

 ICOM

HF+50 MHz ALL MODE COMMUNICATIONS RECEIVER

IC-R75



Icom Inc.



WIDE FREQUENCY COVERAGE AND

Expanded frequency coverage

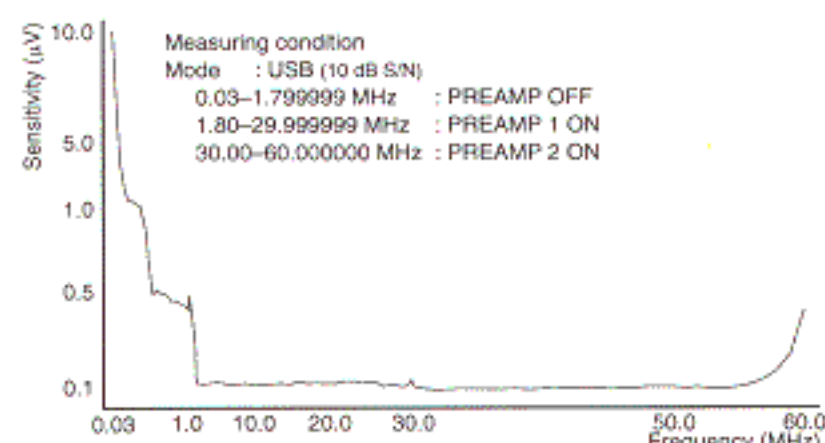
The IC-R75 covers a frequency range that's wider than other HF receivers; 0.03–60.000000 MHz*. This wide frequency coverage allows you to listen to a variety of communications including marine communications, amateur radio, short wave radio broadcasts and more.

*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

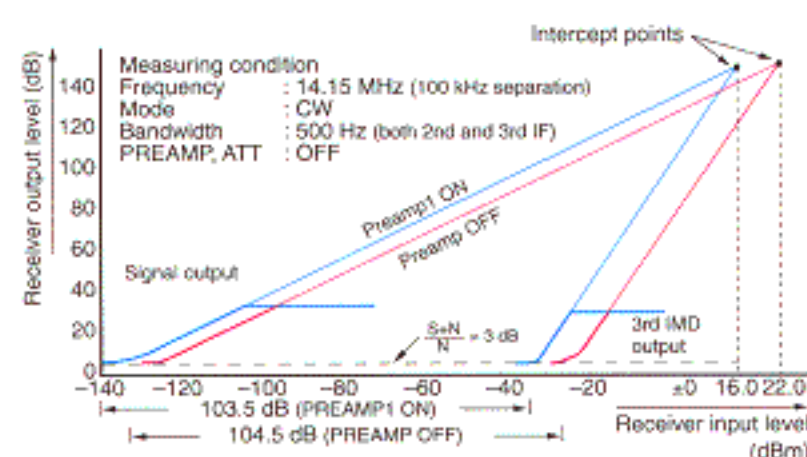
A wide dynamic range of more than 100 dB*¹, 104.5 dB*² for 14 MHz band, 102.5 dB*² for 50 MHz band, and a well-designed triple conversion system help min-

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

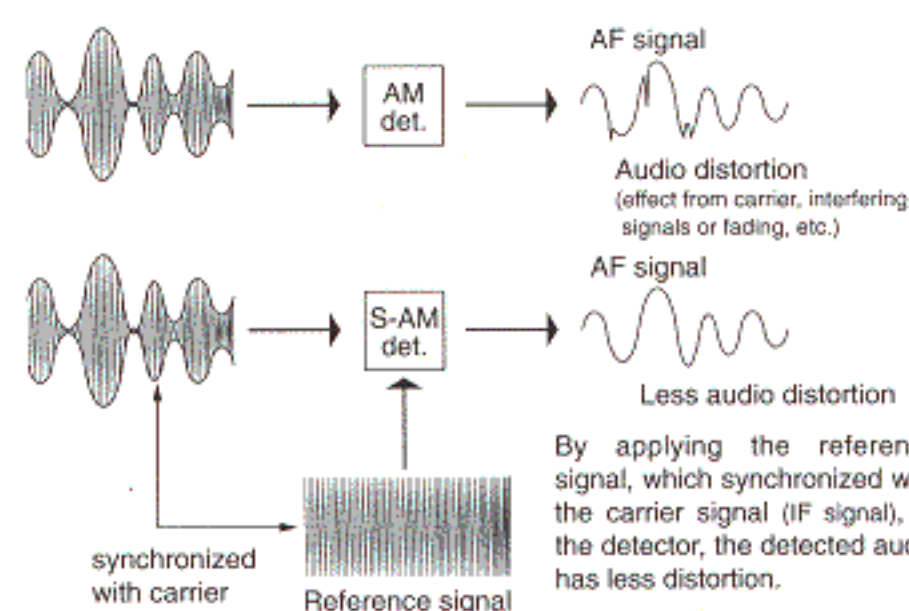
• Dynamic range characteristics example



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.

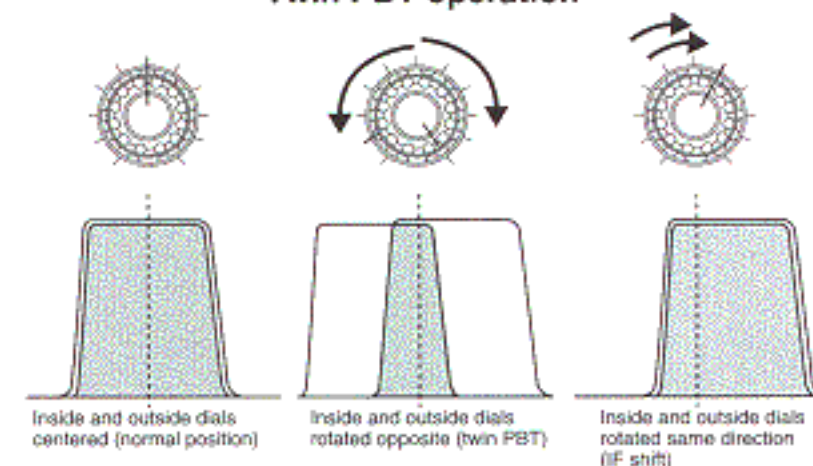
• Difference between AM and S-AM detection



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



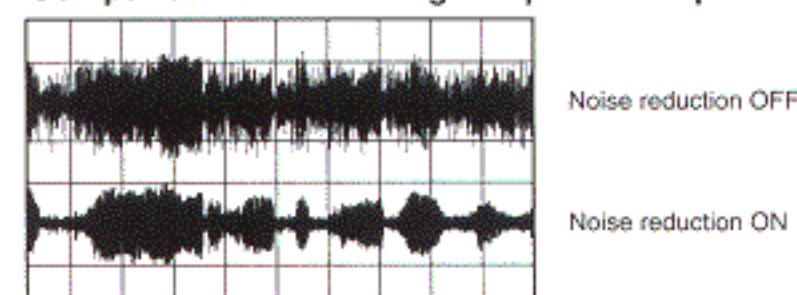
DSP capabilities

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:

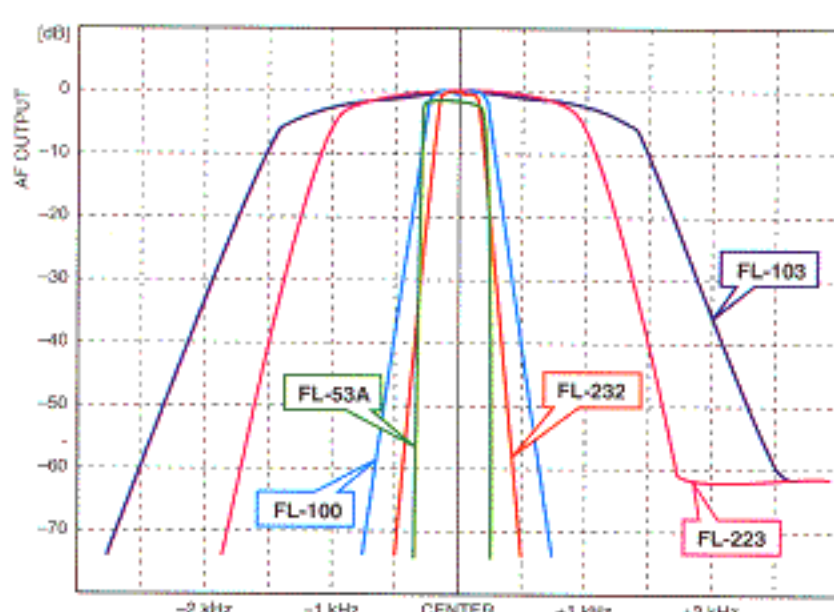
This automatically minimizes beat signals and protects the receive signal. Also, the notch frequency is automatically adjusted to follow interfering beat signals—reducing interference from RTTY signals during SSB operation for example.

