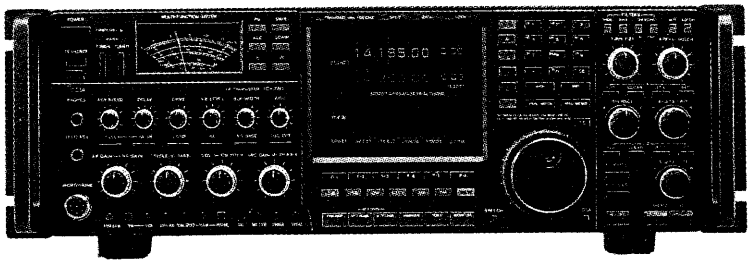
ICOM

INSTRUCTION MANUAL

HF ALL BAND TRANSCEIVER
GENERAL COVERAGE RECEIVER

IC-781



FOREWORD

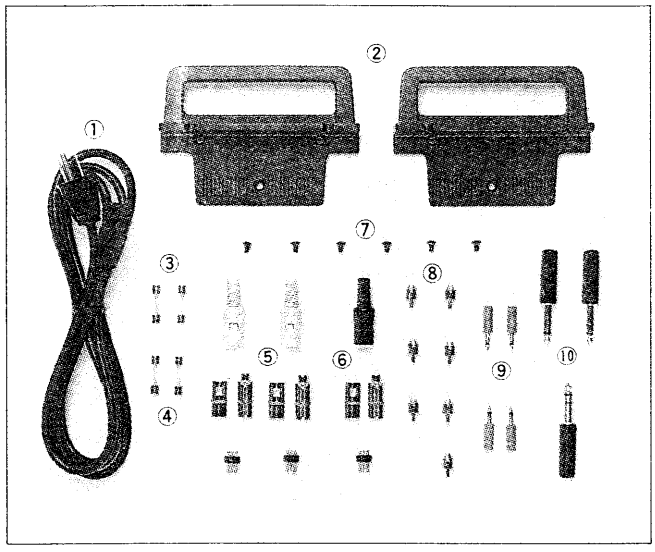
CONGRATULATIONS! You are the owner of the world's most advanced HF transceiver—IC-781—the first amateur radio transceiver with a built-in CRT DISPLAY. **IC-781** is the top of the line, an amateur's dream-rig.

The SPECTRUM SCOPE, TWIN PASSBAND TUNING, and DDS (Direct Digital Synthesizer) are unique to the market. With 105dB DYNAMIC RANGE and 150W OUTPUT POWER you can work the world.

We are grateful to the great number of amateurs throughout the years for their suggestions. In response, we have designed **IC-781**. ICOM's successful DXpeditions have also contributed to the development of **IC-781**. **IC-781** is the choice of amateurs the world over.

To fully enjoy the advanced features of **IC-781**, please read this instruction manual carefully before operating. Should you have questions about **IC-781**, feel free to contact your nearest authorized ICOM dealer or service center.

UNPACKING



Accessories included with the IC-781:	Qty.
① AC cord	1
② Rack mounting handles	1set
③ Spare fuses for DC line (2A)	2
④ Spare fuses for AC line (see below)	2
⑤ DIN plugs (8-pin)	2sets
⑥ DIN plug (7-pin)	1set
⑦ Screws for rack mounting handle	6
⑧ Pin plugs (RCA plugs)	7
⑨ Two-conductor 1/8 inch mini plugs	4
⑩ Three-conductor 1/4 inch plugs	3

120V AC type : 10A
220 ~ 240V AC type : 5A

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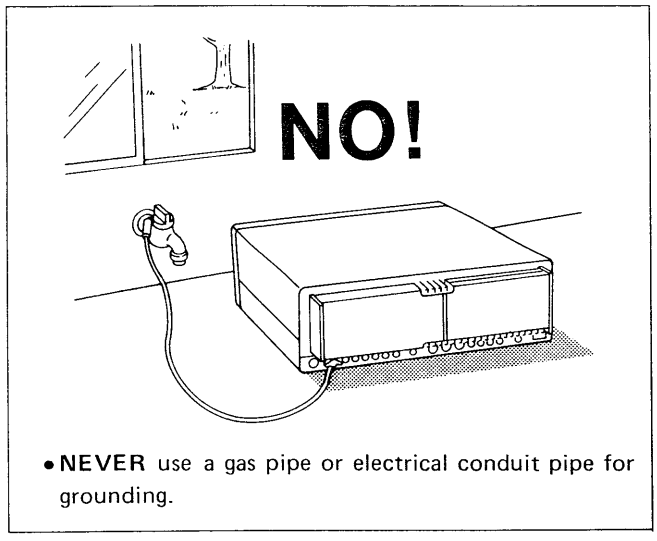
INSTALLATION PRECAUTIONS

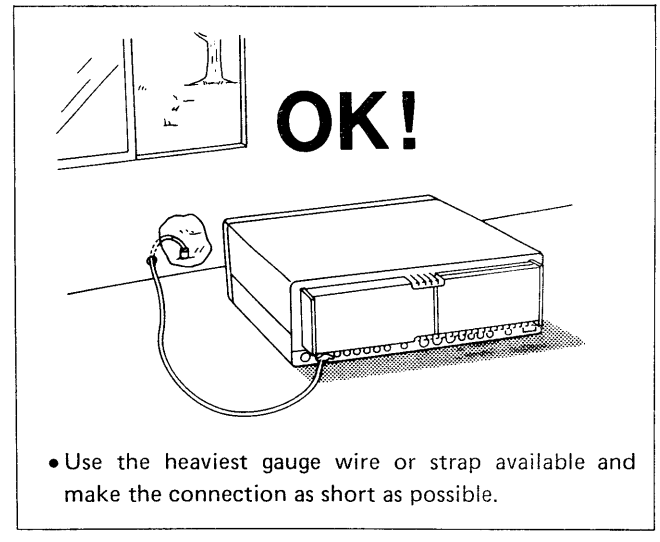
1. **AVOID** using the IC-781 in the following situations:
   - In temperatures under −10°C and over +60°C. DO NOT expose the IC-781 to direct sunlight or heat-producing devices such as a heater or stove.
   - In humid or moist places, such as a bathroom.
2. **DO NOT** run the antenna feedline near electronic instruments or magnetic compasses.
3. **DO NOT** place the transceiver within the reach of babies or children when the transceiver is ON.
4. **DO NOT** place liquids on or near the transceiver. Spilling may cause fires and electric shocks.
5. **DO NOT** use extension cords unless absolutely necessary. Improper use of extension cords may cause fires and electric shocks.
6. **DO NOT** touch metal strips, wires, etc., to anything inside the transceiver.

GROUNDING

To prevent electrical shocks, TVI, BCI and other problems, be sure to ground the transceiver through the GROUND TERMINAL. For best results, use the heaviest gauge wire or strap available, and make the connection as short as possible.



- **NEVER** use a gas pipe or electrical conduit pipe for grounding.



- Use the heaviest gauge wire or strap available and make the connection as short as possible.

ANTENNA

Antennas play a very important role in radio communication. If the antenna is poor your transceiver cannot give you the best performance. A well-matched 50Ω antenna and feedline will provide the desired performance.

■MULTI-FUNCTIONAL CRT DISPLAY

The multi-functional 5 inch CRT displays the frequencies of VFO A and VFO B, the contents of the MEMORY, two MENU SCREENS and seventeen OPERATIONAL SCREENS. Fine resolution of 94 letters, numbers, punctuation marks and symbols. The soft amber display makes reading easy.

●BUILT-IN SPECTRUM SCOPE

The CRT's advanced spectrum scope displays the relative strength of signals around a center frequency. The span can be set to 50kHz, 100kHz and 200kHz. Ideal for monitoring band conditions in an instant.

●MEMORY CHANNEL LIST

The CRT displays the contents of 99 memory channels, two programmed scan edge frequencies and a note of up to ten characters per channel.

●SLEEP AND DAILY TIMERS

The IC-781 is equipped with selectable Sleep Timers and five Daily Timers which turn the transceiver ON and OFF. Using the timers and the [RECORDER REMOTE] jack, you can record a signal at any time. Especially useful for recording your favorite shortwave program when sleeping or at work.

●BUILT-IN CLOCKS

The IC-781 is equipped with two clocks, one for local time, and the other for UTC or any other time. The Sub Clock stores a note of up to six characters.

●TERMINAL MONITOR

ASCII (RS-232C level) code data is displayed on the CRT DISPLAY through the [DATA IN] jack. When using an external terminal unit, the screen displays RTTY, PACKET, AMTOR, etc.

■COMPLETE HF TRANSCEIVER

●BUILT-IN AUTOMATIC ANTENNA TUNER

Built-in preset/auto-tuning antenna tuner matches the IC-781 to the antenna when the SWR is less than 3:1. Maximizes radiated output power.

●DDS (DIRECT DIGITAL SYNTHESIZER)

Newly developed frequency synthesizer system, the ICOM DDS (Direct Digital Synthesizer) unit provides rapid lockup time. One of the fastest transmit/receive switching times on the market, it makes the IC-781 ideal for PACKET and AMTOR communications.

●FULL BREAK-IN

Choose full or semi break-in CW operation at the touch of a switch.

●DUAL WATCH

Two PLL circuits let you monitor two frequencies simultaneously. Ideal for DX contests, traffic-handling and net control work.

●FINE SCANNING

The fine scan slowly tunes through a signal without stopping. This innovative feature is especially useful for monitoring SSB or CW mode.

2. FEATURES

•TWIN PBT

Selects sections of the 455kHz and 9MHz IF filters separately or in tandem for clear reception of a signal in heavy interference. Useful for DX pile-ups, contests, nets, and other crowded band conditions.

•150W OUTPUT POWER

30V-DC (approx.) applied to the final transistors provide 150W output power and low IMD (Inter Modulation Distortion). The inner-type line flow fan ensures continuously stable operation under full power.

•NOISE BLANKER

Built-in noise-trigger type noise blanker removes pulse-type noise, such as that from engine ignition sparks. Ideal for city operation. Maximum 15msec blank-width removes longer pulse width noise such as the "woodpecker" and the key clicks of strong CW signals.

•105dB DYNAMIC RANGE

Provides excellent sound reproduction of faint and strong signals without distortion (IF band width 500Hz).

•BAND STACKING REGISTER

Enables you to store an amateur band frequency, switch bands, and return to the stored frequency. Especially convenient when switching bands during contests and for quick monitoring of propagation conditions on other bands.

•MULTI-FUNCTION KEYBOARD

The KEYBOARD enables you to instantly enter a frequency accurate to 10Hz, to switch amateur bands easily without the use of clumsy knobs, and to instantly call up any of the 99 memory channels.

•HIGH-PERFORMANCE FILTERS

The high shape factor of the 9 filters provides excellent selectivity characteristics. The 455kHz and 9MHz filters can be separately selected in CW or RTTY mode. Filters may be conveniently preset for each operating mode on the CRT DISPLAY FILTER SELECTION screen.

•CW PITCH CONTROL

CW audio pitch may be adjusted without affecting the operating frequency.

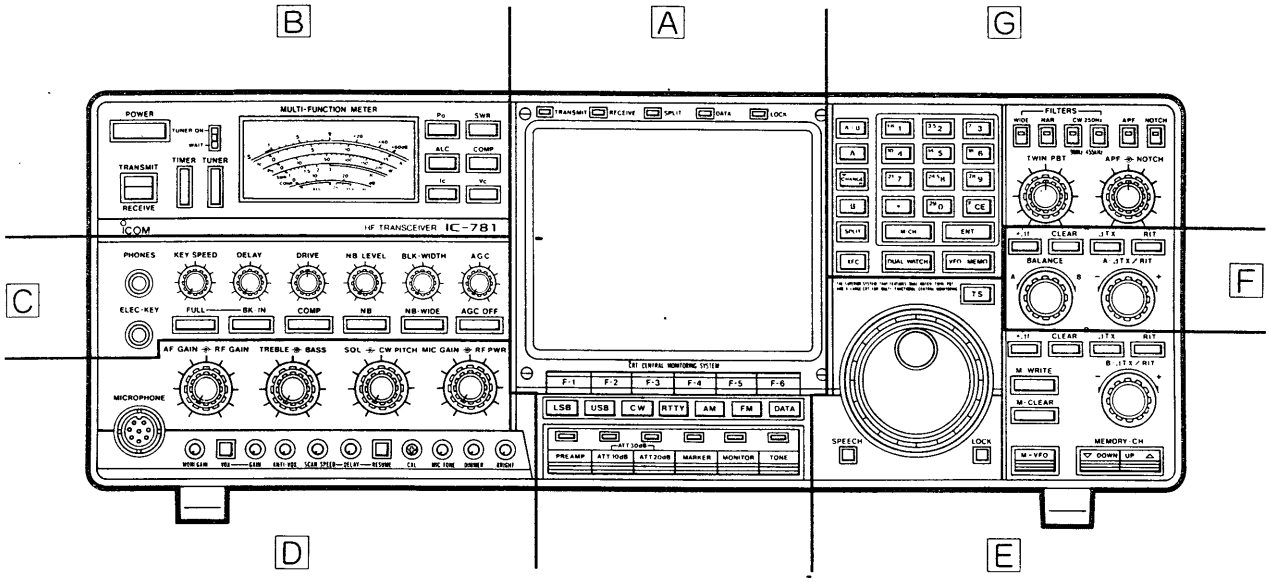
•SEPARATE CONTROLS FOR "A" AND "B" SECTION RIT/⊿TX

RIT (Receiver Incremental Tuning) and ⊿TX (Transmitter Incremental Tuning) for each frequency display section can be separately controlled. Especially useful when operating in duplex and dual watch.

•AUDIO PEAK FILTER

The APF (Audio Peak Filter) attenuates the unwanted audio frequency components in CW. Your desired audio frequency between 500Hz and 1000Hz is floated for interference-free receiving.

