

ICOM

HF/VHF/UHF
ALL MODE TRANSCEIVER

IC-7000



Icom Inc.



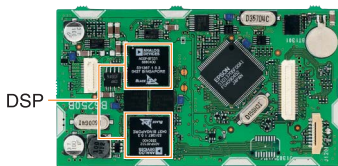
The technical properties of the IC-7000 DSP found in our leading HF transceiver now offers its superior performance in HF, 50MHz 144MHz

DSP

First in its class, IF DSP model

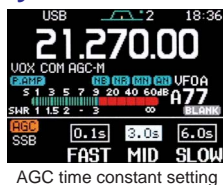
IF DSP — First in its class

Digital IF filter, manual notch filter, digital twin PBT and more. The latest digital features are incorporated in this compact radio from two DSP chips that deliver superior processing performance. Of course, those features work on all ham bands, from HF to the 70cm band.



AGC loop performance controlled by DSP

You will never experience AGC pumping from a signal filtered out by the DSP system. The digital IF filter and manual notch filter are inside the AGC loop, so you will not encounter AGC blocking. The AGC time constants are flexibly adjustable from slow, middle, fast (or AGC-off) for each operating mode.



AGC time constant setting

Digital IF filters

All the filters you want at your fingertips! You will never have to purchase "Optional" filters as the IC-7000 has adjustable digital filters. You just dial in the width you want and select whether you want a sharp or soft filter shape for SSB and CW modes. Then to pull-in the weak ones, with a quick turn of the concentric twin PBT knobs, you can either narrow the IF passband, or shift the entire passband to eliminate the QRM.

Mode	Passband width range
SSB	50–500Hz; 50Hz step
	600Hz–3.6kHz; 100Hz step
CW	50–500Hz; 50Hz step
	600Hz–3.6kHz; 100Hz step
RTTY	50–500Hz; 50Hz step
	600Hz–2.7kHz; 100Hz step
AM	200Hz–10kHz; 200Hz step
FM	7/10/15kHz; fixed step
WFM	280kHz; fixed



IF filter setting

2-point MNF (Manual notch filter)

Pull out the weak signals in crowded band conditions with Icom's NEW two-point MNF (manual notch filter). Apply 70 dB of rejection to two signals at once! Notch width is adjustable – wide, medium, and narrow – and an auto-tuning notch filter is available, too.



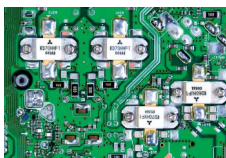
Manual notch filter

Performance

Basic performance exceeds your expectations

35W output in 70cm band

High power MOS-FET amps supply 35W output power on 430/440MHz band as well as 100W on HF/50MHz bands and 50W on 144MHz. It provides stable, high quality output with low IMD and low spurious emissions even during high duty cycle and extended operation.



MOS FET PA units

High stability crystal unit

The IC-7000 incorporates a high-stability master oscillator, providing 0.5ppm (–0°C to +50°C). A must for data mode operation.

Digital noise reduction

Noise reduction reduces background noise and improves signal-to-noise ratio. The noise reduction level is adjustable in 16 steps. It improves the readability of voice and data signals.

Digital noise blanker

The noise blanker reduces pulse-type noise such as engine ignition and sparking. The NB level and width (blanking duration) are adjustable in 100 steps.



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DDS (Direct digital synthesizer) circuit

Icom's original DDS (Direct digital synthesizer) circuit improves the C/N ratio, providing a clear, clean transmit signal in all bands.



Icom original DDS circuit

Compact, all in one package

The IC-7000 sheds 20mm (²⁵/₃₂ in) of depth compared with the IC-706MKIIG. It's compact body is easy for carrying outdoors or mobile operation.

Features and advantages of IF-7000 Fixed base station models or advantages on mobile and 430/440 MHz bands.

Function

User-friendly key allocation

Eight of the most-used radio functions such as NB, NR, MNF, and ANF are controlled by dedicated function keys grouped around the display for easy visibility. One quick touch turns the function on and off. A longer touch activates adjustment of the function's setting.



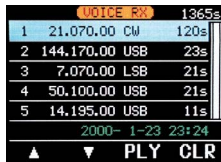
8 direct access buttons



Digital voice recorder (DVR)

Record your callsign, CQ, or other information in 4 transmit playback memories with alphanumeric labels. A total of 90 seconds is available for the four memories. A front panel REC control allows you to record incoming signals for up to 25 minutes (99 channels)*. The DVR makes portable contesting or mini-expeditions a breeze!

* Up to 120 seconds per channel



Voice RX memory

Built-in RTTY demodulator

The RTTY demodulator and decoder are built-in. External units and PC are no longer required for decoding. The twin peak audio filter reduces interfering signals overlapping the tones and the tuning indicator helps you zero-in with accurate tuning.



RTTY decode screen

Remote control microphone, HM-151

The HM-151 has a 10-keypad for quick channel selection. The triple band stacking register memorizes the last three frequencies and modes used on each band. Push the band button once to three times to recall the channel setting. The F-1 and F-2 buttons are programmable as shortcut menus of your often used functions.



Key illumination

Practical functions and operations

2.5 inch color TFT display

The 2.5 inch color TFT display presents numbers and indicators in bright, concentrated colors for easy recognition. You can choose from 3 background colors and 2 font styles to suit your preference, in addition to a large operating frequency readout. And more, the Video output jack on the rear panel allows you to view a magnified display on an external monitor*.

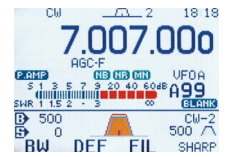
* 3.5(d) mm monaural cable is required for connection.



Negative type



Color type



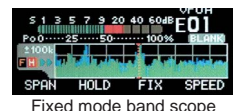
Positive type

SSB transmit bandwidth adjustable

The SSB transmit bandwidth is selectable from 100, 200, 300, 500Hz at the high-pass edge, and 2500, 2700, 2800, 2900Hz at the low-pass edge respectively. 3 types of high and low combinations can be set in the quick set mode.

2-mode band scope

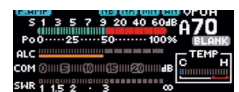
The band scope function lets you watch conditions around the band and visually assists in finding other stations. In center mode the band scope range is centered on the receiving frequency ($\pm 10\text{kHz}$ to $\pm 250\text{kHz}$). In Fixed mode the band scope sweeps a fixed range.



Fixed mode band scope

Multi function meter and SWR graphic display

The IC-7000 displays power level, SWR, ALC and compression level of the speech compressor. The SWR graphic display is useful for tuning antennas. The measuring step is selectable from 10/50/100/500kHz steps and the number of measuring steps is adjustable from 3 to 13 steps.



Multimeter screen

Other outstanding features

- Front panel separation with optional 3.5m/5m separation cable
- Selectable main dial tension from heavy, light and click
- RF speech compressor controlled by the DSP
- CW full break-in
- CW receive reverse
- CW pitch adjustable
- Tone squelch in FM mode
- 503 memory channels
- Built-in voice synthesizer announces operating frequency, mode and signal strength
- Duplex mode and automatic repeater function
- Transmit monitor
- DTMF monitor
- 1Hz tuning
- VOX
- CI-V interface
- RIT/ATX
- RF/SQL knob
- Large speaker
- Auto TS function
- Thermo control silent cooling fan
- Noise squelch and S-meter squelch
- Preamplifier
- Dial lock
- 20dB attenuator

Rear panel