Flexible filter selection

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-96 (2.8 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)



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

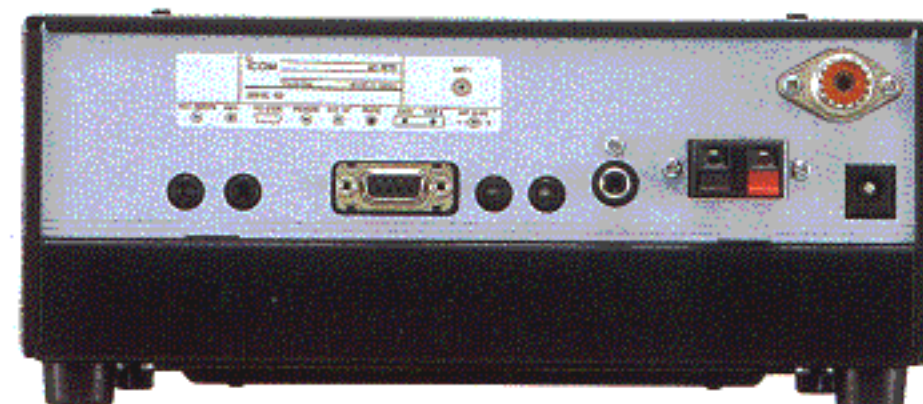
The function display has an alphanumeric readout that indicates up to 8-character memory names for easy recognition.

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...

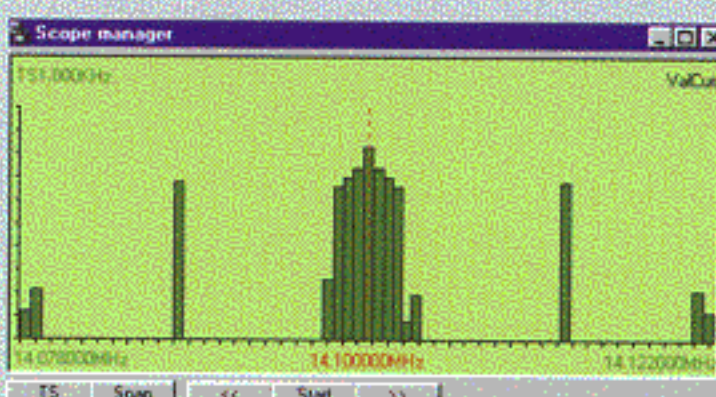
- Compact body
- Digital bar S-meter
- Front mounted speaker for easy listening
- Internal clock with ON/OFF, sleep timer
- Numeric keypad for direct frequency or memory channel input
- Attenuator
- 2-level preamp
- Selectable AGC (FAST/SLOW/OFF)
- Noise blanker
- 99 memories plus 2 program scan edges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



Optional PC remote control—RS-R75

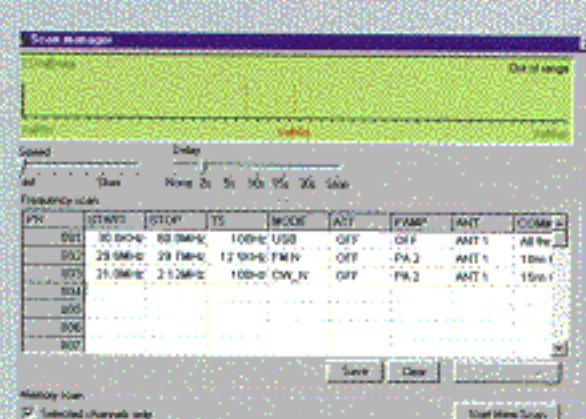


FRONT PANEL—gives you access to all switches and controls on the front panel of the IC-R75.

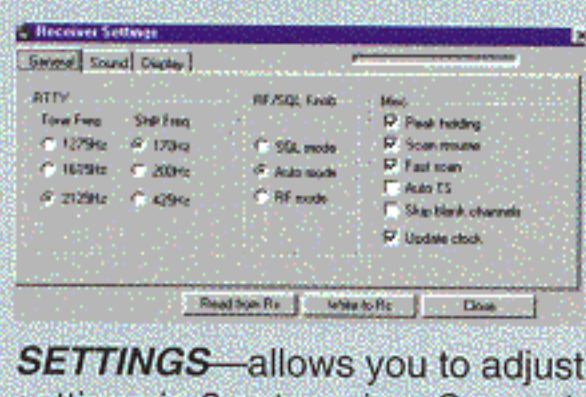


BAND SCOPE—shows signal conditions around a specified frequency.

