

ICOM

HF ALL BAND TRANSCEIVER

IC-775DSP



Wanted sideband

SUPERIOR
DSP

Unwanted sideband

21.025.00

DUALWATCH

SPLIT

VFO

99 CH

99 CH

21030.00

HF TRANSCEIVER IC-775DSP

Icom Inc.

Interference rejection

■ Twin PBT (Passband Tuning)

PBT electronically narrows the receiver IF passband width to reduce interfering signals overlapping the edge of the IF passband. With twin PBT you can electronically shift the center frequencies of the 455 kHz and 9 MHz IF filters separately or together for unsurpassed clear reception during crowded band conditions such as contesting.

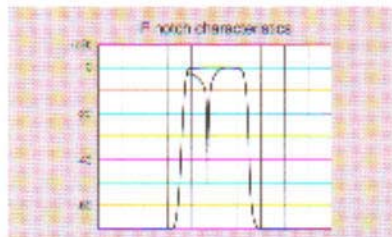


■ CW reverse mode

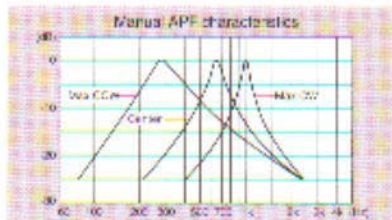
CW reverse mode is convenient when a nearby interfering signal is making it difficult to copy the desired signal. By using CW reverse mode you can flip the carrier point from USB to LSB and vice versa, thus changing the pitch of the interfering signal relative to the desired signal.

■ Manual IF notch

You can get excellent out of frequency characteristics and attenuation of more than 40 dB with the manual IF notch. Manual IF



notch allows you to cut very strong beat signals which AF notch can't. The combination of digital AF automatic notch and manual IF notch provides a double reduction of beat signals.



■ Manual APF (Audio Peak Filter)

Manual APF is available so that the desired audio peak frequency can be set without affecting the CW pitch (as in the case of digital automatic APF).

■ Related features

- Noise blanker with adjustable level and width
- AGC with adjustable time constant

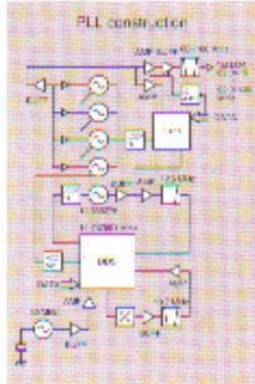
Excellent basic performance

■ 200 W output from power MOS-FET finals

Power MOS-FETs are employed in all stages of the PA unit providing excellent signal quality and low IMD characteristics. 200 W full duty cycle operation is achieved for reliable performance during contests or data operation.

■ Newly developed mixer-less PLL

Icom's original DDS (Direct Digital Synthesizer) system has just taken a leap forward with the development of a new PLL which operates without the use of a mixer. The new PLL enables very high stability signal production that is consistent and accurate over long periods of use. The use of DDS for all oscillation circuits means only one reference crystal is needed, thereby obtaining frequency stability that was up to now only dreamed of.



DSP performs magic!

Serious DX'ers require serious equipment. While the IC-775/DSP may be fun to operate it was engineered from the ground up using high-quality components and offering features and performance you'll find nowhere else. If you're serious about your hobby and want some serious fun...

HF ALL BAND TRANSCEIVER

IC-775DSP

■ 1 Hz tuning

The newly employed FLL provides signal resolution and display resolution to an amazing 1 Hz. This allows very accurate tuning in critical situations such as data communications and gives a comfortable analog feel to tuning.

■ 3 grade selectivity

Filter selection is available in all modes of operation (excluding FM), providing the level of selectivity and audio quality desired—whether you're competing in a contest or simply rag-chewing. Filters are independently selectable in the 2nd (9 MHz) and 3rd (455 kHz) IF sections.

*Optional filters must be installed.

