

 ICOM

COMMUNICATIONS RECEIVER

# IC-R9000L



**EXPAND YOUR HORIZONS  
WITH ICOM'S TOP-OF-THE-LINE,  
SUPER WIDE RANGE RECEIVER.**

**Icom Inc.**

BRING THE DIVERSE WORLD OF INFORMATION CLOSER TO YOU WITH ICOM'S IC-R9000L, A PROFESSIONAL GRADE COMMUNICATIONS RECEIVER WITH ALL-MODE, CONTINUOUS, ULTIMATE FREQUENCY RANGE OF 100 kHz to 1999.8 MHz. WITH AN ADVANCED RANGE LIKE THIS LOCAL STATIONS AND STATIONS WORLDWIDE ARE NOW WITHIN EARSHOT. THIS TRULY PROFESSIONAL RECEIVER IS ALSO ENHANCED WITH ICOM'S UNIQUE 5-INCH LCD DISPLAY FOR EXTRA VERSATILITY.

## COMMUNICATIONS RECEIVER IC-R9000L

### 5-inch, multi-function LCD

The Icom IC-R9000L is made extremely efficient with the installment of a unique 5-inch LCD display. This multi-function LCD display shows operating status at a glance. Superior contrast and backlighting make viewing easy on your eyes and yet maintains readability. The LCD indicates monitoring details (frequency, mode, etc), as well as including Spectrum scope, Memory list, Terminal monitor and more.

### Continuous, all mode coverage

The IC-R9000L's versatile receive capability enables you to receive many mode signals. With the wide frequency coverage of 100 kHz to 1999.8 MHz\*\* you can tune into AM used by broadcasting stations and VHF air band. Use SSB (USB, LSB) and CW to receive marine band, aircraft and amateur stations on shortwave. Listen to many businesses, emergency services, government and amateur stations using FM on VHF and UHF. Or use wide FM to receive FM broadcasts and TV stations. FSK (Frequency Shift Keying) is also built in for receiving RTTY from news agencies. Hear the diversity of the world in detail!

Watch the IC-R9000L! With a simple connection to a TV set or video recorder with a video input connector you are able to watch VHF, UHF TV broadcasts\*\*2 and receive ATV (amateur television) on both the 430(440) and 1200 MHz amateur bands.

\*\*Some versions do not cover the entire range.

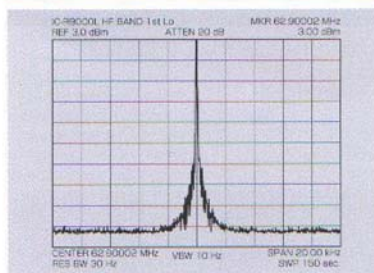
\*\*NTSC system only.

### Excellent performance

Advanced RF circuits ensure an improved dynamic range of 103.5 dB\* and can receive desired weak signals even when strong signals are on nearby frequencies. For frequencies higher than 30 MHz, the front end circuits have tuned bandpass filters with Ga-As FETs and other high-performance circuits. Experience high sensitivity in all frequencies.

\*On 14 MHz band, CW-narrow mode, IF pass-band width 500 Hz/ -6 dB.

### Superior PLL C/N characteristics



The PLL C/N characteristics of the IC-R9000L are in a class of their own. Sensitivity and selectivity in receiving frequencies are both highly advanced and the blocking performance is predominate. With the utilization of the DDS (Direct Digital Synthesizer), C/N characteristics ensure fast PLL lock-up and effective scanning. Minimum tuning steps of 10 Hz for frequency coverage make all tuning easy.

### High frequency stability

Another Icom achievement is the IC-R9000L's very high frequency stability in the difficult to manage GHz range. Frequency stability is  $\pm 0.25$  ppm\* in ranges greater than 30 MHz and  $\pm 25$  Hz\* in ranges below 30 MHz.

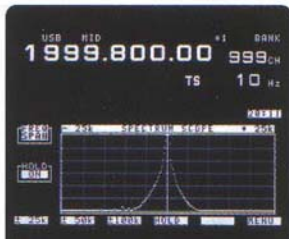
\*0°C to 50°C; +32°F to +122°F



# ULTIMATE RECEIV



### ● SPECTRUM SCOPE SCREEN



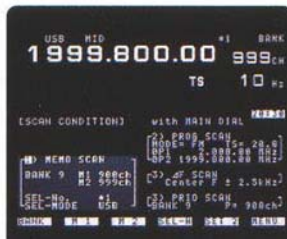
At a glance, observe the signal spectrum of nearby receive frequencies. The span of the spectrum scope can be selected for  $\pm 25$ ,  $\pm 50$  or  $\pm 100$  kHz according to your needs.

