

INSTRUCTION MANUAL

HF/50 MHz TRANSCEIVER

IC-7200



Icom Inc.

IMPORTANT

READ THIS INSTRUCTION MANUAL CAREFULLY before attempting to operate the transceiver.

SAVE THIS INSTRUCTION MANUAL. This manual contains important safety and operating instructions for the IC-7200.

FOREWORD

We understand that you have a choice of many different radios in the market place. We want to take a couple of moments of your time to thank you for making the IC-7200 your radio of choice, and hope you agree with Icom's philosophy of "technology first." Many hours of research and development went into the design of your IC-7200.

♦ FEATURES

- O IF DSP features
- O Digital Twin PBT
- O Manual notch function
- ±0.5 ppm of high frequency stability
- O Simple operation
- O Tough and compact body
- O Standard voice synthesizer

EXPLICIT DEFINITIONS

WORD	DEFINITION		
△DANGER	Personal death, serious injury or an explosion may occur.		
△WARNING	Personal injury, fire hazard or electric shock may occur.		
CAUTION Equipment damage may occur.			
NOTE	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.		

Spurious signals may be received near the following frequencies when the transceiver is connected to a PC via an USB cable.

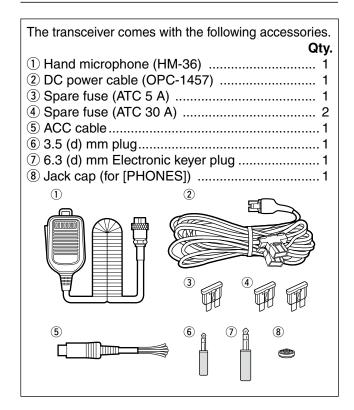
These are generated in the internal circuit and does not indicate a transceiver malfunction:

21.0295 MHz,

51.0910 MHz,

51.0957 MHz

SUPPLIED ACCESSORIES



FCC INFORMATION

• FOR CLASS B UNINTENTIONAL RADIATORS:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

PRECAUTIONS

⚠ WARNING RF EXPOSURE! This device emits Radio Frequency (RF) energy. Extreme caution should be observed when operating this device. If you have any questions regarding RF exposure and safety standards please refer to the Federal Communications Commission Office of Engineering and Technology's report on Evaluating Compliance with FCC Guidelines for Human Radio Frequency Electromagnetic Fields (OET Bulletin 65).

⚠ WARNING HIGH VOLTAGE! NEVER touch an antenna or internal antenna connector during transmission. This may result in an electrical shock or burn.

⚠ **WARNING! NEVER** operate the transceiver while driving a vehicle. Safe driving requires your full attention—anything less may result in an accident.

⚠ **NEVER** apply AC power to the [DC13.8V] socket on the transceiver rear panel. This could cause a fire or damage the transceiver.

⚠ **NEVER** apply more than 16 V DC, such as a 24 V battery, to the [DC13.8V] socket on the transceiver rear panel. This could cause a fire or damage the transceiver.

⚠ **NEVER** let metal, wire or other objects touch any internal part or connectors on the rear panel of the transceiver. This may result in an electric shock or this could cause a fire or damage the transceiver.

⚠ **NEVER** expose the transceiver to rain, snow or any liquids.

DO NOT use or place the transceiver in areas with temperatures below -10°C (+14°F) or above +60°C (+140°F). Be aware that temperatures on a vehicle's dashboard can exceed +80°C (+176°F), resulting in permanent damage to the transceiver if left there for extended periods.

DO NOT place the transceiver in excessively dusty environments or in direct sunlight.

DO NOT place the transceiver against walls or put anything on top of the transceiver. This will obstruct heat dissipation.

Place unit in a secure place to avoid inadvertent use by children.

During mobile operation, **NEVER** place the transceiver where air bag deployment may be obstructed.

During mobile operation, **DO NOT** place the transceiver where hot or cold air blows directly onto it.

During mobile operation, **DO NOT** operate the transceiver without running the vehicle's engine. When the transceiver's power is ON and your vehicle's engine is OFF, the vehicle's battery will quickly become exhausted.

Make sure the transceiver power is OFF before starting the vehicle engine. This will avoid possible damage to the transceiver by ignition voltage spikes.

During maritime mobile operation, keep the transceiver and microphone as far away as possible from the magnetic navigation compass to prevent erroneous indications.

BE CAREFUL! The rear panel will become hot when operating the transceiver continuously for long periods

BE CAREFUL! If a linear amplifier is connected, set the transceiver's RF output power to less than the linear amplifier's maximum input level, otherwise, the linear amplifier will be damaged.

Use Icom microphones only (supplied or optional). Other manufacturer's microphones have different pin assignments, and connection to the IC-7200 may damage the transceiver.

For U.S.A. only

Caution: Changes or modifications to this transceiver, not expressly approved by Icom Inc., could void your authority to operate this transceiver under FCC regulations.

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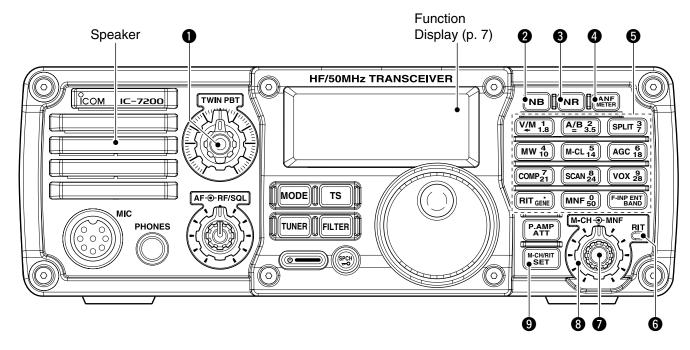
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1 PANEL DESCRIPTION

■ Front panel



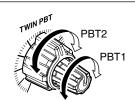
1 PASSBAND TUNING CONTROLS [TWIN PBT]

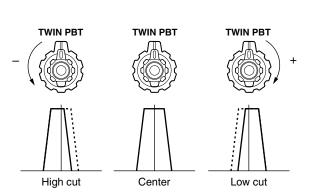
Adjust the receiver's DSP filter passband width. (p. 46)

- The limit of the variable range depends on the passband width and mode. The limit of the variable range is half of the passband width, and PBT is adjustable in 200 Hz (AM) or 50 Hz (other models) steps.
- Rotate both [TWIN PBT] controls (PBT1 and PBT2) to the same position shifts the IF.

✓ What is the PBT control?

Generally, the PBT electronically narrows the IF passband width to reject interference. This transceiver uses the DSP circuit for the PBT function.





② NOISE BLANKER KEY NB (p. 49)

- Push to turn the noise blanker function ON or OFF.
 - "NB" appears on the display when the noise blanker function is turned ON.
- → Push and hold for 1 sec. to enter the noise blanker set mode for setting the noise blanker level and blank time; push again to return to normal operation.
 - When entering the noise blanker set mode, the noise blanker function is automatically turned ON.

✓ What is the noise blanker?

The noise blanker reduces pulse-type noise such as that generated by automobile ignition systems. This function is not effective against non pulse-type noise.

3 NR KEY (p. 50)

- → Push to turn the noise reduction function ON or OFF.
 - "NR" appears on the display when the noise reduction function is turned ON.
- Push and hold for 1 sec. to enter the noise reduction level set mode; push again to return to normal operation.
 - When entering the noise reduction set mode, the noise reduction function is automatically turned ON.

✓ What is the Noise Reduction function?

The Noise Reduction (NR) function removes random noise from the receiver passband. The level is adjustable to allow maximum clarity without harming the intelligibility of the desired signal. Noise Reduction should generally not be used with digital modes.

4 ANF/METER KEY (p. 51)

- Push to turn the Automatic Notch Filter function ON or OFF in SSB and AM modes.
 - "(ANF)" appears on the display when the automatic notch filter function is turned ON.
- → Push and hold for 1 sec. to toggle the meter function; (pgs. 30, 60)

PO → SWR → ALC

• PO : indicates the relative RF output power.

• SWR: indicates the SWR over the transmission line.

• ALC : Indicates ALC level.

✓ What is the Automatic Notch Filter?