• IF filter

MODE	9 MHz (2nd IF)	455 kHz (3rd IF)
CW/RTTY	wide 2.4 kHz FL-95	2.7 kHz FL-95
	normal 200 Hz FL-95	300 Hz FL-95
SSB	CR10N 250 Hz FL-101	250 Hz FL-101
	wide 6.0 kHz FL-102	3.0 kHz FL-101
SSB	normal 2.4 kHz FL-95	2.7 kHz FL-95
	CR10N 1.9 kHz FL-101	1.9 kHz FL-101
AM	wide thru	15 kHz CR-455
	normal 6.0 kHz FL-102	3.0 kHz CR-455
	CR10N 2.4 kHz FL-95	2.7 kHz FL-95

*Optional

■ Pre-amp and attenuator

According to operating conditions, 2 levels of pre-amp gain are selectable to boost reception. Also, 3 levels of RF attenuation are selectable, providing the necessary

reduction of receiver sensitivity when desired.

• Preamp/RF attenuator

Preamp 1	Gain 10 dB (all bands)
Preamp 2	Gain 16 dB (21-28 MHz bands)
RF attenuator	5/12/18 dB (all bands) selectable

■ High performance receiver

The IC-775/DSF's receiver covers a wide range (100 kHz-29.980 MHz) and offers exceptional performance—dynamic range of 105 dB, high intercept point of -23 dBm and a low noise floor level of -40 dBm. Low intermodulation distortion is achieved. A narrow separation band pass filter in the receiver's front end helps prevent cross-modulation caused by broadcast signals and strong adjacent signals.

*Rx: 14.1 MHz Interfering sig. F1=14.2, F2=14.3 MHz IF passband width 500 Hz

■ Related features

• RF speech compressor • Multiple meter functions • Optional voice synthesizer

Versatile operating features

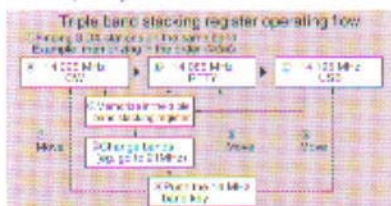
■ Dualwatch

Dualwatch allows you to receive 2 signals on the same band simultaneously. This allows you to conveniently monitor a DX station while operating on another frequency. Moreover, the main and sub frequencies are completely independent and can be con-

trolled with different tuning dials (including independent dial lock functions). During split frequency operation, while monitoring a DX station's transmit frequency you can search for its receive frequency; or while monitoring a DX net frequency, search for rare DX. Expand your operating possibilities.

■ Triple band stacking register

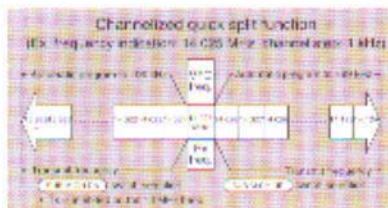
Think of the transceiver as having 3 VFO's or each band. 3 separate registers allow you to memorize the 3 frequencies and modes used on each band. Push the band key once to call up the last-used frequency and mode; twice to call the frequency and mode used before that; and three times to call up the frequency and mode used before that.



■ Channelized quick split function

The channelized quick split function offers the fastest possible method of operating split frequency for contact with DX stations. No dial rotation is necessary, simply pushing switches will set split frequency operation over a range of ±99 kHz in 1-99 kHz step channel separation.





■ Built-in automatic antenna tuner

A high-speed stepping motor antenna tuner is built-in to the transceiver. Simply push the tuning switch; the tuner matches the connected antenna using an auto-preset memory in all ham bands, including 160 m. This tuner is convenient when you use an antenna which has a narrow frequency range.

■ Automatic antenna selector

Equipped with 2 antenna connectors, the automatic antenna selector memorizes the selected antenna in each band for automatic antenna selection when using 2 antennas.

■ Improved function display

The large function display employs CFL (Cold Cathode Fluorescent Lamp) construction, resulting in increased durability and operating lifetime twice as long as typical filament construction.

■ Related features

- Monitor
- 5/10 ch memo pads (selectable)
- Total of 10³ memory channels

- A variety of scans
- Quick dialwatch
- XFC
- Quick split
- All mode power control
- VXC
- Built-in subaudible tone encoder

Complete CW functions

■ Built-in memory keyer

A built-in memory keyer provides 3 separate channels with an automatic repeater function, each capable of storing up to about 40 characters. These can be transmitted automatically. During contests, store QZ and exchanging number, etc. during regular operation, store your rig name, antenna, etc. Moreover, the content of the selected channels can be transmitted repeatedly in 4 sec. intervals.

Intervals can be selected from 4/6/8/10/20/30 sec.

■ Electronic keyer function

An electronic keyer function is built-in to the transceiver, allowing programmable CPU control of your transmitted dash/dot ratio. Ratio can be adjusted from 2.8:1 to 4.5:1. Adjust the ratio to suit your work and style. Also, the polarization of your Jambic paddle can be reversed in set mode. This is particularly convenient when both right and left-handed operators use the same paddle, such as in club shops.

■ Double key jack

The front panel of the transceiver has an electronic key jack and the rear panel has a

normal key jack. Connect a paddle to the front jack, computer keying equipment to the rear jack — great for contest operation!

■ CW pitch control

Different operators prefer different CW pitches. The IC-775/DSP allows you to adjust CW pitch from 800 Hz to 900 Hz in 20 Hz steps. Choose a pitch you find most comfortable for operation.

■ Related features

- QSK (full break-in) function
- Side tone related to CW pitch setting

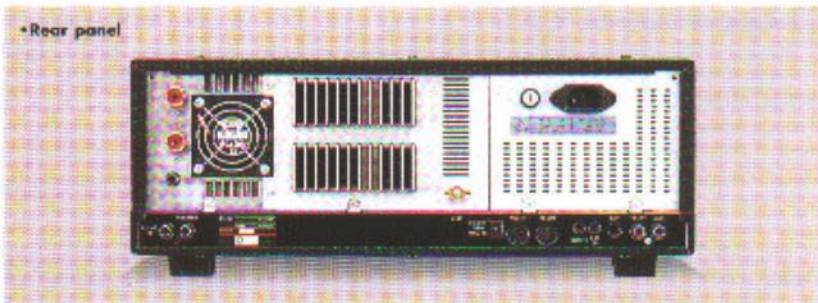
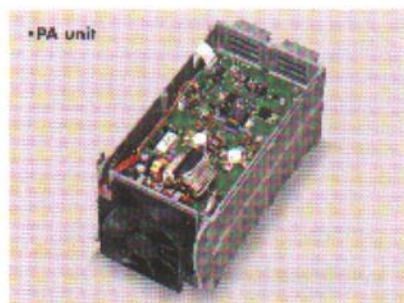
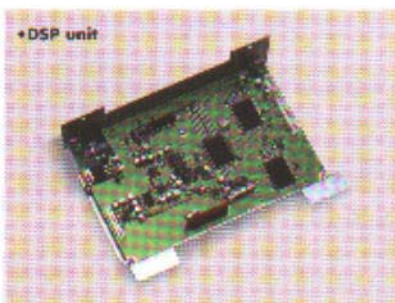
Data communication

■ Data mode

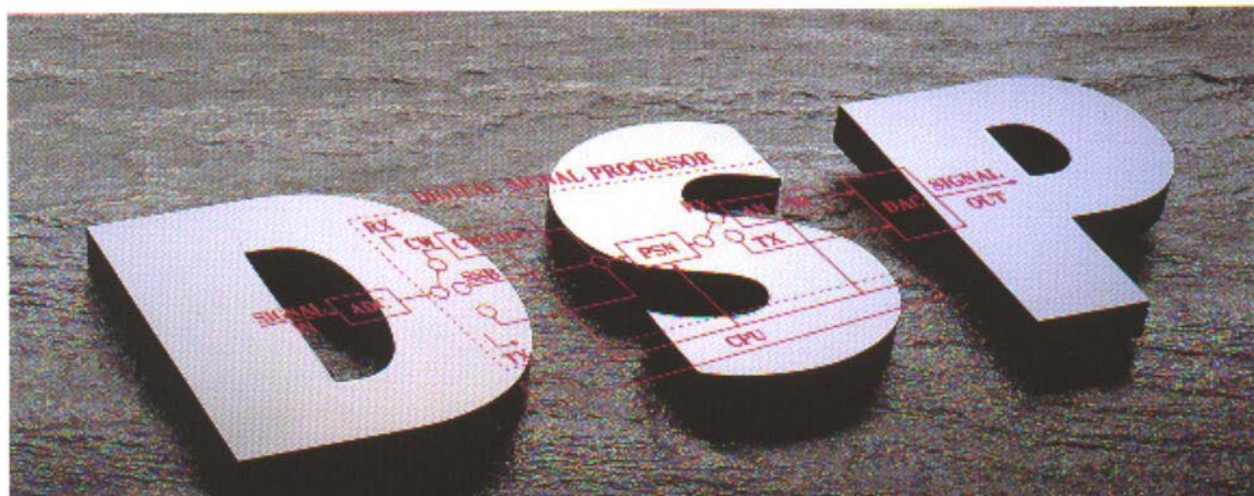
In data mode, voice rout through the microphone is automatically inhibited, allowing uninterrupted data communication. Connect the appropriate equipment and enjoy a host of amateur data modes such as RTTY, packet, SSTV, etc.

