THE TRANSCEIVERS
IC‒7850
IC‒7851

Instruction Manual

PREFACE

Thank you for choosing the IC-7850/IC-7851. The IC-7850/IC-7851 has many built-in high technology circuitry and unique functions, such as the Dualwatch on the Main and Sub bands, a high speed spectrum scope scan, a high-resolution waterfall screen, and many other outstanding features.

The internal frequency signals in a radio utilizing a PLL are not always sufficiently pure. This results in a considerable number of unwanted spurious components, called phase noise, in its frequency spectrum. We focused intensively in drastically reducing the phase noise of LO (Local Oscillator) because the phase noise degrades the interference rejection and noise characteristics of the receiver. As a result, we succeeded in developing an LO with high purity outputs so that results in an RMDR (Reciprocal Mixing Dynamic Range) of 110 dB with newly developed 1.2 kHz Optimum Roofing Filter. Currently no competitors have been able to achieve this extremely high result performance. We believe we would not have been able to exceed the standard specifications without our full focus on LO purity.

In addition, Icom that has chosen to base the IC-7850/IC-7851 on an up-conversion, double super-heterodyne receiver design, which has many advantages over traditional receiver designs.

We are proud to have developed the IC-7850/IC-7851 for your amateur radio activities, and hope it brings you years of enjoyable operation.

Please read this instruction manual thoroughly before using the IC-7850/IC-7851.

ABOUT CE AND DOC

Hereby, Icom Inc. declares that the versions of IC-7851 which have the "CE" symbol on the product, comply with the essential requirements of the Radio Equipment Directive, 2014/53/EU, and the restriction of the use of certain hazardous substances in electrical and electronic equipment Directive, 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address:
http://www.icom.co.jp/world/support

DISPOSAL

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that in the European Union, all electrical and electronic products, batteries, and accumulators (rechargeable batteries) must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste.
Dispose of them according to the laws in your area.

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 transceiver.

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	Recommended for optimum use. No risk of personal injury, fire or electric shock.

TRADEMARKS

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This product includes "libpng" open source software, and is licensed according to the open source software license.

Refer to the Text files in the License folder of included CD for information on the open source software being used by this product.

PRECAUTIONS

⚠ **DANGER 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. The continuous high volume operation may cause a ringing in your ears. If you experience the ringing, reduce the volume level or discontinue use.

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

⚠ **WARNING! 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.

⚠ **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 put the transceiver's rear panel side down after lifting up the transceiver by holding rack mounting handle. This may scratch the surface of the place or damage the connectors on the transceiver's rear panel.

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 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: The transceiver weighs approximately 23.5 kg (52 lb). Always have two people available to carry, lift or turn over the transceiver.

CAUTION: The line-voltage receptacle must be near the transceiver and must be easily accessible.
DO NOT use extension cords.

DO NOT use harsh solvents such as benzine or alcohol when cleaning, 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 store the transceiver in areas with temperatures below ±0°C (+32°F) or above +50°C (+122°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! NEVER touch the transceiver top cover when transmitting continuously for long periods of time. The top cover may be hot.

Use Icom microphones only (supplied or optional). Other manufacturers' microphones have different pin assignments, and connection to the transceiver 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 [I/O] switch (on the rear panel) OFF and/or disconnect the AC power cable from the AC outlet when you will not use the transceiver for long period of time.

FCC INFORMATION

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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

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

ABOUT THE SUPPLIED CD

The following instructions and installers are included on the CD.

- **Instruction manual**
  Instructions for the full operations, the same as this manual

- **Schematic diagram**
  Includes the schematic and block diagrams

- **Adobe® Acrobat® Reader® Installer**
  Installer for Adobe® Acrobat® Reader®

To read the Instruction manual or Schematic diagram, Adobe® Acrobat® Reader® is required. If you have not installed it, please install the Adobe® Acrobat® Reader® on the CD or downloaded it from Adobe Systems Incorporated's website.

A PC with the following Operating System is required.
- Microsoft® Windows® 10, Microsoft® Windows® 8.1, Microsoft® Windows® 7

◇ Starting the CD

① Insert the CD into the CD drive.
   - Double click "Menu.exe" on the CD.
   - Depending on the PC setting, the Menu screen shown below is automatically displayed.
② Click the desired button to open the file.
   - To close the Menu screen, click [Quit].

