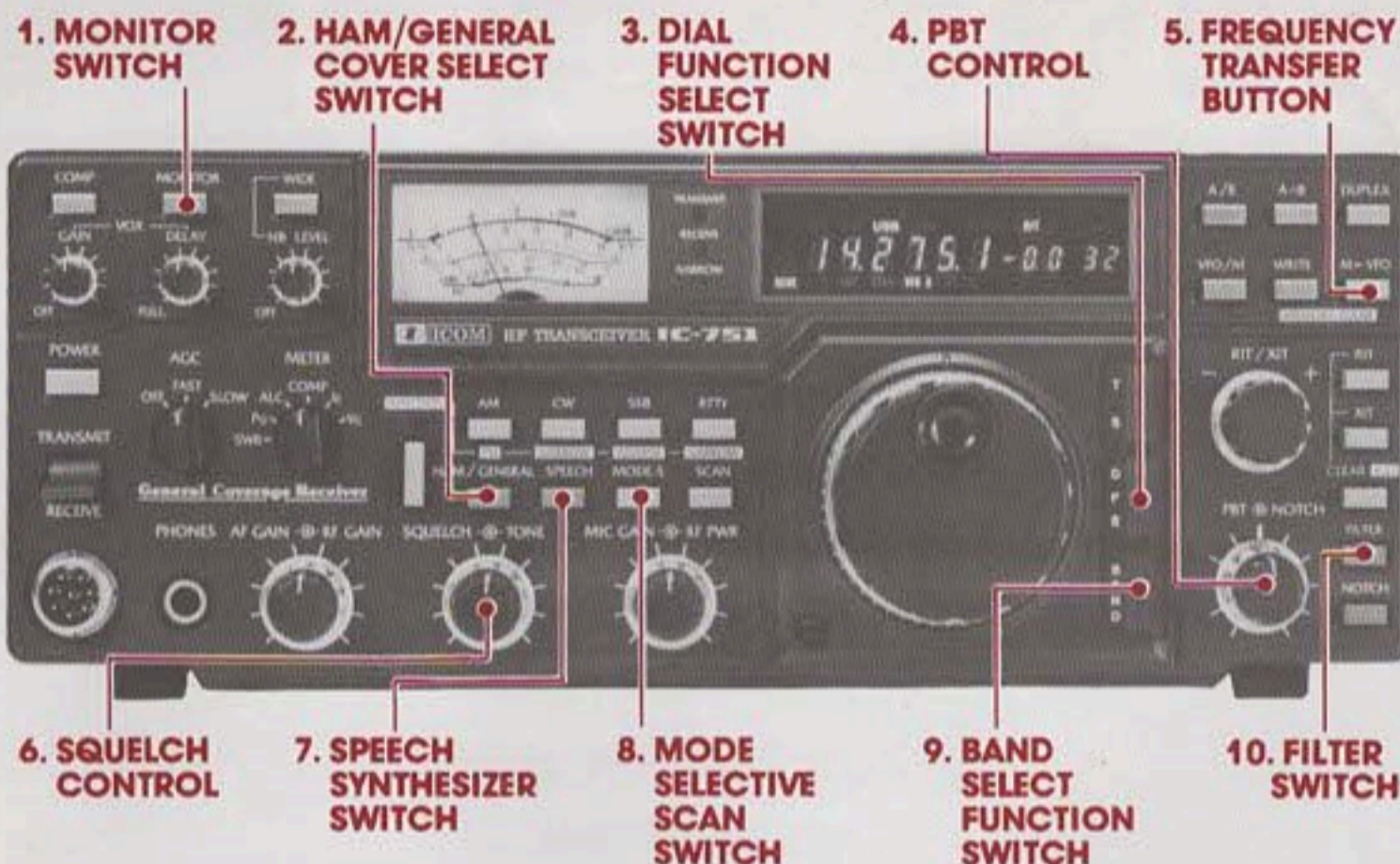

ICOM IC-751

The New Standard of Comparison



 **ICOM**

The World System



1. MONITOR SWITCH.
In the SSB transmit mode, the transmitting IF signals can be monitored by turning this switch ON. At this time, use headphones or reduce receiver audio volume to prevent howling.

