



HF+50 MHz ALL MODE COMMUNICATIONS RECEIVER

IC-R75



ICOM

IC-R75

COMMUNICATIONS RECEIVER



SSB CW/RTTY FIL

AM FM TS

1	ABC 2	DEF 3
GHI 4	JKL 5	MNO 6
PRS 7	TUV 8	WXY 9
.	OZ 0	ENT

V/M	MW	CLR
SEL	SCAN	
▼ DN	UP ▲	

PHONES

POWER

AF → RF/SQL

TWIN PBT

ANT SET

CLOCK

P.AMP

ATT

NR

ANF

NB

AGC

Icom Inc.



WIDE FREQUENCY COVERAGE AND

Expanded frequency coverage

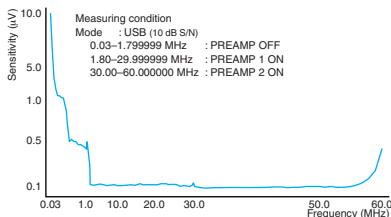
The IC-R75 covers a frequency range that's wider than other HF receivers; 0.03–60.000000 MHz*. This wide frequency coverage allows you to listen to a variety of communications including marine communications, amateur radio, short wave radio broadcasts and more.

*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

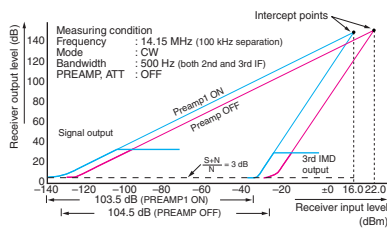
A wide dynamic range of more than 100 dB*¹, 104.5 dB*² for 14 MHz band, 102.5 dB*² for 50 MHz band, and a well-designed triple conversion system help mini-

mize image and spurious responses for better signal fidelity.

*1 Not guaranteed.

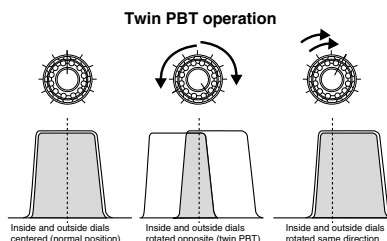
*2 Not guaranteed; When PREAMP OFF; CW narrow 500 Hz bandwidth; 100 kHz channel spacing

• 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

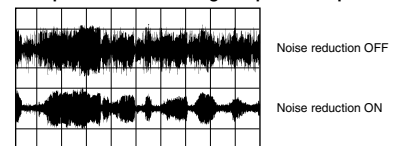
DSP (Digital Signal Processor) filtering in the AF stage is available with the optional UT-106 DSP UNIT*. The DSP provides the following functions:

* 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

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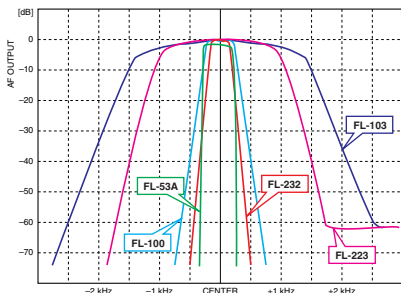
INNOVATIVE FEATURES...

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)



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



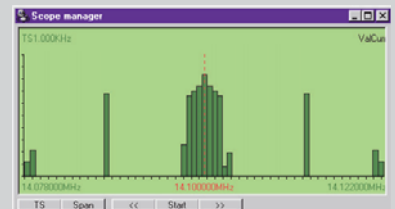
Alphanumeric readout

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

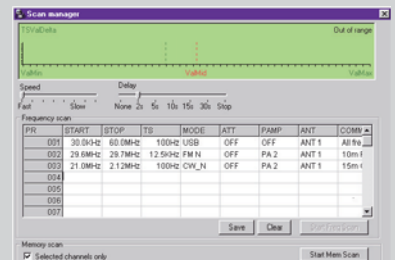
Optional PC remote control —RS-R75



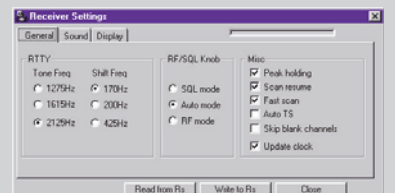
FRONT PANEL—gives you access to all switches and controls on the front panel of the IC-R75.



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.

Ctrl	Src	Description	Ctrl	Src	Description
00	00	Sets frequency (transceive)	10	00	Sets 9 kHz tuning step
01	xx	Sets mode (transceive)	08	00	Sets 10 kHz tuning step
02	00	Reads band edge frequencies	07	00	Sets 12.5 kHz tuning step
03	00	Reads frequency	08	00	Sets 20 kHz tuning step
04	00	Reads mode	09	00	Sets 25 kHz tuning step
05	00	Sets frequency	10	00	Sets 100 kHz tuning step
06	00	Sets USB mode	11	00	Sets 1 MHz tuning step
01	00	Sets USB mode	01	00	Turns attenuator OFF
02	00	Sets AM mode	25	00	Turns attenuator ON
03	00	Sets CW mode	00	00	Selects ANTI 1
04	00	Sets RTTY mode	01	00	Selects ANTI 2
05	00	Sets FM mode	13	00	Speech all contents
07	00	Sets CW-R mode	01	00	Speech operating freq. +5 level
08	00	Sets RTTY mode	02	00	Speech operating mode
07	00	Selects VFO operation	14	01	Reads/sets AI level
08	00	Selects memory operation	07	00	Reads/sets TWIN PBTT (inside)
xx	xx	Set memory channel	08	00	Reads/sets TWIN PBTT (outside)
09	00	Writes to memory	06	00	Reads/sets SQL level
0A	00	Transfer memory contents to VFO	07	00	Reads/sets CW PRTC level
0B	00	Clears the memory channel	08	00	Reads/sets CW PRTC level
0C	00	Stops scan	09	01	Reads the squelch condition
01	00	Starts program/memory scan	00	00	Reads signal strength level
02	00	Starts program scan	16	00	Reads the preamp
04	00	Starts auto memory write scan	12	00	Reads/sets the AGC
22	00	Starts memory scan	23	00	Reads/sets the noise blanker
23	00	Starts select memory scan	40	00	Reads/sets the noise reduction
B0	00	Turns a "select" setting OFF	41	00	Reads/sets the auto notch
B1	00	Turns a "select" setting ON	18	00	Turns power OFF
D0	00	Turns scan resume OFF	01	00	Turns power ON
D3	00	Turns scan resume ON	19	00	Reads receiver's ID code
10	00	Sets 170 Hz tuning step	1A	00	Reads/Writes memory contents
01	00	Sets 0.1 kHz tuning step	01	00	Reads/sets the B filter
02	00	Sets 0.5 kHz tuning step	02	00	Reads/sets SET mode
03	00	Sets 1 kHz tuning step			
04	00	Sets 2.5 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 ±15% (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) × 94(H) × 229(D) mm
(projections not included) 9½(W) × 3⅜(H) × 9⅜(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 (⅛")

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 μV	5.6 μV	—
1.8–28 MHz*2	0.16 μV	1.6 μV	—
28–29.99 MHz*2	0.16 μV	1.6 μV	0.22 μV
50–54 MHz*3	0.13 μV	1.0 μV	0.2 μV

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

- SQL sensitivity (threshold) : SSB, CW, RTTY Less than 5.6 μV *1
FM Less than 0.32 μV *2
*1 Preamp 1: ON; *2 Preamp 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 (¼")
- External SP connector : 2-conductor 3.5 (d) mm (⅛")/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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