



PRE RELEASE INFORMATION

IC-7700

THE CONTESTER'S RIG



Icom America Inc.

IC-7700

CONTESTING RIG

Taking the Excitement of the Chase to New Heights

Two 32-bit floating point units

Two independent DSP units (of the same type used in the IC-7800) are built-in: One for the transmitter and receiver; and one for the spectrum scope. The IC-7700 expands on the phenomenal performance of the 32-bit DSP that Icom introduced to the amateur world. With the 24-bit AD/DA converter, this combination supports many DSP features in the IC-7700.



+40dBm ultra high intercept point

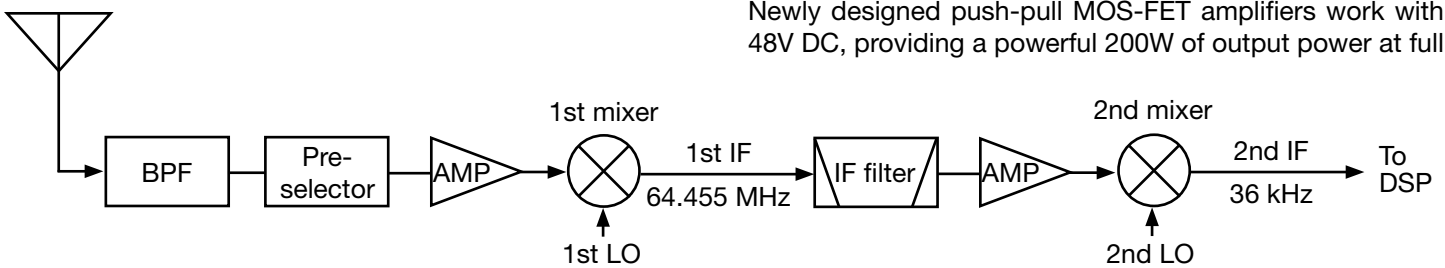
By sparing no expense throughout the signal chain, Icom has developed an amateur rig that challenges the performance of any "Military Grade" transceiver. You'll enjoy a +40dBm* 3rd order intercept point and ultra wide dynamic range that is, like its IC-7800 "big brother", amateur radio's highest. The IC-7700 continues Icom's setting of the benchmark for HF transceivers. Examples include the use of mechanical relays instead of traditional semi-conductors and high performance DMOS mixers with a high-drive Local Oscillator. Using only two IF stages and Icom's image rejection technology, enables the IC-7700 to clearly reproduce very weak signals as well as very strong signals without distortion.

Automatic tracking pre-selector

As your first line of defense against interfering signals, the pre-selector rejects unwanted out of band interference from multi-multi operation or strong broadcast stations. The 7700's pre-selector automatically tracks the intended signal, keeping the pre-selector's bandwidth centered on the operating frequency.

200W output power at full duty

Newly designed push-pull MOS-FET amplifiers work with 48V DC, providing a powerful 200W of output power at full



duty cycle with low IMD in all bands. A low-noise switching power supply is built-in.

Ultra high frequency stability

Your IC-7700 shares the IC-7800's standard stability of ± 0.05 ppm! Even on 6m band, that is less than 3Hz error from the Oven Controlled Crystal Oscillator! Also, a 10MHz reference frequency can be input/output for external equipment.

7-inch wide color TFT LCD

Contesting is often a marathon sport. Be kind to your eyes! The large 7-inch wide (800x480 pixels) color display has to be seen to be believed! A high linearity needle S-meter, multi-function spectrum scope and RTTY/PSK31 messages are displayed in vivid color. In addition, the IC-7700 has a VGA connector allowing you to connect an external monitor.

Multi function spectrum scope

With the dedicated DSP unit, the spectrum scope offers linearity, accuracy and resolution. By adjusting the scope selectivity (resolution band width), the spectrum scope allows you to find those weak signals right next to strong ones! With this ground breaking scope, you can even monitor the distortion or width of the received signals. In addition, the scope range can be set independently from the receiving frequency. You can monitor the band condition between the selected sweep edges, as well as sweep a selected band width centered on the receiving frequency in the scope screen.

RTTY /PSK31 operation without PC connection

The IC-7700 has a modulator and demodulator for the 2 major HF amateur digital modes. It is possible to encode and decode PSK31 as well as baudot RTTY signals by simply connecting a USB keyboard to the IC-7700. You no longer need to connect a PC for RTTY/PSK31 operation. In addition, transmitted and received messages can be stored to a USB memory device and transferred to your PC.

IF notch filter with adjustable notch filter characteristics

The IC-7700's DSP controlled manual notch filter shape can be set in 3-steps for the various receiving conditions. Use a soft filter shape for tuning an interfered tone, then switch to the sharp one to cut 70dB off the tone.

Professional 6m receiver

While most HF/50MHz transceivers share the preamp between the HF bands and 50MHz band, the IC-7700 uses an exclusive preamp and mixer especially for 50MHz. This preamp and mixer are tuned to the 50MHz band and improve cross modulation characteristics, particularly important when picking up a very weak signal near a strong station.

Digital Voice Recorder

The Digital Voice Recorder (DVR) is a convenient function for contests, DXpeditions, field day and even normal operation. Record your callsign, CQ, or other station information into a memory. Independent "Rec" and "Play" buttons are on the front panel.

USB ports in the front panel:

- 1 port for USB memory drive
- 1 port for USB keyboard

And more....

- Soft and sharp IF filter shapes for receiver
- Reverse power protection circuit built-in
- RS-232C port for PC connection
- BNC type RF accessory connectors
- Audio Peak filter for CW
- Multi-function noise blanker
- Advanced noise reduction and auto notch
- Twin peak audio filter and tuning indicator for RTTY
- High speed automatic antenna tuner
- Built-in Voice synthesizer
- Optional IC-PW1 1kW Linear Amplifier available



PRE-RELEASE SPECIFICATIONS

GENERAL

Frequency coverage (unit: MHz):

Receive	0.030–60.000*	
Transmit	1.800–1.999	3.500–3.999
	7.000–7.300	10.100–10.150
	14.000–14.350	18.068–18.168
	21.000–21.450	24.890–24.990
	28.000–29.700	50.000–54.000

- Mode: USB, LSB, CW, RTTY, AM, FM, PSK31
- Number of memory channels: 101 (99 regular and 2 scan edges)
- Antenna impedance: 50Ω unbalanced (with antenna tuner OFF)
- Antenna connector: SO-239×4, BNC x 1
- Temperature range: 0°C to +50°C; +32°F to +122°F
- Frequency stability: Less than ±0.05ppm (0°C to +50°C)
- Frequency resolution: 1Hz
- Power supply requirement: 85–265V AC
- Power consumption:

Tx	Max. power	800VA
Rx	Standby	200VA typ.
	Max. audio	210VA typ.
- Dimensions (W×H×D): 424 × 150 × 420 mm;
(projections not included) 16 11/16 × 52 9/32 × 16 17/32in
- Weight (approx.): 23kg; 50.7lb

TRANSMITTER

- Output power (continuously adjustable):
SSB, CW, FM, RTTY, PSK31 5–200W AM 5–50W
- Modulation system:
SSB: DPSN modulation
AM: Digital low power modulation
FM: Digital phase modulation
- Spurious emission: Less than –60dB
- Carrier suppression: More than 60dB
- Unwanted sideband suppression: More than 80dB
- Microphone connector: 8-pin connector (600Ω)

All stated features, appearances, screen shots and specifications may be subject to change without notice or obligation. All screens show simulated pictures.

REAR VIEW



RECEIVER

- Receive system: Double conversion superheterodyne
- Intermediate frequencies: 1st 64.455MHz
2nd 36kHz
- Sensitivity (typical)

SSB, CW, RTTY(BW: 2.4kHz):	0.1–1.79	0.5μV* ¹
(10dB S/N);	1.8–29.99	0.16μV* ¹
	50.0–54.0	0.13μV* ²
AM (BW: 6kHz)	0.1–29.99	2μV* ¹
(10dB S/N)	50.0–54.0	1μV* ²
FM (BW: 15kHz)	28.0–29.99	0.5μV* ¹
(12dB SINAD)	50.0–54.0	0.32μV* ²
- *¹Preamp-1 is ON, *²Preamp-2 is ON
- Squelch sensitivity (Pre-amp: OFF):

SSB, CW, RTTY, PSK31:	Less than 5.6μV
FM:	Less than 1μV
- Selectivity (representative value):

SSB, RTTY(BW: 2.4kHz):	More than 2.4kHz/–3dB
	Less than 3.6kHz/–60dB
CW (BW: 500Hz):	More than 500Hz/–3dB
	Less than 700Hz/–60dB
AM (BW: 6kHz):	More than 6.0kHz/–3dB
	Less than 15.0kHz/–60dB
FM (BW: 15kHz):	More than 12.0kHz/–6dB
	Less than 20.0kHz/–60dB
- Spurious and image rejection ratio: More than 70dB (except 50MHz IF through point)
- AF output power: More than 2.6W at 10% distortion with an 8Ω load
- RIT variable range: ±9.999kHz
- PHONES connector: 3-conductor 6.35(d)mm (1/4")
- External speaker connectors: 2-conductor 3.5(d)mm (1/8")/8Ω

ANTENNA TUNER

- Matching impedance range:

HF bands	16.7–150Ω unbalanced (Less than VSWR 3:1)
50MHz band	20–125Ω unbalanced (Less than VSWR 2.5:1)
- Min. operating input power: 8W
- Tuning accuracy: VSWR 1.5:1 or less
- Insertion loss: Less than 1.0dB (after tuning)

This device has not been approved by the appropriate authorities in each country. This device may not be sold or leased, or be offered for sale or lease, until approval has been obtained.

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