The Automatic Notch Filter is a narrow DSP filter that automatically identifies and attenuates beat tones, tuning signals, CW, etc., even if they are moving and removes them from the receiver passband while preserving the desired signal's frequency response.

6 KEYPAD

- ► V/M, (A/B), (SPLIT), (MW), (M-CL), (AGC), (COMP), (SCAN), (VOX), (RIT) and (MNF) keys are available. (p. 5)
- → After pushing and holding F-INP ENT for 1 sec., push a key on the keypad to select the operating band. (p. 24)
 - The band stacking register is available.
 - GENE selects the general coverage band.
- After pushing F-INP ENT , push a key on the keypad to enter a numeric frequency. After entering, push F-INP ENT . (p. 25)
 - e.g. To enter 14.195 MHz;

 $\begin{array}{c} \text{Push} \left(\begin{array}{c} \text{F-INP} \, \text{ENT} \\ \text{BAND} \end{array} \right), \left(\begin{array}{c} 1 \\ 1.8 \end{array} \right), \left(\begin{array}{c} 4 \\ 10 \end{array} \right), \left(\begin{array}{c} \bullet \\ \text{GENE} \end{array} \right), \left(\begin{array}{c} 1 \\ 1.8 \end{array} \right), \left(\begin{array}{c} 9 \\ 28 \end{array} \right), \left(\begin{array}{c} 5 \\ 14 \end{array} \right) \\ \text{and} \left(\begin{array}{c} \text{F-INP} \, \text{ENT} \\ \text{BAND} \end{array} \right). \end{array}$

6 RIT CONTROL INDICATOR (pgs. 44, 61)

Lights orange when **[M-CH]** control (**7**) acts as the RIT control.

M-CH/RIT CONTROL [M-CH] (inner control)

- While in the set mode/quick set mode, rotate to select the set mode item. (p. 70)
- ➡ This control can act as the memory channel control or RIT control.
 - The RIT function should be turned ON in advance to activate this control as RIT control. (p. 44)
 - "RIT" appears when the RIT function is turned ON.
 - The RIT control indicator (6) lights orange when this control is activated as the RIT control.

During [M-CH] acts as the M-CH control:

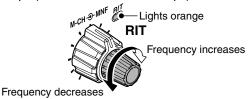
Rotate to select a memory channel (p. 61).



During [M-CH] acts as RIT control:

Rotate to shift the receive frequency (p. 44).

- Rotate the control clockwise to incerase the frequency, or rotate the control counterclockwise to decrease the frequency.
- The shift frequency range is ±9.999 kHz in 1 Hz steps (or ±9.99 kHz in 10 Hz steps).



✓ What is the RIT function?

The RIT (Receiver Incremental Tuning) shifts the receive frequency without shifting the transmit frequency. This is useful for fine tuning for stations calling you off-frequency or when you prefer to listen to slightly different sounding voice characteristics, etc.

• About the [M-CH] control activation:

		RIT control indicator (6 on p. 2)		
		Lights	OFF	
RIT indicator		Acts as the RIT control	Acts as the memory channel control	
(6 on p. 8)	Disappears	N/A	ory charmer control	

3 MANUAL NOTCH FILTER CONTROL [MNF]

(outer control; p. 51)

Rotate to adjust the notch filter frequency to reject an interfering signal while the manual notch function is ON

• The filter width can be set to narrow, middle or wide in the manual notch filter set mode.



✓ What is the Manual Notch Filter?

The Manual Notch Filter is an adjustable narrow DSP filter that removes tones from CW, SSB, AM or RTTY signals while preserving the desired signal's frequency response.

9 M-CH/RIT-SET KEY M-CH/RIT SET

- → Push to toggle the [M-CH] control activation between memory channel control and RIT control.
 - The RIT function should be turned ON in advance. (p. 44)
 - The RIT control indicator (6) lights orange when the [M-CH] control functions as the RIT control.
- → Push and hold for 1 sec. to enter the quick set mode. (p. 70)
- → During quick set mode, push and hold for 1 sec. to enter the set mode (p. 70)
- → During quick set mode or set mode, push to return to normal operation. (p. 70)

Count on us!			
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