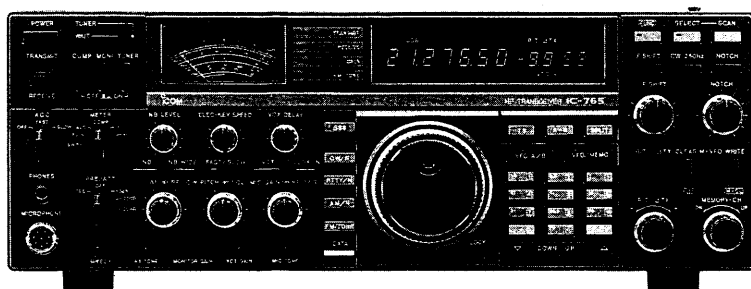




INSTRUCTION MANUAL

HF ALL BAND TRANSCEIVER
IC-765



INTRODUCTION

Thank you for choosing this new Icom product.

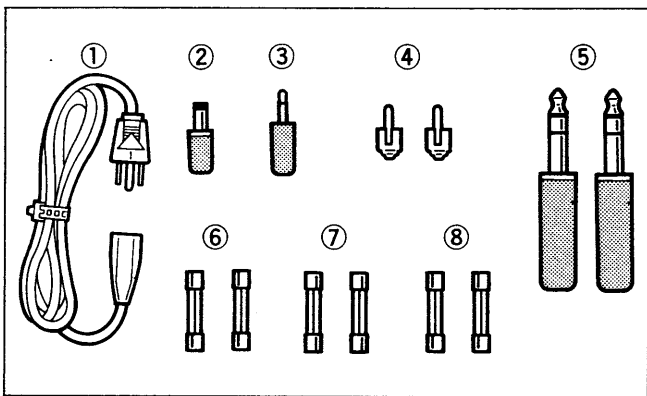
Icom's advanced new **IC-765** is designed to meet the increasing demand of today's amateur radio operators for high precision, sophisticated radio communications. Serious HF CW enthusiasts will especially enjoy the multi-function capability of this state-of-the-art rig.

EXPLICIT DEFINITIONS

The following explicit definitions apply to this instruction manual.

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

UNPACKING



Accessories included with the IC-765:

	Qty.
① AC power cable.	1
② Mini DC power plug.	1
③ External speaker plug.	1
④ Pin plugs (RCA plugs)	2
⑤ 1/4 inch 3 conductor plug.	2
⑥ Spare fuses (for AC line; see below)	2
⑦ Spare fuses (for DC line; 2 A)	2
⑧ Spare fuses (for internal circuitry; 5 A)	2
120 V AC type : 10 A	
220 ~ 240 V AC type : 5 A	

IMPORTANT

- READ THIS INSTRUCTION MANUAL CAREFULLY** before attempting operation. If you have any questions regarding the operation of the IC-765, feel free to contact your nearest authorized Icom Dealer or Service Center.
- SAVE THIS INSTRUCTION MANUAL** — This instruction manual contains important safety and operating instructions for the IC-765.

PRECAUTIONS

- Unplug the AC power cable from the AC outlet and wait a few minutes, then remove the transceiver cover.
- NEVER** let metal, wire or other objects touch any internal part of the transceiver. Risk of electric shock could occur.
- NEVER** place the transceiver within the reach of babies or children at any time.
- NEVER** expose the transceiver to rain, snow or any liquid.
- DO NOT** operate the transceiver when it is covered by objects which impede heat dispersal.
- AVOID** using the transceiver in temperatures below -10°C ($+14^{\circ}\text{F}$) or over $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$). The transceiver may not function properly in extreme temperatures.
- AVOID** using the transceiver in excessively dusty environments.
- AVOID** placing the transceiver in direct sunlight.
- BE CAREFUL!** The heatsink may become hot when operating the transceiver continuously for long periods.
- During maritime mobile operations, keep interconnection cables as far away as possible from electronic instruments. This will prevent instrument malfunctions.

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- **COMPLETE HF TRANSCEIVER**

Icom's new IC-765 is an advanced HF all band transceiver with a modern heavy-duty design for the serious HF enthusiast. The IC-765 features a 10 Hz digit in the display, a high speed PLL lock-up time including Icom's exclusive DDS circuit, a newly developed fully automatic antenna tuner, and many more advanced features.