3-1 FRONT PANEL



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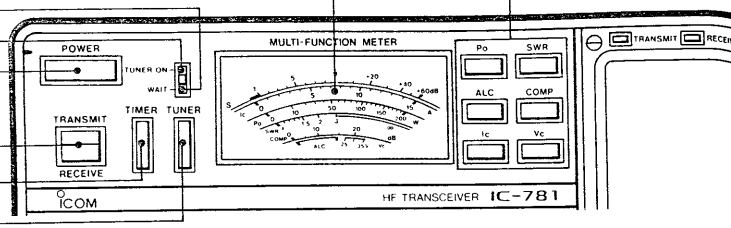

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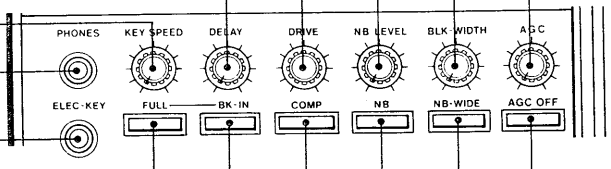

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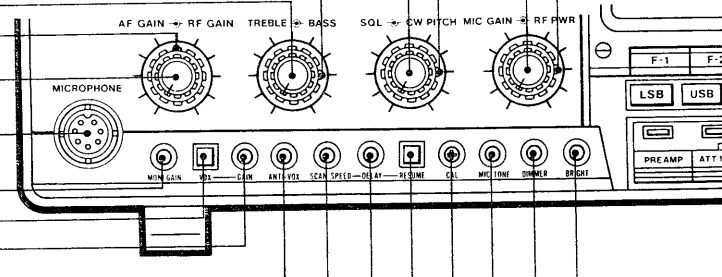

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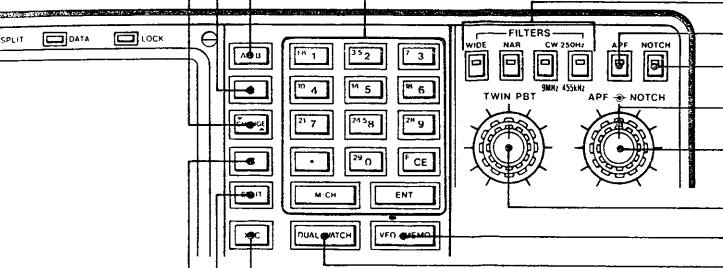

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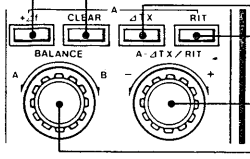

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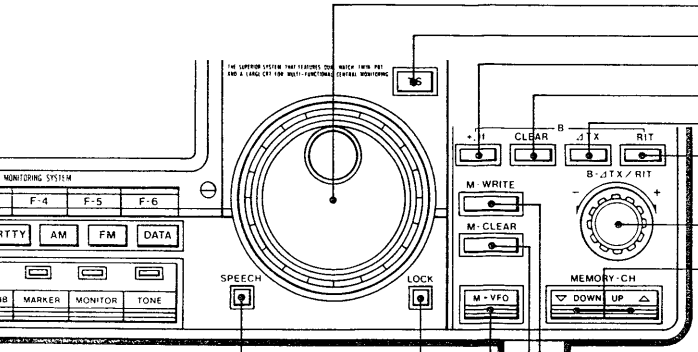

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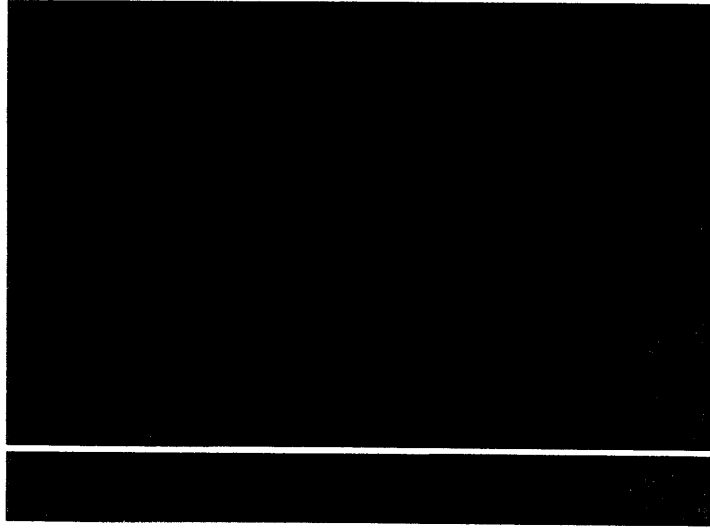
Count on us!



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