### ● MEMORY EDITOR SCREEN



Memory editor screen has the flexibility to move, change, delete, or copy any of the 1000 memory channels to better locations. Simple and convenient memory management.

### ● SCAN CONDITION SCREEN



Each scan condition can be immediately checked in detail and set on the LCD display.

### ● DAILY TIMER SET SCREEN



Program six independent sessions—specifying day, time, on/off—and memory channel to tune.

### 1000 memory channels

1000 memory channels store frequencies, modes, filter width and tuning steps. Memory channels are grouped into 10 memory banks. Use the memory banks according to station type, mode, frequency range, or what ever your preference. Assign a name or note to each memory channel for easy reference. (up to an eight character capacity)

### RF attenuator

A 10, 20 and 30 dB level-selectable RF attenuator prevents any saturation of RF circuits from excessively strong signals.

### Advanced S-meter squelch

Icom's all-mode S-meter squelch is built in to ignore weaker signals while scanning, standing-by, and concentrates on receiving only signals stronger than the preset level.

### AFC function

An advanced AFC function automatically tunes to the frequency of the signal in each FM mode. Is useful, for example, when receiving amateur stations in the 1200 MHz band. AFC also compensates for frequency shifts in weather satellite signals due to the Doppler Effect.

### Memory editor function

The super convenient memory editor function makes it easy to move, copy or delete memories at any time on the LCD display.

### Interference elimination circuits

The IF shift circuit shifts the center frequency of the passband to effectively reject nearby interfering signals in the SSB, CW, FSK and AM modes. A threshold-adjustable, width-selectable noise blanker is included for eliminating long duration pulse-type noises such as "woodpecker."

The deep notch filter can be tuned to a particular frequency in the IF passband, eliminating interfering signal. These functions ensure clear reception even during crowded band conditions.

### Multi-scan functions

Numerous scanning functions searching desired stations are available to make your operations easier than ever before.

- Programmed scan
- $\Delta$ F scan
- Priority scan
- Memory scan
- Selected mode memory scan
- Selected number memory scan
- Auto memory write scan

### Additional outstanding features

- VSC (Voice Scan Control)
- Direct keyboard entry for memory channels and frequencies
- Wide variety of tuning steps
- Dial lock function
- Dual clocks with sleep/ daily timers
- Bass and treble tone control and more...



# ER TECHNOLOGY



## SPECIFICATIONS

## GENERAL

- Frequency coverage (Unit: MHz) :
  - U.S.A., Europe, Australia : 0.10000-1999.80000 MHz
  - Germany : 13.95000-14.50000 MHz, 28.00000-29.70000 MHz, 144.00000-146.00000 MHz, 430.00000-440.00000 MHz, 1240.00000-1300.00000 MHz
  - France : 0.10000-87.49999 MHz, 108.00000-1999.80000 MHz
- Mode : USB, LSB, CW, FSK, AM, FM, Wide FM
- Number of memory channel : 1000
- Power supply requirement : 100-120 V AC (U.S.A.), 220 V AC (Germany), 220-240 V AC (Others)
- Power consumption : Less than 110 VA
- Usable temperature range : -10°C to +50°C; +14°F to +122°F
- Frequency stability (between 0°C to +50°C) : Less than ±25 Hz (Below 30 MHz)  
Less than ±0.25 ppm (Above 30 MHz)
- Antenna connectors : SO-239 (for HF; 50 Ω), Type-N × 2 (one each for 30-1000 MHz and 1000-2000 MHz; 50 Ω), Phono [RCA (for HF; 50 Ω)]
- Dimensions (proj. not incl.) : 424(W)×150(H)×365(D) mm;  
16<sup>1</sup>/<sub>16</sub>(W)×5<sup>2</sup>/<sub>32</sub>(H)×14<sup>3</sup>/<sub>8</sub>(D) in
- Weight (approx.) : 20.0 kg; 44 lb 1 oz
- Display : 5-inch TFT color LCD (320×234 pixel)
- REMOTE connector : 2-conductor 3.5 (d) mm (1/8")
- IF OUT connector : Phono (RCA; 50 Ω)
- ACC connector : DIN 8-pin (female)
- VIDEO IN/OUT connectors : Phono (RCA; 75 Ω)
- REC REMOTE connector : 2-conductor 3.5 (d) mm (1/8")
- DATA IN connector : DIN 8-pin (female)

## Supplied accessories:

- AC power cable
- Spare fuses
- Rack mounting kit
- Pin plugs
- Phono (RCA) plugs
- DIN 8-pin plugs

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

## RECEIVER

- Receive system : Superheterodyne system
- Below 1000 MHz : Quadruple conversion (SSB, CW, FSK)  
Triple conversion (FM)
- 30-999.99999 MHz : Double conversion (WFM)
- Above 1000 MHz\* : Quintuple conversion (SSB, CW, FSK)  
Quadruple conversion (FM)  
Triple conversion (WFM)

\*Crystal conversion system is used for above 1000 MHz bands.

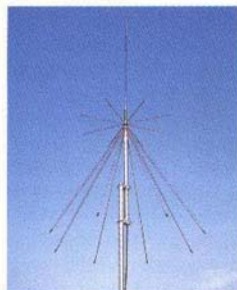
- Sensitivity (typical value) :

Frequency range (MHz)	SSB, CW, FSK	AM	FM	WFM
0.1-0.49999	0.5 μV	3.2 μV	—	—
0.5-1.79999	1.0 μV	6.3 μV	—	—
1.8-29.99999	0.16 μV*	1.0 μV*	—	—
30-999.99999	0.32 μV	1.4 μV	0.5 μV	1.4 μV
1000-1239.99999	0.63 μV	4.0 μV	1.0 μV	4.0 μV
1240-1299.99999	0.32 μV	2.0 μV	0.5 μV	2.0 μV
1300-1599.99999	0.63 μV	4.0 μV	1.0 μV	4.0 μV
1600-1999.80000	1.0 μV*	5.6 μV*	1.4 μV*	5.6 μV*

10 dB S/N for SSB, CW, FSK and AM; 12 dB SINAD for FM and WFM  
The IC-R9000L receives below 30 MHz in FM mode. FM specification guaranteed 30-1999.80000 MHz only (except wide FM).

- Selectivity : More than 2.4 kHz/-6 dB (SSB, CW, RTTY)  
More than 6 kHz/-6 dB (AM)  
More than 15 kHz/-6 dB (FM)
- Audio output power : More than 2.5 W at 10% distortion with an 8 Ω load
- PHONES connector : 3-conductor 6.35 (d) mm (1/4")
- Ext. SP connector : 2-conductor 3.5 (d) mm (1/8")/4-8 Ω
- REC connector : 2-conductor 3.5 (d) mm (1/8")
- LINE OUT connector : Phono (RCA; 2 kΩ)

## OPTIONS



**AH-7000 SUPER WIDEBAND OMNIDIRECTIONAL ANTENNA**  
Provides super wideband coverage from 25 to 1300 MHz.

For the owner of IC-R9000  
The UX-R9000 LCD UNIT is available and can also be installed into the current IC-R9000 model. (Can replace CRT unit)

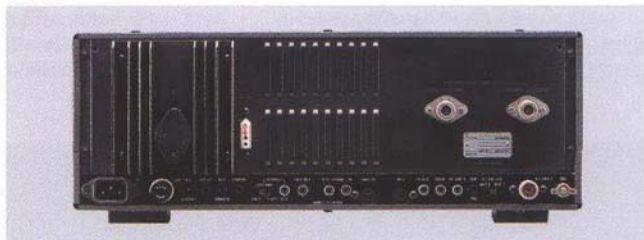


**CT-17 CI-V LEVEL CONVERTER**  
For remote receivers control using a PC equipped with an RS-232C port.



**SP-20 EXTERNAL SPEAKER WITH NOISE FILTERS**  
High performance speaker with audio filters for great sound quality. Size, style match the IC-R9000L.

## Rear View



- IF OUT : 10.7 MHz/-65 dB at -50 dBm  
RF signal is received (50 Ω)
- VIDEO IN/OUT : NTSC format 1.0 mV p-p (In/out)
- DC OUT : 13.8 V/100 mA max.
- DATA IN : DATA (Pin 1) RS-232C level; ASCII code output  
VIDEO (Pin 3) 1 V p-p output (75 Ω)
- REC : 10 mV max. (2 kΩ)
- LINE OUT : 10 mV max. (2 kΩ)
- ACC : ANTS (Pin 1) 5 V/100 μA output (10 kΩ)  
SEND (Pin 3) -0.5 to +0.8 V;  
Less than 20 mA input  
AF (Pin 5) 100-300 mV rms output (47 kΩ)  
SQL S (Pin 6) 0.3/6.0 V output (SQL Off/On)  
13.8 V (Pin 7) 13.8 V/100 mA output  
M OUT (Pin 8) 0-4 V output (10 kΩ)

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Certificate Number Q14190



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

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