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.

Ch	Sc	Description
00		Set frequency (transceive)
01	xx	Set mode (transceive)
02		Reads band edge frequencies
03		Reads frequency
04		Reads mode
05		Set frequency
06	00	Set USB mode
07	01	Set USB mode
08	02	Set AM mode
09	03	Set CW mode
10	04	Set RTTY mode
11	05	Set FM mode
12	06	Set CW-R mode
13	07	Set RTTY-R mode
14	08	Set S-AM mode
15	09	Set S-AM mode
16	10	Selects VFO operation
17	11	Selects memory operation
18	12	Set memory channel
19	13	Writes to memory
20	14	Transfer memory contents to VFO
21	15	Clears the memory channel
22	16	Stops scan
23	17	Starts program/memory scan
24	18	Starts program scan
25	19	Starts audio memory write scan
26	20	Starts memory scan
27	21	Starts select memory scan
28	22	Turns a "select" setting OFF
29	23	Turns a "select" setting ON
30	24	Turns scan resume OFF
31	25	Turns scan resume ON
32	26	Set 1/10 kHz tuning step
33	27	Set 0.1 kHz tuning step
34	28	Set 1 kHz tuning step
35	29	Set 5 kHz tuning step
36	30	Set 10 kHz tuning step
37	31	Set 20 kHz tuning step
38	32	Set 25 kHz tuning step
39	33	Set 100 kHz tuning step
40	34	Set 1 MHz tuning step
41	35	Turns attenuator OFF
42	36	Turns attenuator ON
43	37	Selects ANT1
44	38	Selects ANT2
45	39	Speech all contents
46	40	Speech operating freq + S-level
47	41	Speech operating mode
48	42	Reads/Set AF level
49	43	Reads/Set RF gain level
50	44	Reads/Set SQL level
51	45	Reads/Set NR level
52	46	Reads/Set (TWIN PRT) (inside)
53	47	Reads/Set (TWIN PRT) (outside)
54	48	Reads/Set CW PITCH level
55	49	Reads/Set the squelch condition
56	50	Reads signal strength level
57	51	Reads/Set the preamp
58	52	Reads/Set the AGC
59	53	Reads/Set the noise blanker
60	54	Reads/Set the noise reduction
61	55	Reads/Set the auto notch
62	56	Turns power OFF
63	57	Turns power ON
64	58	Reads receiver's ID code
65	59	Reads/Writes memory contents
66	60	Reads/Set the IF filter
67	61	Reads/Set SET 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 ± 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 $\pm 15\%$ (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) $\times$ 94(H) $\times$ 229(D) mm
(projections not included) 9 $\frac{1}{2}$ (W) $\times$ 3 $\frac{1}{16}$ (H) $\times$ 9 $\frac{1}{32}$ (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 ($\frac{1}{8}$ ")

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*/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 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

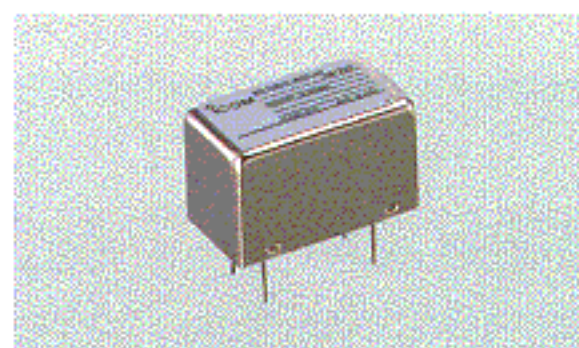
- SQL sensitivity (threshold) : SSB, CW, RTTY Less than 5.6 μ V *¹
FM Less than 0.32 μ V *²
*¹Preamp 1: ON; *²preamp 2: ON
- Selectivity : SSB, CW, RTTY More than 2.1 kHz/–6 dB
Less than 4.0 kHz/–60 dB
AM, S-AM More than 6 kHz/–6 dB
Less than 20 kHz/–50 dB
FM More than 12 kHz/–6 dB
Less than 30 kHz/–40 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 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

Supplied accessories:

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

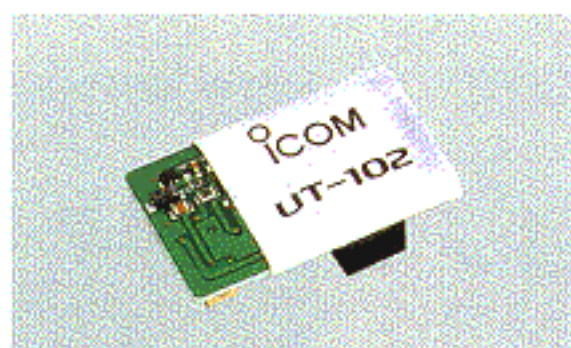
All stated specifications are typical and subject to change without notice or obligations.

OPTIONS



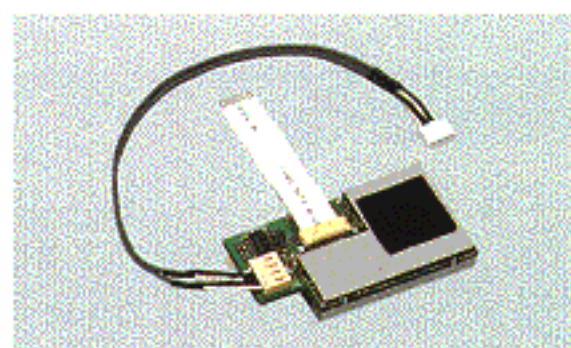
CR-282 HIGH STABILITY CRYSTAL UNIT

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



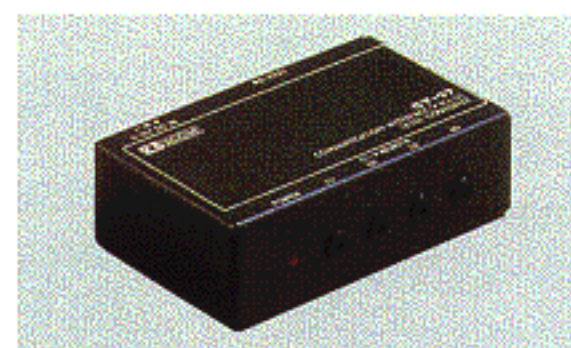
UT-102 VOICE SYNTHESIZER

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.



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/A/V AC DAPTER
Allows you to power the receiver via domestic AC.

Icom Inc. 6-9-16, Kamihigashi, Hirano-ku, Osaka 547-0002, Japan Phone: 06 6793 5302 Fax: 06 6793 0013

Count on us!

Icom America Inc.

<Corporate Headquarters>
2380 116th Avenue N.E., Bellevue, WA 98004, U.S.A.
Phone: (425) 454-8155 Fax: (425) 454-1509
URL : <http://www.icomamerica.com>
<Customer Service>
Phone: (425) 454-7619

Icom Canada

3071 #5 Road, Unit 9, Richmond, B.C., V6X 2T4, Canada
Phone: (604) 273-7400 Fax: (604) 273-1900
URL : <http://www.icomcanada.com>

Icom (Australia) Pty. Ltd.

A.C.N. 006 092 575
290-294 Albert Street, Brunswick, Victoria, 3056, Australia
Phone: 03 9387 0666 Fax: 03 9387 0022
URL : <http://www.icom.net.au>

Asia Icom Inc.

6F No. 68, Sec. 1 Cheng-Teh Road, Taipei, Taiwan, R.O.C.
Phone: (02) 2559 1899 Fax: (02) 2559 1874

Icom (Europe) GmbH

Communication Equipment
Himmelgeister Str. 100, D-40225 Düsseldorf, Germany
Phone: 0211 346047 Fax: 0211 333639
URL : <http://www.icomeurope.com>

Icom Spain S.L.

Ctra. de Gracia a Manresa Km. 14,750
08190 Sant Cugat del Valles Barcelona, SPAIN
Phone: (93) 590 26 70 Fax: (93) 589 04 46
URL : <http://www.icomspain.com>

Icom (UK) Ltd.

Unit 9, Sea St., Herne Bay, Kent, CT6 8LD, U.K.
Phone: 01227 741741 Fax: 01227 741742
URL : <http://www.icomuk.co.uk>

Icom France S a

Zac de la Plaine, Rue Brindejone des Moulinais
BP 5804, 31505 Toulouse Cedex, France
Phone: 561 36 03 03 Fax: 561 36 03 00
URL : <http://www.icom-france.com>



Certificate Number Q14190

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

Your local distributor/dealer: