

IC-7410

The Best Balance of Technology,
Performance and Fun!



The Best Balance of Technology, Performance and Fun!

HF/50MHz ALL MODE TRANSCEIVER

1C - 7410



Faster DSP unit and in-house DSP expertise

Icom brings out the best DSP performance combining more than ten years of DSP technical know-how and much faster DSP processors. Icom's in-house DSP experts have developed a IC-746PRO/7400 series replacement that every operator will be proud to own. In addition to the higher speed DSP, the AD/DA converter, AK4620B, provides a higher dynamic range and superior S/N ratio.



Internal clock speed: 333MHz 32-bit floating point DSP Max. performance: 2000MFLOPS



<AD/DA converter> AK4620B ADC Signal/(Noise+Distortion): 100dE ADC Dynamic range, S/N: DAC Dynamic range, S/N:

Double-conversion superheterodyne

Introduced with the IC-7800, a double conversion superheterodyne design, with an image rejection mixer for the 2nd mixer stage is employed in the IC-7410. This receiver design not only reduces the electronic complexity, it greatly reduces the number of internal distortion points from older triple and quadruple conversion receivers.

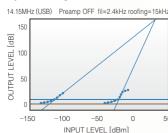


+30dBm third-order intercept point (IP3)

create the best receiver, the design of the IC-7410 incorporates the latest in DSP software technology and Icom's analog RF circuit experience for a +30dBm* IP3, rivaling the IC-7600. The end result, clear reception of weak signals surrounded by QRM from broadcast and neighboring ham stations.

* In 14MHz band.

In Icom's continuing efforts to Dynamic range characteristics



Three first IF filters (3/6/15kHz)

The IC-7410 accommodates three 1st IF filters with the 15kHz, 1st IF filter supplied, while the 3kHz FL-431 and 6kHz FL-430 are optional for better receiver performance by protecting the desired signal from nearby strong signals. (Fixed for 15kHz in FM mode.)



Large, multi-function LCD

The display increases in width from the IC-746PRO/7400 series. The large multi-function LCD shows frequency, 9-character channel name, channel number, multi-functional meter (includes S-meter, RF output, SWR. ALC and COMP level). The dot-matrix portion of the LCD shows the following items:

- Channel name
- Function key assignment
- Band scope
- Memory keyer contents Graphical SWR scale
- RTTY decoder screen

USB connector for PC control

The IC-7410 has a standard type B USB connector and can be connected to a PC. Modulation input, audio output, RTTY demodulator output and CI-V command can be controlled via the USB cable. Also, the conventional CI-V remote control jack is built in to the IC-7410.





RTTY demodulator and decoder

The built-in RTTY demodulator and decoder allow you to instantly read an RTTY message on the display. No external units or PC required. The built-in tuning indicator visually helps in critical tuning.



Simple band scope

The built-in simple band scope shows the band condition at a glance and is handy for searching for active stations.

Wide range of DSP features

Using the latest algorithms, the digital features give flexibility and speed needed for working in tough RF conditions.

- Digital IF filter allows you to choose filter width and shape factor
- Digital Twin PBT eliminates interference by changing the IF bandwidth and/or shifting the IF frequency
- AGC loop management with programmable AGC time constant
- Auto/manual Notch Filter provides more than 70dB attenuation and eliminates unwanted heat tones
- Noise Reduction can enhance the receiver's signal-to-noise ratio
- Noise Blanker reduces interference from pulse-type noise
- RF Speech Compressor increases average talk power, improving signal strength and readability
- User programmable tone control: microphone equalizer, SSB transmit passband width, receive HPF/LPF and receive audio equalizer

Ample CW functions

All of the following CW capabilities are included in the IC-7410:

- Large CW pitch knob and independent BK-IN (break-in) delay knob
- CW wave form controlled by the DSP
- 4 keyer channels with 70 characters of transmit memory per channel
- Multi-function electronic kever with adjustable keving speed from 6-48 wpm, dot-dash ratio from 1:1:2.8 to 1:1:4.5 and paddle polarity
- Bug keyer and full break-in function
- Continuously adjustable CW pitch control from 300-900Hz
- Double key jacks (Front and rear panels) CW reverse



High frequency stability

A high stability TCXO crystal oscillator provides ±0.5ppm of high frequency stability over a wide temperature range (0°C to +50°C). This allows for a long steady operating time in digital modes.



Large heat sink

When compared to the IC-746PRO series, the IC-7410's large heat sink improves heat dissipation. Even during long hours of heavyduty cycle operation, the IC-7410 provides stable output power.



IC-7410 chassis

Other features

- Built-in voice synthesizer User programmable band edge beep
- VSC (Voice Squelch Control) function
- Two preamplifier types: Preamp 1: Improving IMD characteristics,
- Preamp 2: High gain preamplifier 20dB built-in attenuator
- Built-in automatic antenna tuner
- · CTCSS tone encoder and decoder
- Triple band stacking register Quick split and frequency lock functions
- RIT and ∠Tx variable up to ±9.999kHz SSB/CW synchronous tuning
- 1Hz pitch tuning and display ±0.5ppm of high frequency stability
- Program, memory, select memory, mode select and ⊿f scans
- Large independent MIC/RF power and Notch knobs

Optional RS-BA1 IP remote control software

The optional RS-BA1 allows you to use the IC-7410 from another room using your home network or even from a remote location over the Internet



Rear Panel View



1C - 7410

SPECIFICATIONS

GENERAL (

Frequency coverage

USA version 0.030-60.000MHz* Rx 1.800-1.999MHz 3.500- 3.999MHz Tx 5.255-5.405MHz* 7.000- 7.300MHz 14 000-14 350MHz 10 100-10 150MHz 21.000-21.450MHz 18.068-18.168MHz 28.000-29.700MHz 24.890-24.990MHz

50.000-54.000MHz

Europe. Europe-01 version Rx

0.030-60.000MHz* 1.810-1.999MHz 3.500- 3.800MHz 7.000-7.100MHz (Europe) 7.000–7.200MHz (Europe-01)

10.100-10.150MHz 14.000-14.350MHz 18.068-18.168MHz 21.000-21.450MHz 24 890-24 990MHz 28 000-29 700MHz 50.000-52.000MHz

* Some frequency bands are not guaranteed.

: USB, LSB, CW, RTTY, AM, FM Mode • Number of memory Ch. : 101 (99 regular, 2 scan edges)

SO-239×2 (50Ω) Antenna connector

: 0°C to +50°C; +32°F to +122°F Temperature range Frequency stability : Less than +0.5ppm (0°C to 50°C; +32°F to +122°F)

• Power supply requirement : 13.8V DC ±15% (negative ground)

• Current drain (at 13.8V DC):

Tx Max. power 23A Stand-by 2.2A Rx Max. audio 3.0A

• Dimensions (W×H×D) : 315×116×343 mm; 12.4×4.57×13.5 in (projections not included) • Weight (approx.) : 10.2kg; 22.4lb

TRANSMITTER (

 Output power SSB, CW, RTTY, FM 2-100W AM 2-27W

Modulation system

SSB Digital PSN modulation ΔМ Digital low power modulation FM Digital phase modulation : Less than -50dB (HF bands) Spurious emission Less than -63dB (50MHz band)

· More than 40dB Carrier suppression : More than 55dB Unwanted sideband suppression

Microphone connector : 8-pin connector (600Ω)

RECEIVER (

 Receive system : Double conversion superheterodyne

 Intermediate frequencies : 1st 64.455MHz 36kHz 2nd

Sensitivity (typical)

olarity (typical)				
		0.5-1.8MHz	1.8-29.9MHz	50-54MHz
	SSB/CW	_	0.16µV*1	0.13µV*2
	AM	12.6µV*1	2.0µV*¹	1.6µV*2
	FM		0.5µV*³	0.32µV*³

10dB S/N for SSB, CW, RTTY and AM, 12dB SINAD for FM
*1 Pre-amp 1 ON, *2 Pre-amp 2 ON, *3 28–29.7MHz.

• Squelch sensitivity (Pre-amp : ON) :

SSB Less than 5.6uV FM Less than 0.3µV Selectivity

More than 2.4kHz / -6dB SSB (BW: 2.4kHz, sharp) Less than 3.4kHz / -40dB (BW: 500Hz, sharp) RTTY

(BW: 350Hz, sharp) AM (BW: 6kHz)

FM (BW: 15kHz)

 Spurious and image rejection ratio AF output power

(at 13 8V DC) RIT variable range PHONES connector

EXT SP connector

More than 500Hz / -6dB Less than 700Hz / -40dB More than 500Hz / 6dB Less than 800Hz / -40dB More than 6.0kHz / 6dB Less than 10.0kHz / -40dB More than 12.0kHz / -6dB Less than 22.0kHz / -40dB : More than 70dB

: More than 2.0W at 10% distortion

with an 80 load ±9.999kHz

3-conductor 6.35 (d) mm (1/4")

2-conductor 3.5 (d) mm (1/8")/8Ω

ANTENNA TUNER

Matching impedance range:

HF bands 16.7-150Ω unbalanced* 50MHz band 20-125Ω unbalanced* *1 Less than VSWR 1:3: *2 Less than VSWR 1:2.5

Minimum operating power :

HF bands 50MHz band 15W

VSWR 1:1.5 or less Tuning accuracy (SWR after the motor has stopped)

 Insertion loss (after tuning) 1.8 MHz band 1 2dB or less

3.5 -50MHz bands 1.0dB or less

Supplied accessories :

 Hand microphone Spare fuses

• DC power cable

· CW key plug

All stated specifications are subject to change without notice or obligation.

OPTIONS



IC-PW1/IC-PW1EURO HF+50MHz 1kW LINEAR AMPLIFIER Covers all HF and 50MHz bands, provides clean, stable 1kW output. Automatic antenna tuner and compact detachable controller are standard, 2 exciter inputs are available.



AH-4 HF+50MHz AUTOMATIC ANTENNA TUNER Covers 3.5-54MHz with a 7m (23 ft) or longer wire antenna





AH-2b ANTENNA ELEMENT A 2.5m long antenna element for mobile operation with the AH-4. All amateur bands between 7-54 MHz can be matched



PS-126 DC POWER SUPPLY 13.8V DC, 25A max. with 4-pin



FL-430 6kHz 1st IF FILTER FL-431 3kHz 1st IF FILTER 1st IF filters for better receiver performance.



SM-50 DESKTOP MICROPHONE Unidirectional, electret microphone for base station operation. [UP/DOWN] switches and low cut function are available.



SM-30 DESKTOP MICROPHONE Compact, lightweight electret microphone. Low cut function is available.

SM-20 is also available.



SP-21 EXTERNAL SPEAKER Input impedance: 8Ω Max. input power: 5W



SP-23 EXTERNAL SPEAKER 4 audio filters: headphone jack. Input impedance: 8Ω Max. input power: 5W



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

HM-36 HAND MICROPHONE Same as supplied MB-123 CARRYING HANDLE Same as supplied.

OPC-599 CABLE ADAPTER Converts 13-pin ACC connector to 7-pin + 8-pin ACC connectors.

RS-BA1 IP REMOTE CONTROL SOFTWARE For IP remote transceiver control from a PC.

Count on us!

Icom, Icom Inc. and the Icom logo are registered trademarks of Icom Incorporated (Japan) in the United States, the United Kingdom, Germany, France, Spain, Russia, Japan and/or other countries.

ICOM Inc. 1-1-32, Kami-minami, Hirano-ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013 Icom America Inc.

2380 116th Avenue NE, Bellevue, WA 98004, U.S.A.
Phone: +1 (425) 454-8155
Fax :+1 (425) 454-1509
E-mail: sales@icomamerica.com
URL : http://www.icomamerica.com : http://www.icomamerica.com

Icom Canada

Glenwood Centre #150-6165 Highway 17, Delta, B.C., V4K 5B8, Canada Phone: +1 (604) 952-4266 : +1 (604) 952-0090 E-mail : info@icomcanada.com

: http://www.icomcanada.com Icom (Australia) Pty. Ltd.

Unit 1 / 103 Garden Road, Clayton, VIC 3168 Australia Phone: +61 (03) 9549 7500 Fax: +61 (03) 9549 7505 E-mail: sales@icom.net.au : http://www.icom.net.au

Icom New Zealand

146A Harris Road, East Tamaki, Auckland, New Zealand Phone: +64 (09) 274 4062 Fax: +64 (09) 274 4708 E-mail: inquiries@icom.co.nz URL: http://www.icom.co.nz

Icom (Europe) GmbH

Communication Equipment Auf der Krautweide 24 65812 Bad Soden am Taunus, Germany Phone: +49 (6196) 76685-0 Fax: +49 (6196) 76685-50 E-mail : info@icomeurope.com URL : http://www.icomeurope.com

Icom Spain S.L.

Ctra. Rubi, No. 88 "Edificio Can Castanyer" Bajos A 08174, Sant Cugat del Valles, Barcelona, Spain Phone: +34 (93) 590 26 70 : +34 (93) 589 04 46 E-mail : icom@icomspain.com URL : http://www.icomspain.com

Icom (UK) Ltd.

Blacksole House, Altira Park Herne Bay, Kent, CT6 6GZ, U.K. Phone: +44 (01227) 741741 Fax: +44 (01227) 741742 E-mail: info@icomuk.co.uk : http://www.icomuk.co.uk

Icom France s.a.s.

Zac de la Plaine, 1 Rue Brindejonc des Moulinais, BP 45804, 31505 Toulouse Cedex 5, France Phone: +33 (5) 61 36 03 03 : +33 (5) 61 36 03 00 il : icom@icom-france.com : http://www.icom-france.com

Icom Polska

81-850 Sopot, ul. 3 Maja 54, Poland Phone: +48 (58) 550 7135 Fax: +48 (58) 551 0484 Fax : +48 (58) 551 0484 E-mail : icompolska@icompolska.com.pl URL: http://www.icompolska.com.pl

Asia Icom Inc.

6F No. 68, Sec. 1 Cheng-Teh Road, Taipei, Taiwan, R.O.C Fanal : +886 (02) 2559 1899 Fax : +886 (02) 2559 1874 E-mail : sales@asia-icom.con URL : http://www.asia-icom.

Beijing Icom Ltd.

10007, Long Silver Mansion, No.88, Yong Ding Road, Haidian District, Beijing, 100039, China Phone: +86 (010) 5889 539175392/5393 Fax: +86 (010) 5889 5395 E-mail: bjicom@bjicom.com

: http://www.biicom.com

www.icom.co.jp/world

Your local distributor/dealer: