



INSTRUCTION MANUAL

HF/50 MHz TRANSCEIVER

IC-7600



Icom Inc.

FOREWORD

Thank you for making the IC-7600 your radio of choice. We hope you agree with Icom's philosophy of "technology first." Many hours of research and development went into the design of your IC-7600.

FEATURES

- *Ultimate receiver performance: third-order intercept (IP3) of +30 dBm (HF bands only)*
- *Built-in Baudot RTTY and PSK modulator/demodulator and direct PC keyboard connection capability for RTTY and PSK operations without a PC*
- *High resolution spectrum scope—center frequency and fixed frequency modes, plus mini-scope displays*
- *USB connectors on front and rear panels*
- *Large LCD with LED backlight*

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-7600.

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.

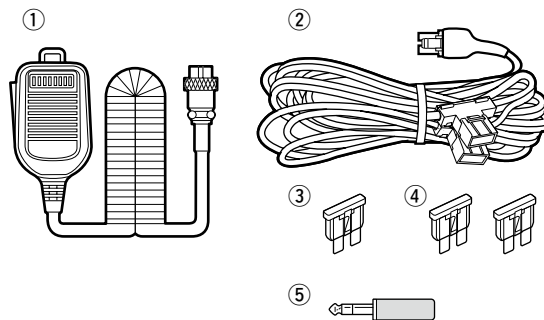
Spurious signals may be received near the following frequencies. These are made in the internal circuit and does not indicate a transceiver malfunction.
10.4923MHz, 24.576MHz

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SUPPLIED ACCESSORIES

The transceiver comes with the following accessories.

	Qty.
① Hand microphone	1
② DC power cable	1
③ Spare fuse (ATC 5 A)	1
④ Spare fuse (ATC 30 A)	2
⑤ 6.35 (d) mm plug	1



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 HIGH RF VOLTAGE! NEVER attach an antenna or internal antenna connector during transmission. This may result in an electrical shock or burn.

⚠ WARNING! NEVER operate the transceiver with a headset or other audio accessories at high volume levels. Hearing experts advise against continuous high volume operation. If you experience a ringing in your ears, reduce the volume or discontinue use.

⚠ WARNING! Immediately turn the transceiver power OFF and remove the power cable if it emits an abnormal odor, sound or smoke. Contact your Icom dealer or distributor for advice.

CAUTION! NEVER put the transceiver in any unstable place (such as on a slanted surface or vibrated place). This may cause injury and/or damage to the transceiver.

CAUTION! NEVER change the internal settings of the transceiver. This may reduce transceiver performance and/or damage to the transceiver.

In particular, incorrect settings for transmitter circuits, such as output power, idling current, etc., might damage the expensive final devices.

The transceiver warranty does not cover any problems caused by unauthorized internal adjustment.

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

CAUTION! 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.

CAUTION! NEVER let metal, wire or other objects protrude into the transceiver or into connectors on the rear panel. This may result in an electric shock.

CAUTION! NEVER block any cooling vents on the top, rear or bottom of the transceiver.

CAUTION! NEVER expose the transceiver to rain, snow or any liquids.

CAUTION! NEVER install the transceiver in a place without adequate ventilation. Heat dissipation may be reduced, and the transceiver may be damaged.

CAUTION! NEVER operate or touch the transceiver with wet hands. This may result in an electric shock or damage to the transceiver.

DO NOT use chemical agents such as benzine or alcohol when cleaning the IC-7600, as they can damage the transceiver's surfaces.

DO NOT push the PTT switch when you don't actually desire to transmit.

DO NOT use or place the transceiver in areas with temperatures below $\pm 0^{\circ}\text{C}$ ($+32^{\circ}\text{F}$) or above $+50^{\circ}\text{C}$ ($+122^{\circ}\text{F}$).

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

DO NOT place the transceiver against walls or putting anything on top of the transceiver. This may overheat the transceiver.

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

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

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

Use Icom microphones only (supplied or optional). Other manufacturers' microphones have different pin assignments, and connection to the IC-7600 may damage the transceiver or microphone.

The LCD display may have cosmetic imperfections that appear as small dark or light spots. This is not a malfunction or defect, but a normal characteristic of LCD displays.

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

Turn the transceiver power OFF and/or disconnect the DC power cable when you will not use the transceiver for long period of time.

For U.S.A. only

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

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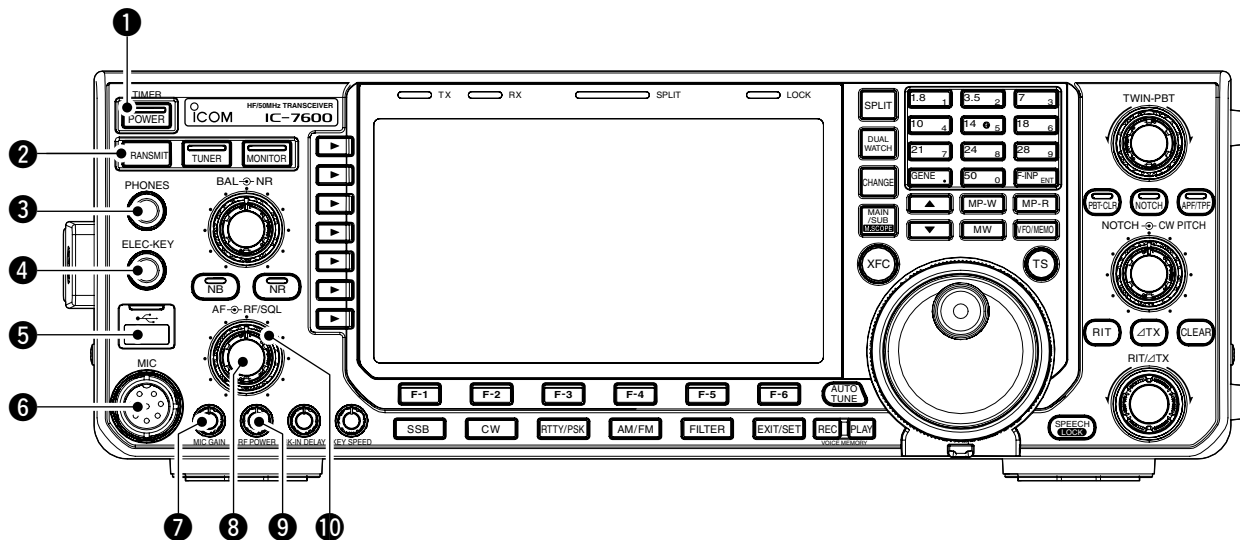
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Front panel



1 POWER SWITCH [POWER•TIMER] (p. 30)

While transceiver's power is OFF:

- ➔ Push to turn the transceiver power ON.
 - Turn the optional DC power supply ON in advance.
 - The indicator on this switch lights green when powered ON.

While transceiver's power is ON:

- ➔ Push momentarily to toggle the timer function ON and OFF. (p. 117)
 - The timer indicator appears when the timer function is ON. (If the transceiver's power is OFF, the indicator on this switch lights red.)
- ➔ Push and hold for 1 sec. to turn the transceiver power OFF.

2 TRANSMIT SWITCH [TRANSMIT]

Selects transmit or receive.

- The [TX] indicator lights red while transmitting and the [RX] indicator lights green when the squelch is open.

3 HEADPHONE JACK [PHONES]

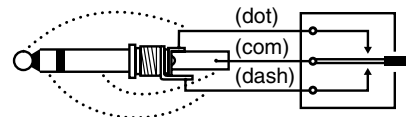
Accepts standard stereo headphones (impedance: 8 to 16 Ω).

- Output power: 5 mW with an 8 Ω load.
- When headphones are connected, the internal speaker or connected external speaker does not function.

4 ELECTRONIC KEYS JACK [ELEC-KEY]

Accepts a paddle to activate the internal electronic keyer for CW operation. (p. 17)

- You can select internal electronic keyer, bug-key or straight key operation in keyer set mode screen. (p. 44)
- A straight key jack is located on the rear panel. See [KEY] on p. 12.
- Keyer polarity (dot and dash) can be reversed in keyer set mode screen. (p. 45)
- A 4-channel memory keyer is available for your convenience. (p. 41)



5 USB (Universal Serial Bus) CONNECTOR (A type) [USB] (A) (p. 19)

- ➔ Insert USB-Memory* for both reading/storing a wide variety of the transceiver's information and data.

- The indicator above the connector lights or blinks when the transceiver reads or writes to the memory data.
- Unmount operation should be performed before removing the USB-Memory* (p.142).

- ➔ Connects a PC keyboard for RTTY and PSK operations, etc.

- Only USB keyboards* are supported.

*: USB-Memory and USB keyboard are not supplied by Icom.

6 MICROPHONE CONNECTOR [MIC]

Accepts the supplied or optional microphone.

- See p. 161 for appropriate microphones.
- See p. 23 for microphone connector information.

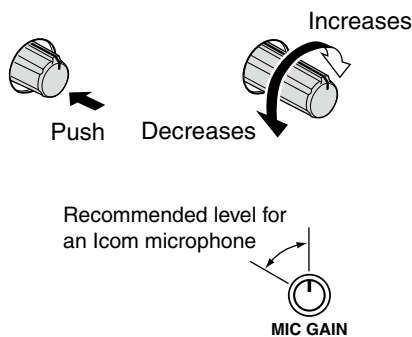
7 MIC GAIN CONTROL [MIC GAIN] (p. 36)

Adjusts microphone input gain.

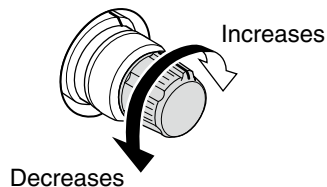
- The transmit audio tone in SSB, AM and FM modes can be adjusted independently in level set mode. (p. 121)

✓ How to set the microphone gain.

Set the [MIC GAIN] control so that the ALC meter occasionally moves up-scale during normal voice transmission in SSB, AM or FM mode.

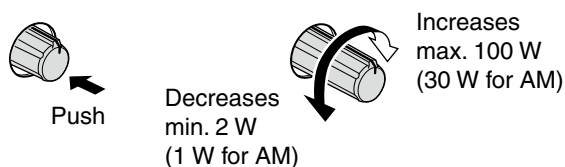
**8 AF CONTROL [AF] (inner control; p. 34)**

Varies the audio output level of the speaker or headphones.

**9 RF POWER CONTROL [RF POWER] (p. 36)**

Continuously varies the RF output power from minimum (2 W*) to maximum (100 W*).

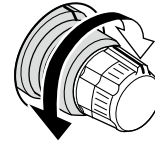
*AM mode: 1 W to 30 W

**10 RF GAIN CONTROL/SQUELCH CONTROL**

[RF/SQL] (outer control; p. 33)

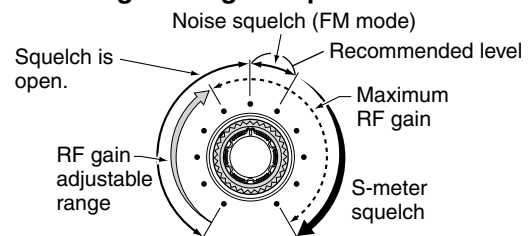
Adjusts the RF gain and squelch threshold level.

The squelch removes noise output from the speaker (closed condition) when no signal is received.

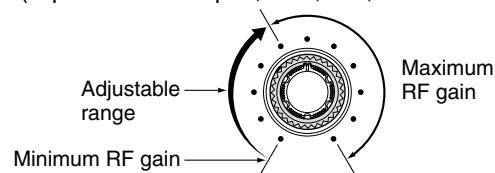


- The squelch is particularly effective for FM. It is also available for other modes.
- 12 to 1 o'clock position is recommended for any setting of the [RF/SQL] control.
- The control can be set as 'Auto' (RF gain control in SSB, CW, RTTY and PSK; squelch control in AM and FM) or squelch control (RF gain is fixed at maximum) in set mode as follows. (p. 128)

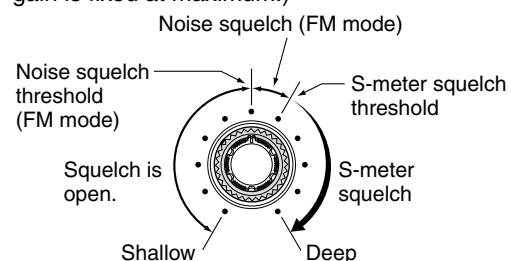
MODE	SET MODE SETTING		
	AUTO	SQL	RF GAIN + SQL
SSB, CW RTTY/PSK	RF GAIN	SQL	RF GAIN + SQL
AM, FM	SQL	SQL	RF GAIN + SQL

• When setting as RF gain/squelch control**• When functioning as RF gain control**

(Squelch is fixed open; SSB, CW, RTTY and PSK only)

**• When functioning as squelch control**

(RF gain is fixed at maximum.)



While rotating the RF gain control, noise may be heard. This comes from the DSP unit and does not indicate an equipment malfunction.

IC-7600 #03
(Europe)

< Intended Country of Use >

☒ AT	☒ BE	☒ CY	☐ CZ	☒ DK	☒ EE
☒ FI	☐ FR	☒ DE	☒ GR	☒ HU	☒ IE
☐ IT	☐ LV	☒ LT	☒ LU	☒ MT	☒ NL
☒ PL	☒ PT	☒ SK	☒ SI	☐ ES	☐ SE
☒ GB	☐ IS	☒ LI	☐ NO	☐ CH	☒ BG
☒ RO	☐ TR	☐ HR			

IC-7600 #04
(Europe-1)

< Intended Country of Use >

☐ AT	☐ BE	☐ CY	☐ CZ	☐ DK	☐ EE
☐ FI	☐ FR	☒ DE	☐ GR	☐ HU	☐ IE
☒ IT	☐ LV	☐ LT	☐ LU	☐ MT	☐ NL
☐ PL	☐ PT	☐ SK	☐ SI	☒ ES	☐ SE
☒ GB	☐ IS	☐ LI	☐ NO	☐ CH	☐ BG
☐ RO	☐ TR	☐ HR			

IC-7600 #05
(Spain)

< Intended Country of Use >

☐ AT	☐ BE	☐ CY	☐ CZ	☐ DK	☐ EE
☐ FI	☐ FR	☐ DE	☐ GR	☐ HU	☐ IE
☐ IT	☐ LV	☐ LT	☐ LU	☐ MT	☐ NL
☐ PL	☐ PT	☐ SK	☐ SI	☒ ES	☐ SE
☐ GB	☐ IS	☐ LI	☐ NO	☐ CH	☐ BG
☐ RO	☐ TR	☐ HR			

IC-7600 #09
(Italy)

< Intended Country of Use >

☐ AT	☐ BE	☐ CY	☐ CZ	☐ DK	☐ EE
☐ FI	☐ FR	☐ DE	☐ GR	☐ HU	☐ IE
☒ IT	☐ LV	☐ LT	☐ LU	☐ MT	☐ NL
☐ PL	☐ PT	☐ SK	☐ SI	☐ ES	☐ SE
☐ GB	☐ IS	☐ LI	☐ NO	☐ CH	☐ BG
☐ RO	☐ TR	☐ HR			

IC-7600 #10
(France)

< Intended Country of Use >

☐ AT	☐ BE	☐ CY	☐ CZ	☐ DK	☐ EE
☐ FI	☒ FR	☐ DE	☐ GR	☐ HU	☐ IE
☐ IT	☐ LV	☐ LT	☐ LU	☐ MT	☐ NL
☐ PL	☐ PT	☐ SK	☐ SI	☐ ES	☐ SE
☐ GB	☐ IS	☐ LI	☐ NO	☐ CH	☐ BG
☐ RO	☐ TR	☐ HR			