Opens the Instruction manual (this manual)

Opens the Schematic diagram

Installs the Adobe® Acrobat® Reader®

Quits the Menu screen
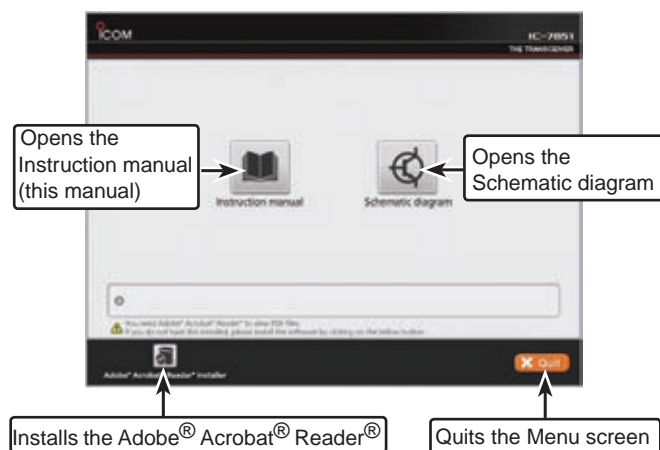
FUNCTIONS AND FEATURES of Adobe® Acrobat® Reader

The following functions and features can be used with Adobe® Reader®.

• Keyword search

Click "Find" (Ctrl+F) or "Advanced Search" (Shift+Ctrl+F) in the Edit menu to open the search screen. This is convenient when searching for a particular word or phrase in this manual.

*The menu screen may differ, depending on the Adobe® Acrobat® Reader® version.

Click to open the find or search screen or advanced search screen.
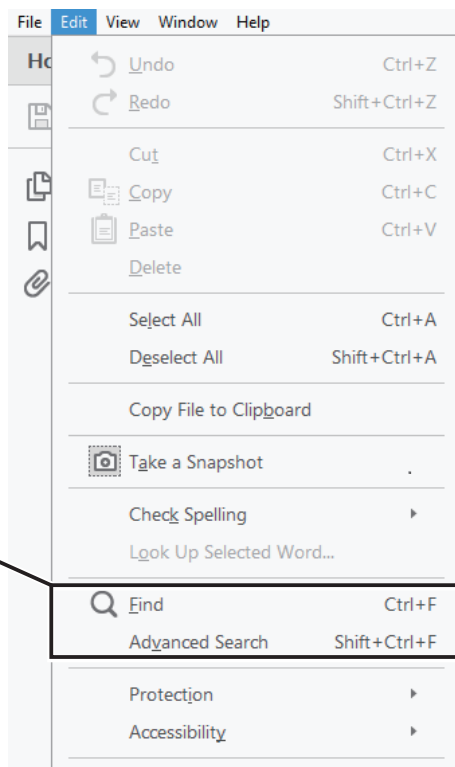
• Find screen
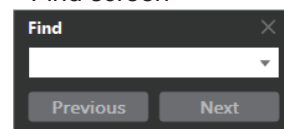
• Advanced search screen
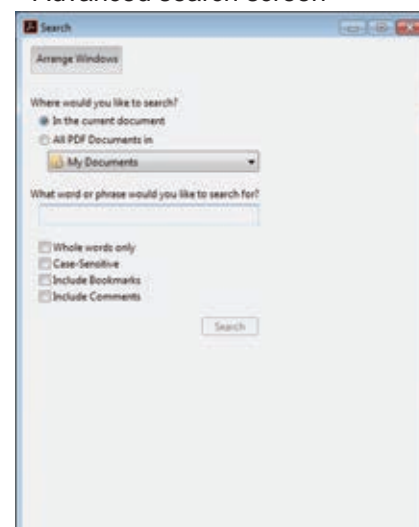
• Printing out the desired pages.

Click "Print" in File menu, and then select the paper size and page numbers you want to print.

*The printing setup may differ, depending on the printer. Refer to your printer's instruction manual for details.

*Select "A4" size to print out the page in the equalized size.
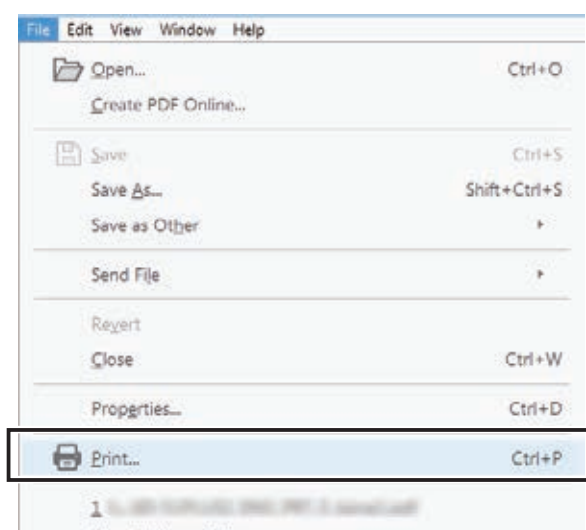
• Read Out Loud feature.

The Read Out Loud feature reads aloud the text in this Instruction Manual.
Refer to the Adobe® Acrobat® Reader® Help for the details.
(This feature may not be usable, depending on your PC environment including the operating system.)
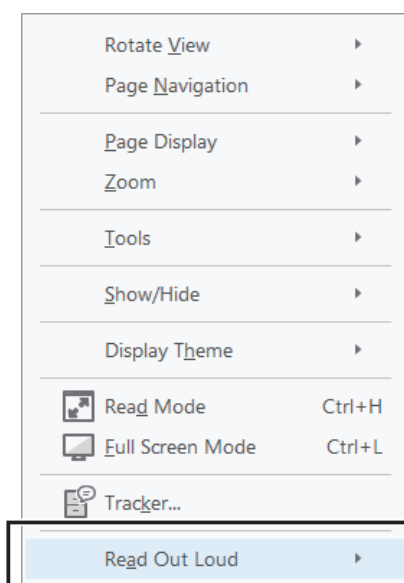
*The screen may differ, depending on the Adobe® Acrobat® Reader® version.

DESCRIPTION INFORMATION

This instruction manual is described based on the following manner.
" " (Quotation marks): Used to indicate icons, setting items, and screen titles displayed on the screen.
[ ] (brackets):　　　　Used to indicate keys, dials, and knobs.

Routes to the Set mode and setting screen descriptions
Routes to the Set mode, setting screen and the setting items are described in the following manner.

SET [F-7] ↘ **OTHERS** [F-5] ↘ *Beep (Band Edge)*

The Multi-function screens are OFF.
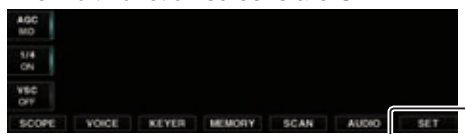
The Set mode menu screen.
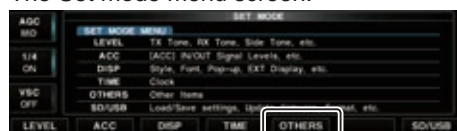
The Others set screen.
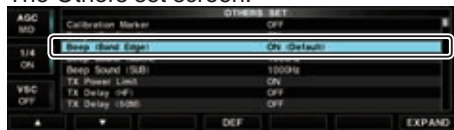
■ Band edge warning beep

This function allows you to hear a beep tone when you tune in or out of an amateur band's frequency range. A regular beep sounds when you tune into a range, and a lower tone error beep will sound when you tune out of a range.

○ The Multi-function screens are OFF:
① Select the "Beep (Band Edge)" item in the Others set screen.

SET [F-7] ↘ **OTHERS** [F-5] ↘ *Beep (Band Edge)*

② Rotate [MAIN DIAL] to select the option.
　• Band Edge Beep options:
　OFF:　　　Band edge beep is OFF.
　ON (Default):　When you tune into or out of the default amateur band's frequency range, a beep sounds. (default)

About the transceiver's illustrations
To indicate the keys and knobs in the operating steps, the transceiver is illustrated as illustrated below.

Also, the keys and knobs are described in the following manner.

(▶) Multi-function keys
　Example: Push the Multi-function [METER](▶) key.

(F) Function key
　Example: Push [SCOPE](F).

Mode key
　Example: Push the Mode key [SSB].

(▶) Multi-function keys　　　　Band key
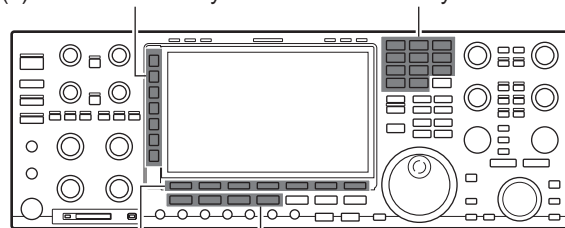
(F) Function keys　　Mode keys

About the LCD monitor display
Due to the printing matter, the Display type differs from the IC-7850 default settings.

SUPPLIED ACCESSORIES
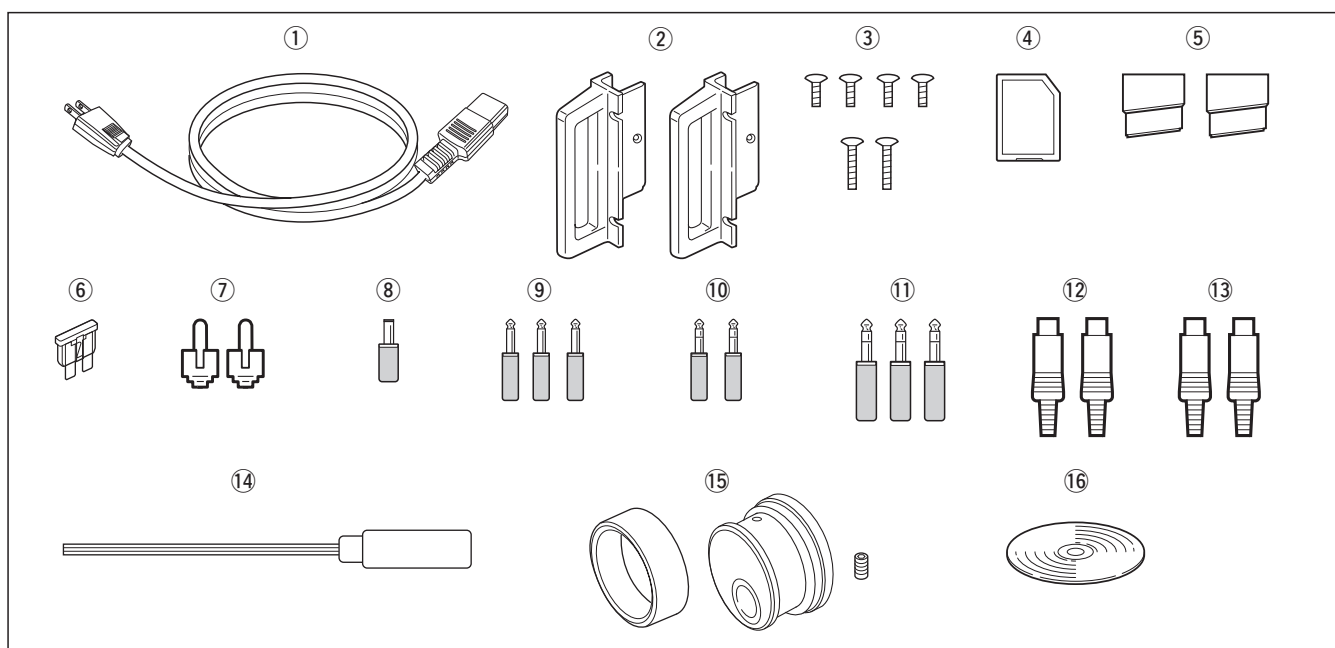
① AC power cable† 1
② Rack mounting handles .... 1 pair
③ Screws for rack mounting handles................... 1 set
④ SD card 1
⑤ Feet .... 1 pair
⑥ Spare fuse (2 A) 1
⑦ RCA plugs 2
⑧ DC plug 1
⑨ 2-conductor ⅛″ plugs 3
⑩ 3-conductor ⅛″ plugs 2
⑪ 3-conductor ¼″ plugs 3
⑫ ACC plugs (7-pin) 2
⑬ ACC plugs (8-pin) 2
⑭ Hexagonal wrench‡ 1
⑮ Main dial‡ 1
⑯ CD 1

† May differ from that shown depending on the version.
‡ See page 3-3 for the Main dial attachment details.