■ Related features

- FSK (RTTY) with selectable tone frequencies and polarization is available
- 13.8 V DC (max. 2 A) power output (such as for a TNC)
- CI-V compatible



Pull out signals no one else can!

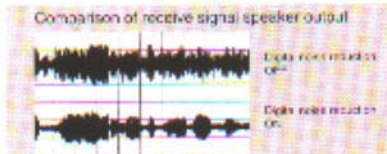


Icom's new DSP technology brings you unsurpassed signal quality.

Excellent SSB transmit signals, that analog methods can't compete with, are produced through control of signals at the modulation stage; no noise reduction at the demodulation stage results in crystal clear signals—revolutionary DSP technology at work for the serious DX'er.

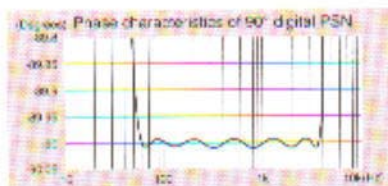
■ Digital noise reduction

The digital signal processor digitally separates desired signal components from noise components before they enter the audio amplifier. Outstanding signal-to-noise ratio is achieved providing clear, clear audio in SSB, easy to copy RTTY and crisp, clear SSTV reception. Pull very weak signals right out of the noise.



■ Digital PSN (Phase Shift Network) modulation and demodulation

The IC-775DSF employs a digital PSN modulator/demodulator constructed using a newly-developed 90° phase shifter and a radically new architecture. Consistently reproducible, clear TX in SSB and high quality RX of SSB signals through superior carrier suppression and unwanted sideband rejection.

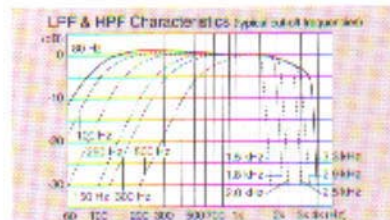


■ Digital AF automatic notch

The notch function attenuates single tone signals such as beat signals, as well as interference from broadcast stations. DSP enables this to be carried out automatically—no need to adjust the notch manually. When a beat frequency moves, the attenuated frequency automatically moves with it.

■ LPF and HPF

You can set the desired audio characteristics for transmit and receive independently using the LPF (Low Pass Filter) and HPF (High-Pass Filter).



■ Digital ultra-narrow CW filter

During pileups or crowded band conditions when trying to receive weak signals, this 80 Hz ultra-narrow CW filter effectively cuts nearby interference and pulls out the desired signal with improved S/N. Moreover, this filter is automatically linked to the automatic APF (see below).

■ Digital automatic APF (Audio Peak Filter)

The center frequency of the APF automatically links to your set CW pitch, zeroing in on the frequency you want. When the CW pitch is changed, the APF automatically changes accordingly.

● The IC-775DSF includes a regular analog circuit so that you can select DSP or analog separately for transmit and receive.

SPECIFICATIONS

GENERAL

Frequency coverage	Receive	Transmit
	10.1-30.0 MHz (M-F)	1.800-30.000 MHz (F)
	3.000-2.999.999 MHz (F)	7.000-7.272.5 MHz (F)
	10.100-10.499 MHz (F)	14.000-14.300 MHz (F)
	15.000-18.000 MHz (F)	21.000-21.450 MHz (F)
	24.000-24.900 MHz (F)	28.000-29.700 MHz (F)

* 10.1-10.199 MHz and 14.1-14.299 MHz are not available in some countries.
 * 10.1-10.199 MHz and 14.1-14.299 MHz are not available in some countries.

- Mode: SSB, CW, AM, RTTY, FSK
- Full set of memory channels: 100 (SSB, CW, AM, RTTY), 100 (FSK)
- Antenna impedance: 50 Ω
- External speaker: 2 × 8 Ω
- Frequency display: LCD

Power supply requirements

- Power supply: 100-240 V AC, 50/60 Hz
- Power consumption: 100 W (transmitting), 10 W (standby)
- Dimensions: 180 × 150 × 100 mm (W × H × D)

Output 100 W (100 W)

TRANSMITTER

- Output power: SSB, CW, FSK, AM: 100 W (100 W) (100 W) (100 W)
- Carrier frequency: 1.800-30.000 MHz (1.800-30.000 MHz)
- Carrier frequency: 1.800-30.000 MHz (1.800-30.000 MHz)
- Carrier frequency: 1.800-30.000 MHz (1.800-30.000 MHz)
- Carrier frequency: 1.800-30.000 MHz (1.800-30.000 MHz)

RECEIVER

- Frequency range: 10.1-30.0 MHz (10.1-30.0 MHz)
- Frequency range: 10.1-30.0 MHz (10.1-30.0 MHz)
- Frequency range: 10.1-30.0 MHz (10.1-30.0 MHz)

MODE	SSB	CW, RTTY	AM	FSK
1st	60 dB	60 dB	60 dB	60 dB
2nd	60 dB	60 dB	60 dB	60 dB
3rd	60 dB	60 dB	60 dB	60 dB
4th	60 dB	60 dB	60 dB	60 dB

- Sensitivity: 100 W (100 W)
- Sensitivity: 100 W (100 W)
- Sensitivity: 100 W (100 W)
- Sensitivity: 100 W (100 W)

- Output power: 100 W (100 W)
- Output power: 100 W (100 W)
- Output power: 100 W (100 W)
- Output power: 100 W (100 W)
- Output power: 100 W (100 W)
- Output power: 100 W (100 W)
- Output power: 100 W (100 W)
- Output power: 100 W (100 W)
- Output power: 100 W (100 W)
- Output power: 100 W (100 W)

ANTENNA TUNER

- Matching impedance range: 10-100 Ω
- Matching impedance range: 10-100 Ω
- Matching impedance range: 10-100 Ω
- Matching impedance range: 10-100 Ω

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

OPTIONS



• **IC-01W1 HF-50 MHz ALL-BAND 1st/2nd LF AMPLIFIER**
 Covers all HF and 50 MHz bands, provides clean, stable 1 kW output. Approximate antenna tuner and computer detachable controller are standard. 2 receiver models are available.



• **SP-20 EXTERNAL SPEAKER**
 4-ohm, 8-ohm, 16-ohm and 32-ohm impedance. Powered by the IC-775DSE.



• **SP-21 EXTERNAL SPEAKER**
 Designed for base station operation.
 • Impedance: 8 Ω
 • Max. input power: 2 W



• **CT-16 SATELLITE INTER-FACE UNIT**
 Easy tuning when connecting another ICOM HF or VHF transceiver for inter-satellite communications.



• **CT-17 CHASSIS CONVERTER**
 For remote base station control using a personal computer. Equipped with an RS-232C port for easy change frequencies, operating mode, memory channels, etc.



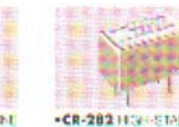
• **SM-20 EXTERNAL SPEAKER**
 Unidirectional, electrical microphone for base station operation. Includes [UP/DOWN] and [CALL] keys for channel selection.



• **SM-8 CONNECTOR**
 Facilitates connection to electrical microphone using 2-pin connector. Includes a 2-pin connector and a 2-pin connector. [UP/DOWN] and [CALL] keys are included.



• **HM-36 HAND-MICROPHONE**
 Hand-microphone equipped with [UP/DOWN] switches.



• **CR-203 HIGH-STABILITY CRYSTAL UNIT**
 Crystals are selected and assembled using special methods to provide high stability.
 • Frequency range: 1.8-30 MHz



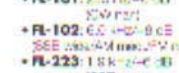
• **UT-66 VOICE SYNTHESIZER UNIT**
 Allows various operating frequencies and modes.



• **MB-19 RACK-MOUNTING HARDWARE**
 Mounting hardware for 19-inch rack.



• **9 MHz FILTERS**
 These 9 MHz filters filter and provide good S-wave reception.



• **FL-101**: 240 Hz ± 0.5 dB (30 W max)
 • **FL-102**: 600 Hz ± 0.5 dB (30 W max)
 • **FL-223**: 1.8 kHz ± 0.5 dB (30 W max)
 • **FL-232**: 360 Hz ± 0.5 dB (30 W max)



• **455 kHz FILTERS**
 These 455 kHz filters filter and provide good S-wave reception.

Icom Inc. 6-9-15, Ka-Ingashi, Hirano-ku, Osaka 547-0032, Japan Phone: 06 6793 5802 Fax: 06 6793 0015

Count on us!

Icom America Inc.

• Corporate Headquarters
 2325 118th Avenue, N.E., Bellevue, WA 98004, U.S.A.
 Phone: (425) 456-1175 Fax: (425) 456-1176
 U.S. Office: 118th Avenue, N.E., Bellevue, WA 98004, U.S.A.
 Phone: (425) 456-1175 Fax: (425) 456-1176

Icom Canada

• Icom Canada Inc.
 3571 RT. 7 East, Unit B, Richmond, B.C., V6X 2T4, Canada
 Phone: (604) 279-1420 Fax: (604) 279-1120

Icom (Australia) Pty. Ltd.

• Icom (Australia) Pty. Ltd.
 291-294 Albert Street, Brisbane, Queensland 4000, Australia
 Phone: (08) 2587 0800 Fax: (08) 2587 0822
 U.S. Office: 118th Avenue, N.E., Bellevue, WA 98004, U.S.A.
 Phone: (425) 456-1175 Fax: (425) 456-1176

Asia Icom Inc.

• Asia Icom Inc.
 67 No. 56, Sec. 1, Cheng Teh Road, Taipei, Taiwan, R.O.C.
 Phone: (02) 2559 1899 Fax: (02) 2559 1874

Icom (Europe) GmbH

• Icom (Europe) GmbH
 Corneliastr. 24, 40225 Düsseldorf, Germany
 Phone: (021) 540087 Fax: (021) 538892
 U.S. Office: 118th Avenue, N.E., Bellevue, WA 98004, U.S.A.
 Phone: (425) 456-1175 Fax: (425) 456-1176

Icom Spain S.L.

• Icom Spain S.L.
 Calle de Goya y Marqués Km. 14, 750
 28190 San Cugat del Valles, Barcelona, Spain
 Phone: (93) 550 26 70 Fax: (93) 550 24 46
 U.S. Office: 118th Avenue, N.E., Bellevue, WA 98004, U.S.A.
 Phone: (425) 456-1175 Fax: (425) 456-1176

Icom (UK) Ltd.

• Icom (UK) Ltd.
 Leith, Sea St., Harlow Bay, Kent CT9 6LD, U.K.
 Phone: (01227) 241741 Fax: (01227) 241742
 U.S. Office: 118th Avenue, N.E., Bellevue, WA 98004, U.S.A.
 Phone: (425) 456-1175 Fax: (425) 456-1176

Icom France Sa

• Icom France Sa
 ZAC de la Folie, Rue Emile, 06000 Valbonne, France
 BP 5804, 06000 Valbonne, France
 Phone: (04) 36 00 00 Fax: (04) 36 00 00
 U.S. Office: 118th Avenue, N.E., Bellevue, WA 98004, U.S.A.
 Phone: (425) 456-1175 Fax: (425) 456-1176



Get Solo Number 014100

Your local distributor/dealer.

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