2. HAM BAND/GENERAL COVER SELECT SWITCH.
Each push selects the function of the set alternately. In the HAM BAND mode, the transceiver functions in any of nine HAM bands between 1.8MHz and 28MHz. In the GENERAL COVERAGE mode the set functions as a general coverage receiver between 0.1MHz and 30MHz.

3. DIAL FUNCTION SELECT SWITCH.
In the VFO operation, by pushing in this switch, the operating frequency (displayed VFO frequency) is locked and the memory channel number (displayed on the frequency display) can be changed by turning the tuning control.

4. P.B. TUNE (PASSBAND TUNING) CONTROL.
Allows continuous tuning of the passband selectivity by moving the filter up to 800Hz from the upper or lower side in SSB, CW and RTTY. Not only improves selectivity, but also can improve the audio tone. Normal position is in the center (12 o'clock) position and is 2.3KHz wide in SSB.

5. FREQUENCY TRANSFER BUTTON.
In the VFO operation, the frequency, mode and HAM/GENE operation stored in a memory channel (displaying its

IC-751

ICOM is proud to announce the most advanced amateur transceiver in communications history.

Based on ICOM's proven high technology and wide dynamic range HF receiver designs, the IC-751 is a competition grade ham receiver, a 100KHz to 30MHz continuous tuning general coverage receiver, and a full featured all-mode, solid state ham band transmitter, that covers all the new WARC bands.

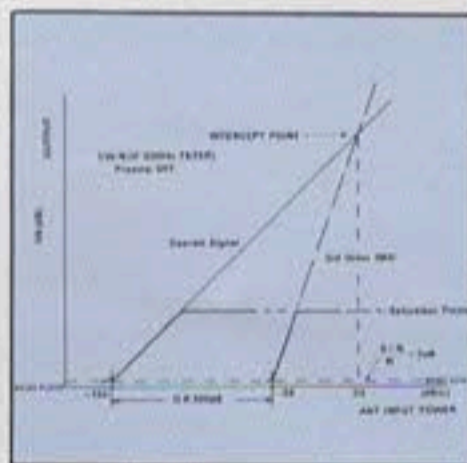
And with the optional internal AC power supply, it becomes one compact, portable/field day package.

Compare these important features in a "top of the line" base station:

- 100KHz — 30MHz receiver
- 105dB dynamic range
- QSK — full break-in CW
- 32 tunable memories w/7 year lithium battery memory backup
- 100% duty cycle transmitter
- Programmable band scan/memory scan/mode scan
- Passband tuning
- 12VDC operation
- Internal AC power supply option
- Computer interfacing options
- Speech synthesizer option

Receiver.

Utilizing an ICOM developed J-FET DBM, the IC-751 has a 105dB dynamic range. The 70.4515MHz first IF virtually eliminates spurious responses, and a high gain 9.0115MHz second IF, with ICOM's PBT gives the ultimate in selectivity. A deep IF notch filter, adjustable AGC and noise blanker (can be adjusted to eliminate the woodpecker), audio tone control, plus RIT with separate readout provides easy-to-adjust, clear reception even in the presence of strong QRM or

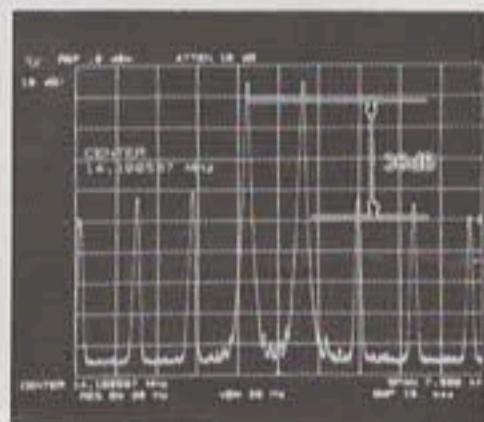
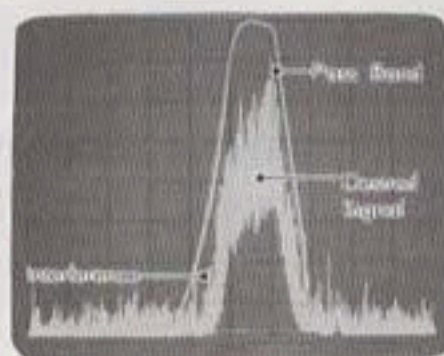


high noise levels. A low noise receiver preamp provides additional reception sensitivity when required.

Transmitter.

The transmitter features high reliability 2SC2904 transistors in a low IMD (-38dB @ 100W), full 100% duty cycle (internal cooling fan standard). 12 volt DC design. Quiet relay selection of transmitter LPF's, transmit audio tone control, monitor circuit (to monitor your own CW or SSB signal), XIT, and a high

PASSBAND TUNING MODE



performance speech processor enhance the IC-751 transmitter's operation. For the CW operator, semi break-in or full QSK is provided for smooth, fast break-in keying.

channel number on the frequency display), are transferred to the selected VFO.

6. SQUELCH CONTROL

Sets the squelch threshold level. To turn OFF the squelch function, rotate this control completely counterclockwise. To set the threshold level higher, rotate the control clockwise.

7. SPEECH SYNTHESIZER SWITCH.

When the optional speech synthesizer unit is installed, this switch turns on the unit which announces the displayed frequency in English.

8. MODE SELECTIVE SCAN SWITCH

By preselecting the desired mode, only those memory channels of the same mode are scanned. All others are bypassed.

9. BAND SELECT FUNCTION SWITCH.

By pushing in this switch, the operating band is changed by turning the TUNING CONTROL. In the HAM BAND mode, each initialized frequency of the band is selected. In the GENERAL COVERAGE mode, the operating frequency is changed in 1MHz steps but the lower digits do not change.

10. FILTER SWITCH.

Selects the combination of the second IF (9MHz) filter and the third IF (455KHz) filter to improve the selectivity.

32 Memories.

Thirty-two tunable memories are provided to store mode, VFO, and frequency, and the CPU is backed by an internal lithium memory back-up battery to maintain the memories for up to seven years. Scanning of frequencies, memories and bands are possible from the unit, or from the IC-HM12 scanning microphone. In the Mode-S mode, only those memories with a particular mode are scanned; others are bypassed. Data may be transferred between VFO's, from VFO to memories, or from memories to VFO. Memories may also be cleared.

Dual VFO.

Dual VFO's controlled by a large tuning knob provide easy access to split frequencies used in DX operation. Normal tuning rate is in 10Hz increments and increasing the speed of rotation of the main tuning knob shifts the tuning to 100Hz increments automatically. Pushing the tuning speed button gives 1KHz tuning. Digital outputs are available for computer control of the transceiver frequency and functions, and for a synthesized voice frequency readout.

Features.

All of the above features plus full function metering, SSB and FM squelch, convenient large

controls, FM standard, a large selection of plug-in filters, and a new high visibility multi-color fluorescent display that shows frequency in white, and other functions in white or red, make the IC-751 your best choice for a superior grade HF base transceiver.

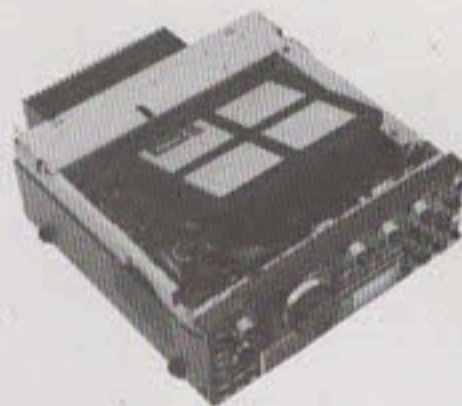
Options.

External 12 key frequency controller, external IC-PS15 power supply, internal power supply, computer interface, speech synthesizer, high stability reference crystal (less than 100Hz, -10°C to +60°C), IC-HM12 hand mic, desk mic, filter options:

SSB: FL-70
CWN: FL-52A, FL-53A, FL-32, FL-63
AM: FL-33

Internal Power Supply.

One of the most unique features of the IC-751 and the one that makes it an all-in-one

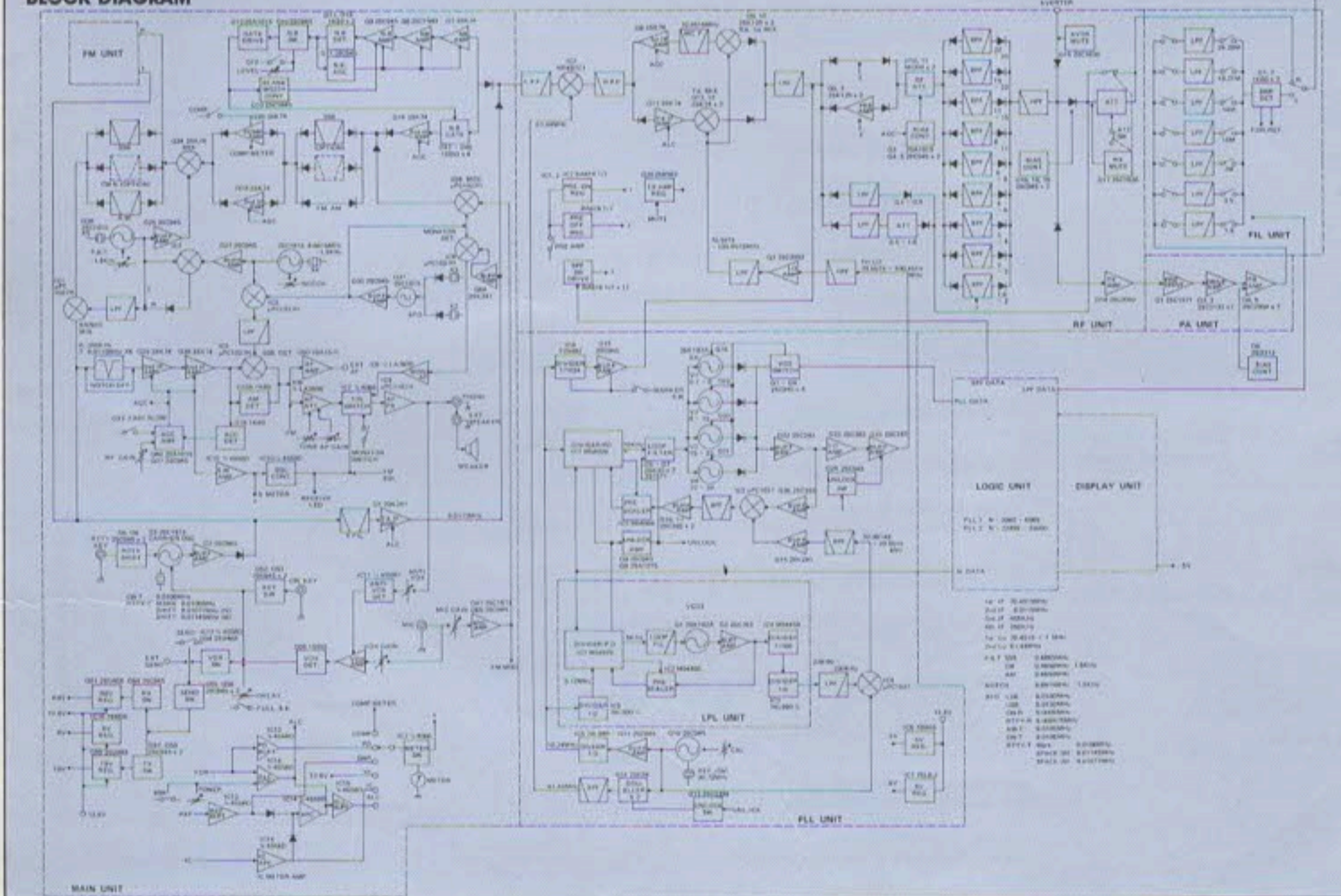


package is the optional IC-PS35 internal power supply. This makes the IC-751 self-contained.

FILTER SPECIFICATIONS LIST

	Filter	Model	Center Freq. (KHz)	-6dB (KHz) Width	-60dB (KHz) Width	dB Insertion Loss	Shape Factor	No.
STANDARD	AM Ceramic	CPW 455 IT	455	6.0	15.0	7	2.5	1
	SSB (PBT) XTAL	FL-30	9011.5	2.3	4.2	6	1.63	2
	FM Filter	9M15A	9011.5	15 (-3dB)	50 (-40dB)	4	-	3
	SSB Narrow (Hygrade Crystal)	FL-44A	455	2.4	4.0	6	1.67	4
OPTIONAL	CW Narrow	FL-52A	455	0.500	1.0	6	2.0	5
	CW Narrow	FL-53A	455	0.250	0.480	6	1.9	6
	SSB Wide	FL-70	9011.5	2.8	5.0	6	1.8	7
	CW Narrow	FL-32	9010.6	0.500	1.6	8	3.2	8
	CW Narrow	FL-63	9010.6	0.250	1.1	12	4.0	9
	AM	FL-33	9010.0	6.0	20.0	-	3.3	10

BLOCK DIAGRAM



SPECIFICATIONS: IC-751

GENERAL

Number of Semiconductors

Transistors	105
FET	16
IC (Includes CPU)	51
Diodes	219

Frequency Coverage

Ham Bands	13.95MHz — 14.5MHz
1.8MHz — 2.0MHz	17.95MHz — 18.5MHz
3.45MHz — 4.1MHz	20.95MHz — 21.5MHz
6.95MHz — 7.5MHz	24.45MHz — 25.1MHz
9.95MHz — 10.5MHz	27.95MHz — 30.0MHz

General Cover (Receive Only)

0.1MHz — 30.0MHz
Thirty 1MHz Segments (or Continuous)
RIT/XIT Coverage ± 9.9 KHz

Frequency Control

CPU based 10Hz step Digital PLL synthesizer.
Independent Transmit-Receive frequency
available on same band.

Frequency Readout

6 digit 100Hz readout

Frequency Stability

Less than ± 200 Hz after switch on 1 min to
60 mins, and less than ± 30 Hz after 1 hour. Less
than ± 500 Hz in the range of 0°C — +50°C.

Power Supply Requirements

DC 13.8V $\pm 15\%$ Negative ground Current
drain 20A max. (at 200W input). AC power
supply is available for AC operation.

Antenna Impedance:

50ohms Unbalanced

Weight

8.5Kg

Dimensions

115mm(H) x 306mm(W) x 355mm(D)

RECEIVER

Receiving System

SSB, CW, RTTY, AM
Quadruple Conversion Superheterodyne
with continuous Bandwidth Control.
FM Triple Conversion Superheterodyne

Receiving Mode

A₁, A₃J (USB, LSB) F₁ (Output FSK
audio signal), A₃, F₃

IF Frequencies:

1st 70.4515MHz
2nd 9.0115MHz (SSB),
9.0106MHz (CW, RTTY)
9.0100MHz (AM, FM)
3rd 455KHz
4th 350KHz (except FM)
with continuous Bandwidth Control

Sensitivity

SSB, CW, RTTY, AM
0.1 — 0.5MHz Less than 0.5 μ V for 10dB S/N
0.5 — 1.6MHz Less than 1.0 μ V for 10dB S/N
1.6 — 30MHz Less than 0.15 μ V for 10dB S/N

AM

0.1 — 0.5MHz Less than 3 μ V for 10dB S/N
0.5 — 1.6MHz Less than 6 μ V for 10dB S/N
1.6 — 30MHz Less than 1 μ V for 10dB S/N

FM

1.6 — 30MHz Less than 3 μ V for 12dB SINAD.

Squelch Sensitivity

1.6 — 30MHz Less than 0.3 μ V

Selectivity

SSB, CW, RTTY
2.3KHz (Adjustable to 0.8KHz Min)
at -6dB
4.0KHz at -60dB
AM 2.4KHz at -6dB, 4.5KHz at -60dB
(When Filter switch ON)

4.0KHz at -6dB, 15KHz at -60dB
FM 15KHz at -6dB, 30KHz at -60dB

Notch Filter Attenuation

More than 45dB.

Spurious Response Rejection Ratio

More than 60dB.

Audio Output

More than 3 Watts.

Audio Output Impedance

8 ohms.

TRANSMITTER

RF Power

SSB (A₃J) 200 Watts PEP Input
CW (A₁), RTTY (F₁) 200 Watts input
FM (F₃) 200 Watts input
Am (A₃) 40 Watts output
Continuously adjustable output power
10 Watts — Max.

Emission Mode:

A₃J SSB (Upper sideband and Lower
sideband)
A₁ CW
F₁ RTTY (Frequency Shift Keying)
A₃ AM
F₃ FM

Harmonic Output

More than 40dB below peak power output.

Spurious Output

More than 60dB below peak power output.

Carrier Suppression

More than 40dB below peak power output.

Unwanted Sideband

More than 55dB down at 1000Hz AF input.

Microphone:

Impedance 600ohms
Input Level 12 millivolts typical
Dynamic or Electret Condenser Microphone
(Optional IC-HM12 or IC-SM6 can be used.)

Accessories:



IC-PS15
IC-SP3
IC-AT500

AC Power Supply
External Speaker
HF Automatic Antenna Tuner (500W), (IC-AT100;
100W version is available)



IC-SM6
IC-HP1
IC-RC-10
IC-HM12

Desk Microphone (electret condenser type)
Headphones
Frequency controller
Microphone with Up/Down Switch



IC-2KL
IC-2KLPS

500W HF All Band Linear Amplifier
Attendant Power Supply for IC-2KL

Internally Mounted Options:

IC-PS35
IC-PS30
IC-EX-309
IC-EX-310
FL-32

Internal Power
Supply
System Power
Supply
Computer Interface
Connector
Voice Synthesizer
CW/RTTY Filter (500Hz)

FL-33
FL-52A
FL-53A
FL-63
FL-70

AM Filter (6.0KHz)
CW/RTTY Filter
(500Hz)
CW/RTTY Filter
(250Hz)
CW/RTTY Filter
(250Hz)
SSB (Wide) Filter
(2.8KHz)



ICOM INCORPORATED

1-6-19, Kamikurazukuri
Hirano-ku, Osaka, Japan
Phone: (06) 793-5301
Telex: ICOM TR J63649

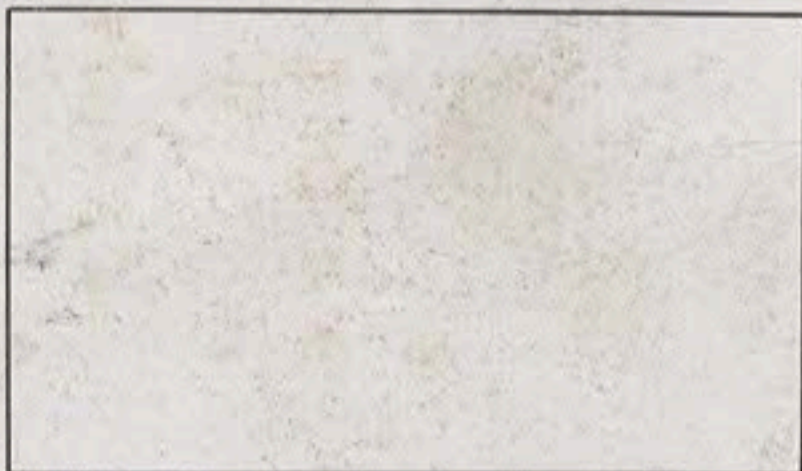
ICOM EUROPE G.M.B.H.
Himmelgeister Strass 100
4000 Duesseldorf 1
West Germany
Phone: 0211-346047
Telex: 41-8588082

ICOM AMERICA, INC.
2112 116th Avenue N.E.
Bellevue, WA 98004
Phone: (206) 454-8155
Telex: 230-152210 ICOM AMER BVUE

3331 Towerwood Dr., Suite 307
Dallas, Texas 75234
Phone: (214) 620-2781

ICOM CANADA LTD.
810 S.W. Marine Drive
Vancouver, BC Canada
Phone: (604) 321-1833
Telex: 21-454315

ICOM AUSTRALIA, PTY, Ltd.
7 Duke Street, Windsor 3181
Victoria Australia
Phone: (03) 529-7582
Telex: 71-35521 ICOMAS AA35521



All stated specifications are approximate and subject to change without
notice or obligation. All ICOM radios significantly exceed FCC regulations
limiting spurious emissions.