- **FULLY AUTOMATIC HIGH SPEED ANTENNA TUNER**

The built-in CPU memorizes previously matched conditions on each band. Tuning speed is ultra fast since tuning starts from a previous position. If the antenna tuner cannot tune from a previously memorized preset position, the advanced re-try function automatically changes the preset position and memorizes the best preset position.

- **COMPLETE SYSTEM FOR CW OPERATORS**

The IC-765 has high-speed CW full break-in capability and many comfortable functions such as a electronic keyer, independent iambic key jack, keying speed control and CW pitch control. The IC-765 includes a 500 Hz CW narrow filter for effectively removing QRM on crowded bands.

- **10 Hz DIGIT DISPLAY**

The large fluorescent display shows 7 digits for the operating frequency, meaning that the 10 Hz digit is also displayed.

- **BAND STACKING REGISTER**

Each band memorizes the last used frequency, mode, and IF filter condition (narrow or normal). The feature gives the IC-765 a simulation of 18 VFO capability (2 VFOs for each band).

- **105 dB DYNAMIC RANGE**

Receiver ability is fixed by the dynamic range. The Icom DFM (Direct Feed Mixer) system provides an excellent 105 dB dynamic range.

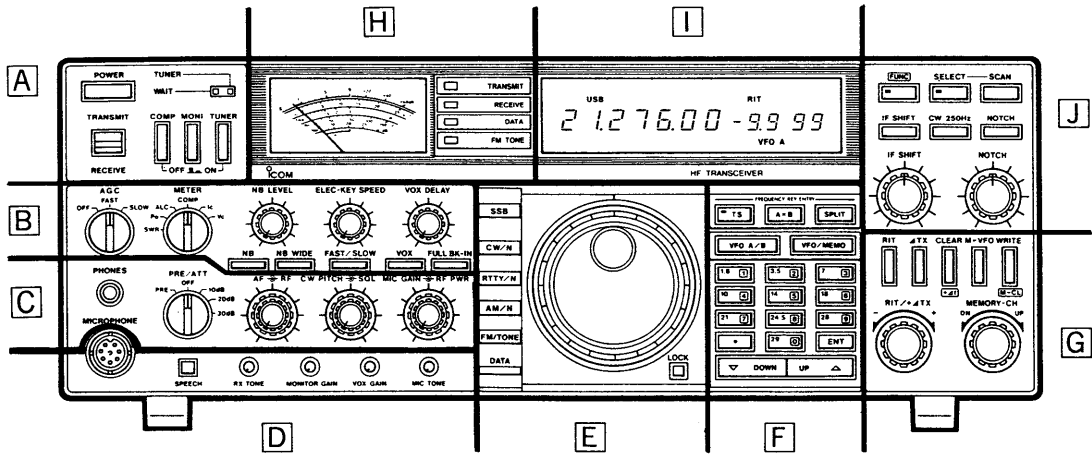
- **NEW PLL CIRCUIT-ADOPTED DDS**

The advanced Icom DDS (Direct Digital Synthesizer) System ensures high speed PLL lock-up times, clear signal emissions, and high C/N characteristics. A high-speed PLL provides very fast CW full break-in performances.

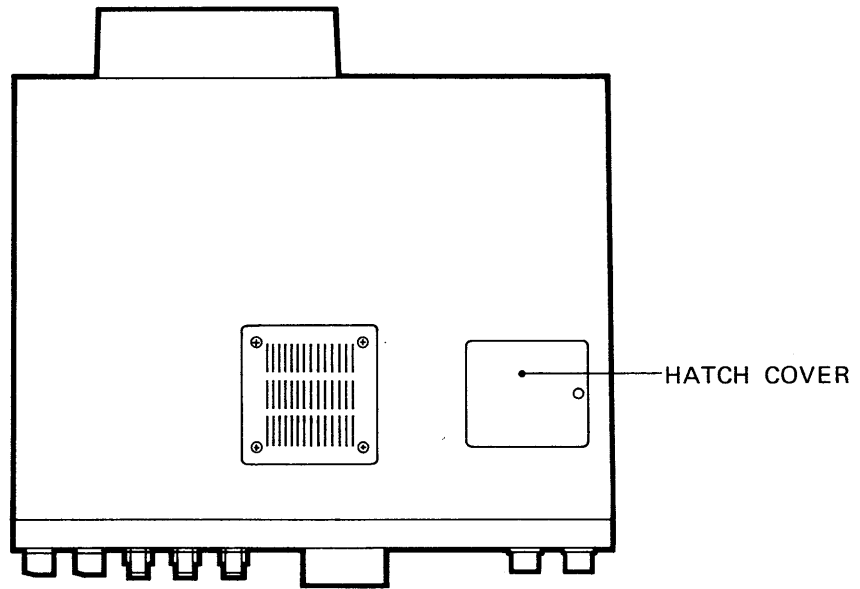
- **OTHER CONVENIENT FEATURES**

- 10 dB preamp
- Selectable attenuator, 10, 20, 30 dB
- 99-channel memory
- Split memory on channels 90 ~ 99
- Built-in 500 Hz CW narrow filter
- Programmed scan, memory scan and selected memory scan
- Separate LED lights on a selected memory channel
- IF shift
- Notch filter
- Low distortion 100 W power amplifier
- Large heatsink and cooling fan
- Fast/Slow/OFF selectable AGC
- RF-type speech compressor
- New-type noise blanker
- DATA switch for advanced data communications
- CI-V bus line

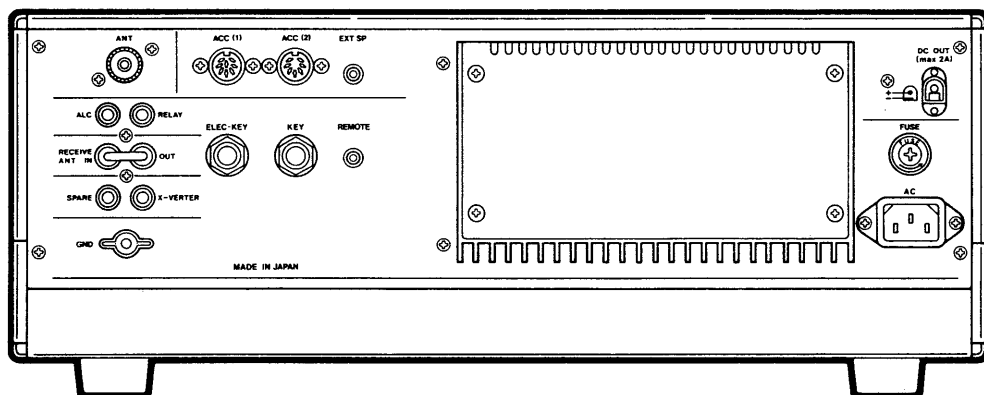
■ FRONT PANEL (See pgs. 3 ~ 8)



■ HATCH COVER (See p. 9)

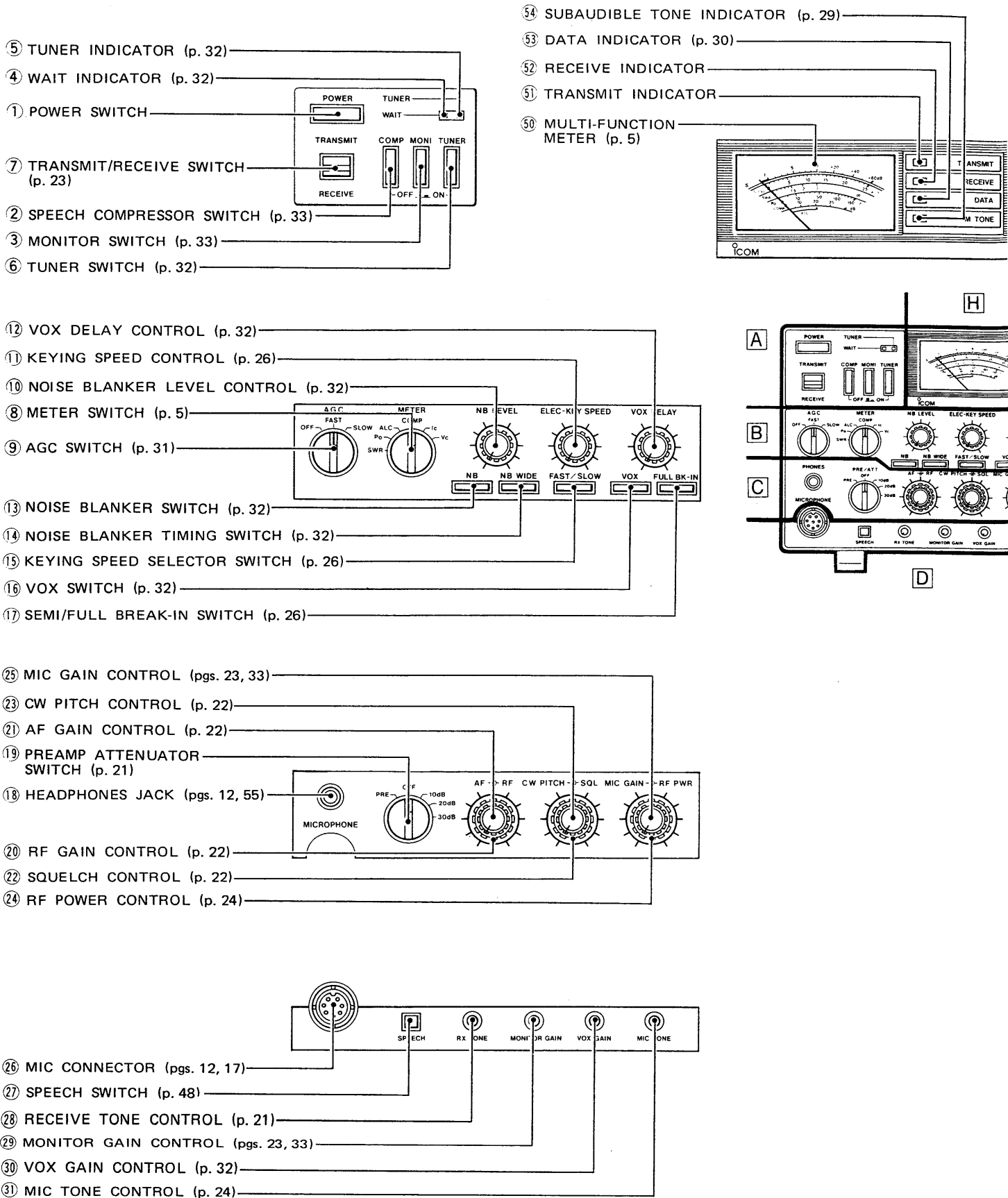


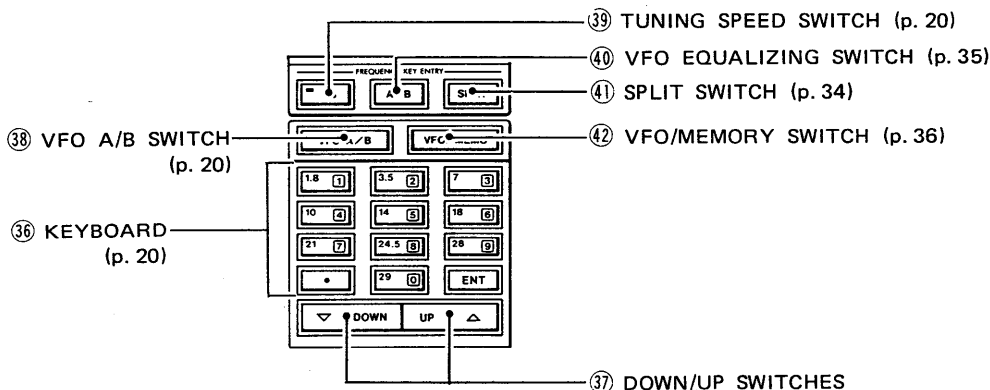
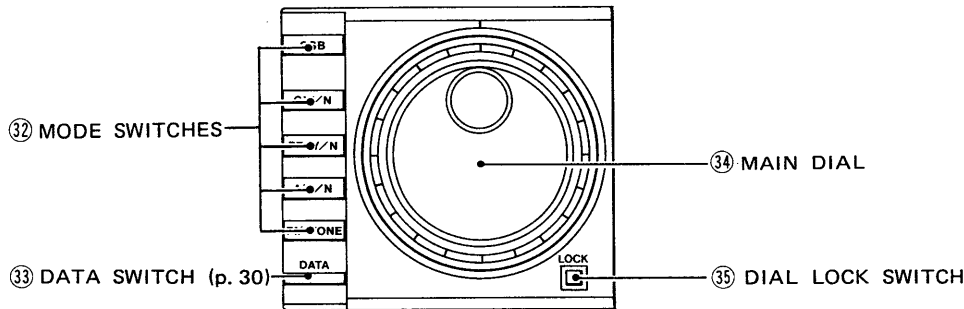
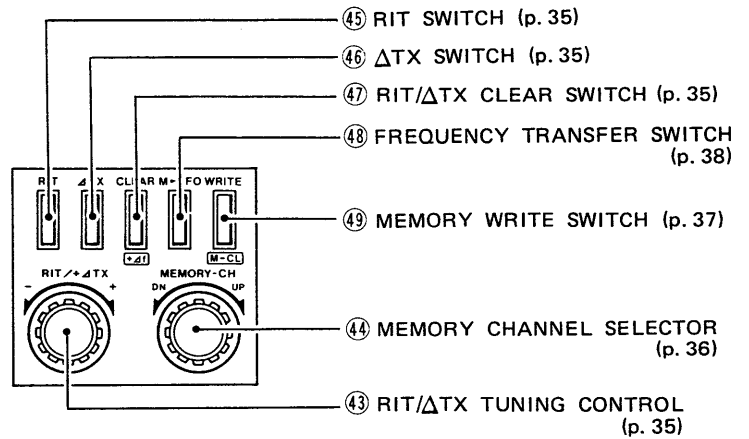
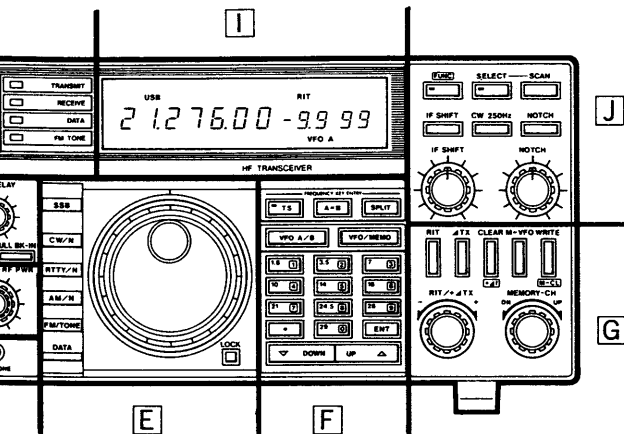
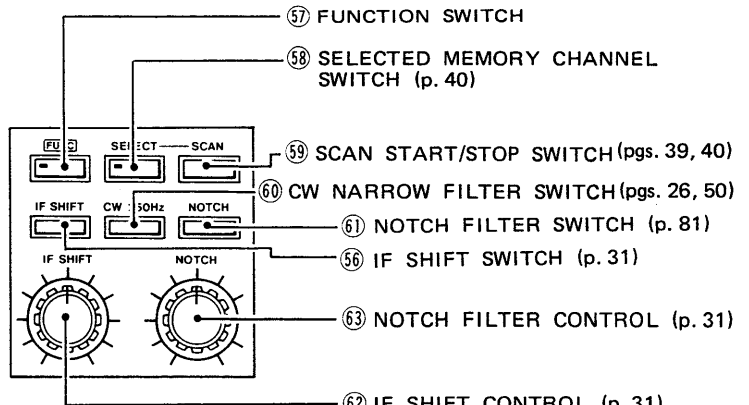
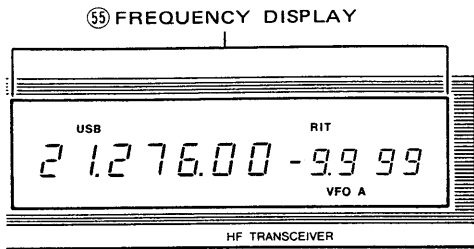
■ REAR PANEL (See p. 10)



2 CONTROL FUNCTIONS

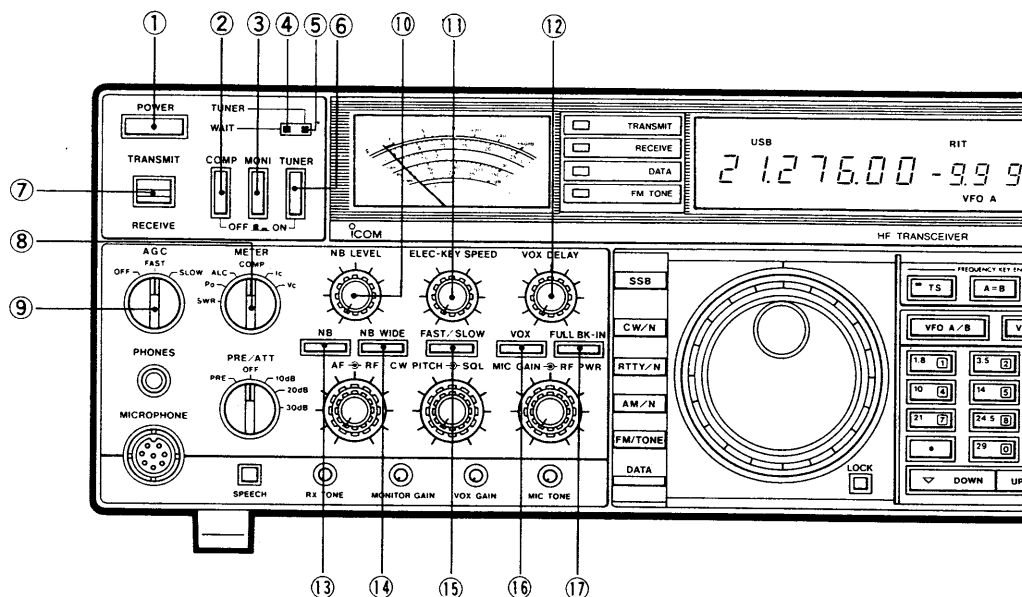
2-1 FRONT PANEL





2 CONTROL FUNCTIONS

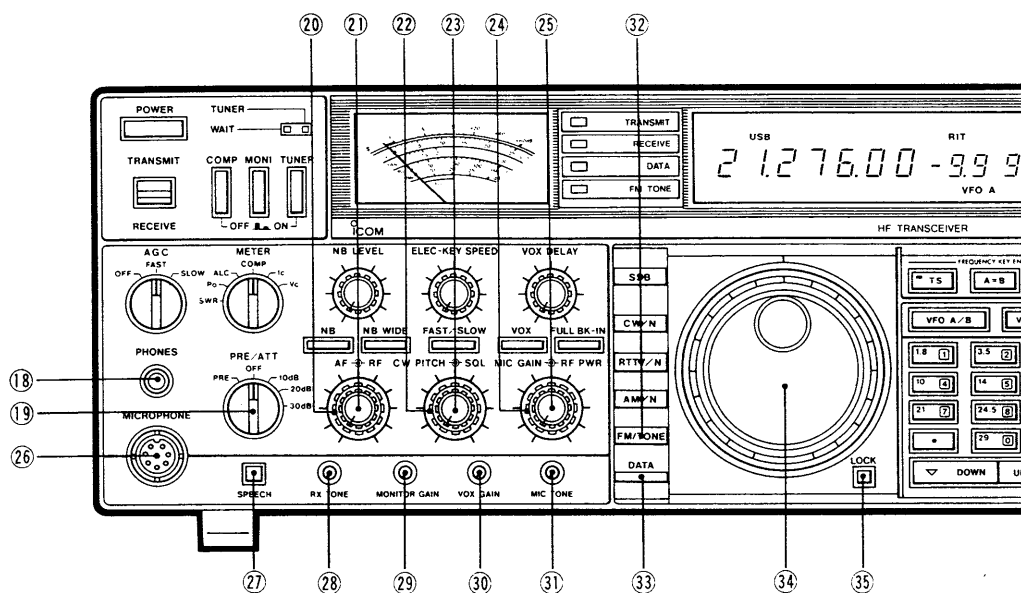
A B



- ① **POWER SWITCH [POWER]**
Turns the power ON and OFF.
- ② **SPEECH COMPRESSOR SWITCH [COMP] (p. 33)**
Activates the built-in speech compressor.
- ③ **MONITOR SWITCH [MONI] (p. 33)**
Activates the monitor function.
- ④ **WAIT INDICATOR [WAIT] (p. 32)**
Lights when the built-in antenna tuner is being tuned.
- ⑤ **TUNER INDICATOR [TUNER] (p. 32)**
Lights when the built-in antenna tuner is turned ON.
- ⑥ **TUNER SWITCH [TUNER] (p. 32)**
Activates the built-in antenna tuner.
- ⑦ **TRANSMIT/RECEIVE SWITCH [TRANSMIT/RECEIVE] (p. 23)**
Selects transmit or receive.
- ⑧ **METER SWITCH [METER]**
Selects the following switch positions:

SWITCH POSITION	MEASUREMENT
[SWR]	Indicates the SWR over the transmission line.
[Po]	Indicates the relative RF output power in watts.
[ALC]	Indicates the ALC level. The ALC circuit begins to activate when the RF output power reaches a preset level.
[COMP]	Indicates the compression level when the speech compressor is in use.
[Ic]	Indicates the collector current of the final transistors.
[Vc]	Indicates the collector voltage of the final transistors.
- ⑨ **AGC SWITCH [AGC] (p. 31)**
Changes the time constant of the AGC circuit.
- ⑩ **NOISE BLANKER LEVEL CONTROL [NB LEVEL] (p. 32)**
Adjusts the threshold level of the noise blanker.
- ⑪ **KEYING SPEED CONTROL [ELEC-KEY SPEED] (p. 26)**
Adjusts the keying speed when operating in CW mode with the built-in electronic keyer.
- ⑫ **VOX DELAY CONTROL [VOX DELAY] (p. 32)**
Changes the transmit-to-receive switching time when the VOX function is activated.
- ⑬ **NOISE BLANKER SWITCH [NB] (p. 32)**
Activates the noise blanker circuit.
- ⑭ **NOISE BLANKER TIMING SWITCH [NB WIDE] (p. 32)**
Selects the blanking time of the noise blanker circuit for a normal or wide blank width.
- ⑮ **KEYING SPEED SELECTOR SWITCH [FAST/SLOW] (p. 26)**
Selects the keying speed for slow or fast when operating in CW mode with the built-in electronic keyer.
- ⑯ **VOX SWITCH [VOX] (p. 32)**
Turns the VOX function ON and OFF.
- ⑰ **SEMI/FULL BREAK-IN SWITCH [FULL BK-IN] (p. 26)**
Selects semi or full break-in operation for CW operating purposes.

C D E



- ⑱ **HEADPHONES JACK [PHONES]** (pgs. 12, 55)
Accepts a standard 1/4 inch plug from 4 ~ 16 Ω mono or stereo headphones.
- ⑲ **PREAMP/ATTENUATOR SWITCH [PRE/ATT]** (p. 21)
Selects the receive RF preamplifier or an RF attenuator.
- ⑳ **RF GAIN CONTROL [RF]** (p. 22)
Adjusts gain at the receiver RF stage.
- ㉑ **AF GAIN CONTROL [AF]** (p. 22)
Adjusts audio output level.
- ㉒ **SQUELCH CONTROL [SQL]** (p. 22)
Adjusts the squelch threshold level.
- ㉓ **CW PITCH CONTROL [CW PITCH]** (p. 22)
Adjusts the receiver or monitored CW audio tone without changing the displayed frequency.
- ㉔ **RF POWER CONTROL [RF PWR]** (p. 24)
Adjusts RF output power.
- ㉕ **MIC GAIN CONTROL [MIC GAIN]** (pgs. 23, 33)
Adjusts microphone input gain.
- ㉖ **MIC CONNECTOR** (pgs. 12, 17)
Accepts optional microphone described on p. 55.
- ㉗ **SPEECH SWITCH [SPEECH]** (p. 48)
Activates the UT-36 VOICE SYNTHESIZER UNIT (optional) for announcing the displayed frequency and mode in English.
- ㉘ **RECEIVE TONE CONTROL [RX TONE]** (p. 21)
Adjusts the receive audio response.
- ㉙ **MONITOR GAIN CONTROL [MONITOR GAIN]** (pgs. 23, 33)
Adjusts the monitor output level when the [MONI] switch is turned ON.
- ㉚ **VOX GAIN CONTROL [VOX GAIN]** (p. 32)
Adjusts the VOX circuit sensitivity.
- ㉛ **MIC TONE CONTROL [MIC TONE]** (p. 24)
Adjusts the transmit audio response.
- ㉜ **MODE SWITCHES**
Selects the desired operating mode.
- ㉝ **DATA SWITCH [DATA]** (p. 30)
Inhibits microphone input except when the microphone PTT switch is pushed. The switch is also used for operating data communications such as packet or AMTOR.
- ㉞ **MAIN DIAL**
Changes the operating frequency.
- ㉟ **DIAL LOCK SWITCH [LOCK]**
Deactivates the main dial and electronically locks the currently displayed frequency.

Count on us!

