



HF/50MHz TRANSCEIVER

# IC-7200



## Simple & Tough with IF DSP



\* The above photo includes optional MB-116 handles.



# Simple & Tough with IF DSP

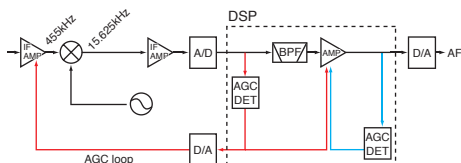


## | IF DSP

The latest IF DSP technology is employed in the IC-7200. While the IC-7200 is an entry-class transceiver, advanced digital features are comparable to higher class transceivers.

## | AGC loop management

Distortion and blocking from strong nearby signals are prevented by placing DSP functions inside the AGC loop. The AGC time constants are selectable from fast, slow and off for each operating mode.



## | Digital IF filter

Optional filters will be never required for the IC-7200. The built-in digital filter allows you to flexibly select the filter width and shape from soft and sharp\* and provides cutting-edge filter characteristics.

\* Filter shape is selectable for SSB and CW modes only.

| Mode | Passband width range                            |
|------|---|
| SSB  | 50–500Hz; 50Hz step<br>600Hz–3.6kHz; 100Hz step |
| CW   | 50–500Hz; 50Hz step<br>600Hz–3.6kHz; 100Hz step |
| RTTY | 50–500Hz; 50Hz step<br>600Hz–2.7kHz; 100Hz step |
| AM   | 200Hz–8kHz; 200Hz step                          |

## | Digital Twin PBT

Only Icom brings you Twin Passband tuning! Tailor your IF passband with the Twin PBT by electronically shifting the upper and lower edges of the IF filter. Depending on the use of the concentric knobs, you can either narrow the IF passband, or shift the entire passband to eliminate interfering signals.

## | Manual notch filter

The manual notch filter delivers more than 70dB of attenuation. Strong interfering tones will be eliminated without adversely affecting the AGC loop performance. On the bottom right of the front panel, a dedicated control knob adjusts the notch filter frequency.

## | Digital noise reduction

The digital noise reduction reduces background noise and improves the 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.

## | High stability transmitter

The DDS (Direct Digital Synthesizer) creates a clear, clean transmit signal and improves the C/N ratio. With a dual-fan cooling system, the IC-7200 provides stable high quality output even during high duty cycle operation.







## HF/50MHz TRANSCEIVER

# IC-7200

### USB port for PC control

The IC-7200 can be controlled by a PC through a USB port using the CI-V data format. In addition, modulator and received audio can also be transferred over the USB cable. By using appropriate external software, you can record incoming calls and/or transmit preprogrammed messages from your PC.

### RF speech compressor

The digital RF speech compressor increases your average talk power in SSB mode. Even when the compression level is increased, the DSP controlled RF speech compressor provides low distortion audio.

### CW mode operation

Full break-in, selectable CW carrier point (USB or LSB) and adjustable CW pitch are also standard.

### Tough construction against water intrusion

Waterproof protection technologies that are used in Icom's marine radios are applied to

the buttons and knobs on the front panel to provide a measure of protection against water intrusion.

\* IC-7200 is NOT waterproof.



### Rugged design for outdoor use

The rugged design of the IC-7200 means your enjoyment of this rig is not limited to your shack only.

### Other features

- RIT • VOX
- $\pm 0.5$ ppm frequency stability
- LCD backlight (Hi/Lo/Off)
- CI-V interface
- 201 memory channels
- Built-in 20dB attenuator
- Preamp • Dial lock
- Auto TS function • 1Hz step tuning
- Band stacking register
- Built-in voice synthesizer • Quick split
- Front facing speaker • Quick set mode

### "Rear bumper"

The "rear bumper" protects various connectors on the rear panel and lets you stand the radio on its rear end when the antenna is disconnected, such as while moving or packing the radio.



**SPECIFICATIONS****GENERAL**

- Frequency range<sup>\*1</sup> :
 

|    |   |
|----|---|
| Rx | 0.030–60.000000MHz <sup>*2</sup>                        |
| Tx | 1.800–1.999999MHz 3.500–3.999999MHz                     |
|    | 5.3305, 5.3465, 5.3665, 5.3715, 5.4035MHz <sup>*3</sup> |
|    | 7.000–7.300MHz 10.100–10.150MHz                         |
|    | 14.000–14.350MHz 18.068–18.168MHz                       |
|    | 21.000–21.450MHz 24.890–24.990MHz                       |
|    | 28.000–29.700MHz 50.000–54.000MHz                       |
- <sup>\*1</sup> Shows USA version. Frequency coverage depends on version.
- <sup>\*2</sup> Guaranteed range: 0.5–29.7 and 50–54.000 MHz. <sup>\*3</sup> USB only.
- Mode : USB, LSB, CW, RTTY (FSK), AM
- No. of memory Ch. : 201Ch. (199 regular, 2 scan edges)
- Frequency resolution : 1 Hz
- Frequency stability : Less than  $\pm 0.5$ ppm
- Power supply requirement : 13.8V DC  $\pm 15\%$  (negative ground)
- Current drain :
 

|          |            |       |
|----------|------------|-------|
| Transmit | Max. power | 22.0A |
| Receive  | Max. audio | 2.0A  |
|          | Stand-by   | 1.3A  |
- Operating temp. range :  $-10^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ;  $+14^{\circ}\text{F}$  to  $+140^{\circ}\text{F}$
- Antenna connector : SO-239 (50 $\Omega$ )
- Dimensions : 241x84x281 mm
- (projections not included) 9 $\frac{1}{2}$ x3 $\frac{5}{8}$ x11 $\frac{1}{8}$  in
- Weight (approx.) : 5.5 kg; 12.1 lb

