (SSB mode)
07	Scan 2 (SSB mode)
08	Scan 3 (AM mode)
09	Scan 4 (VFO mode)
10	Scan 5 (VFO mode)
11	Scan 6 (VFO mode)
12	Scan 7 (VFO mode)
13	Scan 8 (VFO mode)
14	Scan 9 (VFO mode)
15	Scan 10 (VFO mode)
16	Scan 11 (VFO mode)
17	Scan 12 (VFO mode)
18	Scan 13 (VFO mode)
19	Scan 14 (VFO mode)
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93	Scan 88 (VFO mode)
94	Scan 89 (VFO mode)
95	Scan 90 (VFO mode)
96	Scan 91 (VFO mode)
97	Scan 92 (VFO mode)
98	Scan 93 (VFO mode)
99	Scan 94 (VFO mode)
100	Scan 95 (VFO mode)

**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, S-AM, FM
- Number of memory channels : 101 (99 regular, 2 scan edges)
- Frequency stability : Less than  $\pm 7$  ppm from 1 min. to 60 min. after power on. After that rate of stability less than  $\pm 1$  ppm/hr. at +25°C (+77°F). Temperature fluctuations 0°C to +50°C (+32°F to +122°F) less than  $\pm 5$  ppm.
- Power supply requirement : 13.8 V DC  $\pm 15\%$  (negative ground)
- Current drain (at 13.8 V DC) : Standby 0.9 A  
Max. audio 1.1 A
- Antenna connector : SO-239 (50  $\Omega$ ), push connection terminal (500  $\Omega$ )
- Dimensions : 241(W)  $\times$  94(H)  $\times$  229(D) mm  
(projections not included)  
9½(W)  $\times$  3⅜(H)  $\times$  9⅝(D) in
- 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 (⅜)

**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*/S-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/S-AM 10 dB S/N	FM 12 dB SINAD
0.1–1.8 MHz*1	2.0 $\mu$ V	5.6 $\mu$ V	—
1.8–28 MHz**2	0.16 $\mu$ V	1.6 $\mu$ V	—
28–29.99 MHz**3	0.16 $\mu$ V	1.6 $\mu$ V	0.22 $\mu$ V
50–54 MHz**3	0.13 $\mu$ V	1.0 $\mu$ V	0.2 $\mu$ V

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

- SQL sensitivity (threshold) : SSB, CW, RTTY : Less than 5.6  $\mu$ V \*1  
FM : Less than 0.32  $\mu$ 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, S-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  $\Omega$  load (at 13.8 V DC)
- PHONES connector : 3-conductor 6.35 (d) mm (¼")
- External SP connector : 2-conductor 3.5 (d) mm (⅜)/8  $\Omega$

**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.

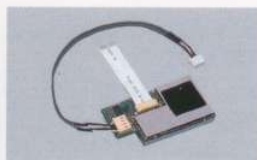
**OPTIONS**



**CR-282 HIGH STABILITY CRYSTAL UNIT**  
Contains a temperature-compensating oven heater and crystal unit for improved frequency stability. Frequency stability:  $\pm 0.5$  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.



**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-96 SSB wide;** 2.8 kHz/–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/AV AC DAPTER**  
Allows you to power the receiver via domestic AC.

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Count on us!

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Certificate Number Q14190

Icom Inc. (Japan), is an ISO9001 certification acquired company.

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