**TRANSMITTER**

- Modulation system :
 

|     |                              |
|-----|------------------------------|
| SSB | Digital PSN modulation       |
| AM  | Digital low power modulation |
- Output power :
 

|               |                           |
|---------------|---------------------------|
| SSB, CW, RTTY | 2–100 W                   |
| AM            | 1–25 W* (* Carrier power) |
- Spurious emissions (Unwanted emission) :
 

|            |                 |
|------------|-----------------|
| HF bands   | Less than –50dB |
| 50MHz band | Less than –63dB |
- Carrier suppression : More than 50dB
- Unwanted sideband : More than 50dB
- Microphone connector : 8-pin connector (600 $\Omega$ )

**RECEIVER**

- Receive system : Triple-conversion superheterodyne
- Intermediate frequencies : 64.455MHz, 455kHz, 15.625kHz
- Sensitivity (10dB S/N, Preamp ON, Filter shape sharp) :
 

|         |  |
|---------|--|
| SSB, CW | Less than 0.16 $\mu\text{V}$ (1.8–29.7MHz) |
|         | Less than 0.13 $\mu\text{V}$ (50MHz band)  |
|         | Less than 13 $\mu\text{V}$ (0.5–1.799MHz)  |
|         | Less than 2 $\mu\text{V}$ (1.8–29.7MHz)    |
|         | Less than 1 $\mu\text{V}$ (50MHz band)     |
- AM

- Squelch sensitivity (SSB, threshold, Preamp ON) : Less than 5.6  $\mu\text{V}$
- Selectivity
 

|                     |                         |
|---------------------|-------------------------|
| SSB                 | More than 2.4kHz/–6dB   |
| (BW: 2.4kHz, sharp) | Less than 3.6kHz/–60dB  |
| CW                  | More than 500Hz/–6dB    |
| (BW: 500Hz, sharp)  | Less than 360Hz/–60dB   |
| RTTY (BW: 350Hz)    | More than 360Hz/–6dB    |
|                     | Less than 650Hz/–60dB   |
| AM (BW: 6kHz)       | More than 6.0kHz/–6dB   |
|                     | Less than 15.0kHz/–60dB |
- Spurious and image rejection ratio : More than 70dB  
(Except  $\frac{1}{2}$  IF through on 50MHz band)
- Audio output power (at 13.8 V DC) : More than 2.0W at 10% distortion with an 8 $\Omega$  load
- RIT variable range :  $\pm 9.999\text{kHz}$
- EXT speaker connector : 2-conductor 3.5 (d) mm ( $\frac{1}{8}$ " )/8 $\Omega$

**Supplied accessories:**

- Hand microphone
- DC power cable
- Spare fuses

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

**OPTIONS** Some options may not be available in some countries. Please ask your dealer for details.

Covers all HF and 50 MHz bands, provides clean, stable 1 kW output. Automatic antenna tuner and compact detachable controller are standard. 2 exciter inputs are available. (An optional OPC-599 is required.)



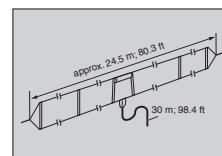
**AH-2b ANTENNA ELEMENT**  
For mobile operation with the AH-4. All bands between 7–54MHz can be matched.



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



**AT-180 AUTOMATIC ANTENNA TUNER**  
Compact, light weight antenna tuner.



**AH-710 FOLDED DIPOLE ANTENNA**  
Covers from 1.9 to 30MHz. Has a PL-259 connector. Easy to assemble (non-kink construction).



**SP-20 EXTERNAL SPEAKER**  
4 audio filters; headphone jack; can connect to 2 transceivers. Input impedance: 8 $\Omega$  Max. input power: 5W



**SP-21 EXTERNAL SPEAKER**  
Input impedance: 8 $\Omega$  Max. input power: 5W



**SP-10 EXTERNAL SPEAKER**  
Compact size speaker.



**SM-50 DESKTOP MICROPHONE**  
Dynamic desktop microphone. Includes [UP]/[DOWN] switches and a low cut function.



**SM-20 DESKTOP MICROPHONE**  
Electret desktop microphone. Includes [UP]/[DOWN] switches and a low cut function.



**HM-36 HAND MICROPHONE**  
Same as that supplied with the radio.



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



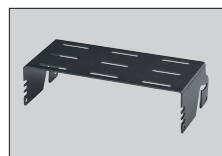
**CT-17 CI-V LEVEL CONVERTER**  
For remote transceiver control from a PC equipped with an RS-232C port.



**MB-116 HANDLES**  
Protect buttons and knobs on the front panel when moving the radio.



**MB-117 CARRYING HANDLE**  
Convenient when carrying the transceiver.



**MB-118 MOBILE MOUNTING BRACKET**  
For mounting the radio in a vehicle.



**OPC-599 CABLE ADAPTER**  
Converts 13-pin ACC connector to 7-pin + 8-pin ACC connector for connection with IC-PW1/EURO.

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