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USING AN SD CARD OR USB MEMORY   Section 10

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PANEL DESCRIPTION   Section   1

■ Front panel
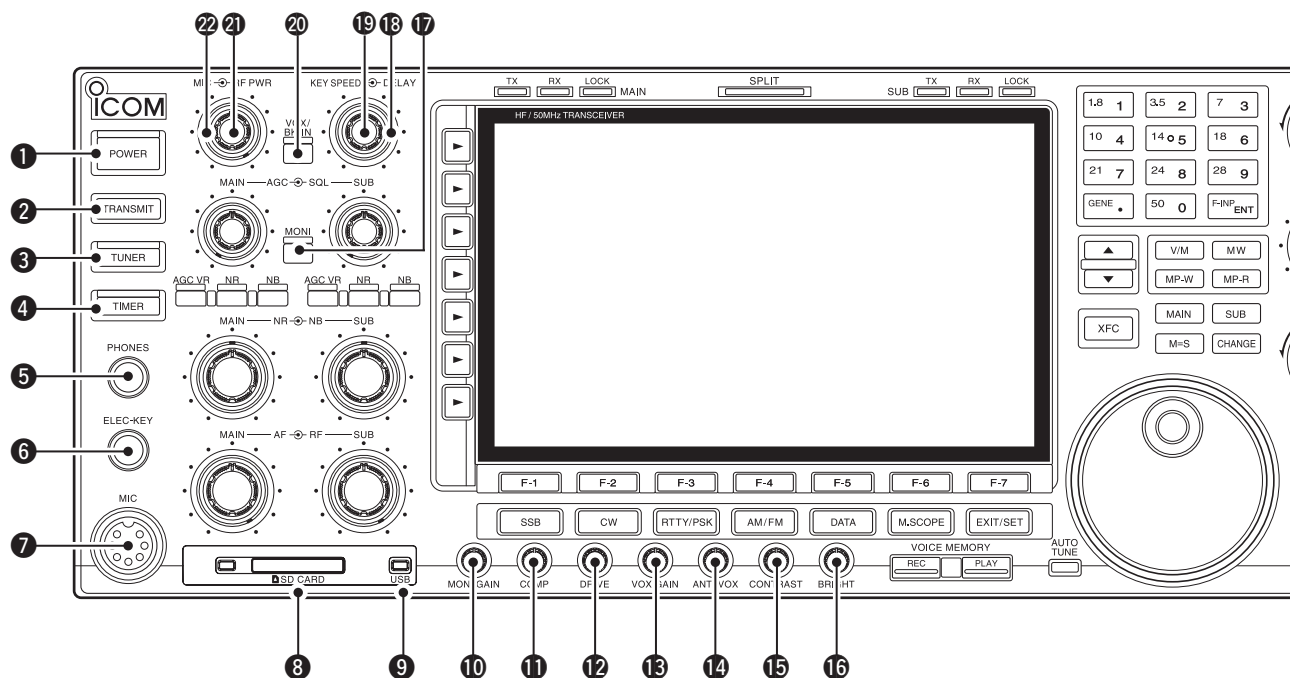
❶ POWER KEY [POWER] (pp. 4-3, 14-6)

First, turn ON the internal power supply. The internal power supply switch is located on the rear panel. (p. 1-12)

➥ Push to turn ON the transceiver power.
• The [POWER] indicator above this key lights blue.
➥ Hold down for 1 second to turn OFF the power.
• The [POWER] indicator lights orange when the transceiver is OFF, but the internal power supply is turned ON.

❷ TRANSMIT KEY [TRANSMIT] (p. 4-13)

Push to transmit, release to receive.
• The [TX] indicator lights red while transmitting and the [RX] indicator lights green when the squelch is open.

❸ ANTENNA TUNER KEY [TUNER] (p.13-7)

➥ Momentarily push to turn the tuner ON or OFF (bypass.)
• The [TUNER] indicator above this key lights white when the tuner is turned ON, and goes off when the tuner is turned OFF (bypassed).
➥ Hold down for 1 second to manually start the tuner.
• The [TUNER] indicator blinks red during manual tuning.
• When the tuner cannot tune the antenna, the tuning circuit is automatically bypassed after 20 seconds.

❹ TIMER KEY [TIMER] (p. 14-5)

➥ Push to turn ON or OFF the sleep or daily timer function.
• The [TIMER] indicator above this key lights white when the timer is in use.
➥ Hold down for 1 second to enter the Timer set screen.

❺ HEADPHONE JACK [PHONES] (p. 3-5)

Connect standard stereo headphones.
• Output power: 50 mW with an 8 Ω load.
• When headphones are connected, the internal speaker and any connected external speaker do not function.

❻ ELECTRONIC KEYER JACK [ELEC-KEY] (p. 20-3)

Connect a paddle to activate the internal electronic keyer for CW operation.
• Select the internal electronic keyer, bug-key or straight key operation in the Keyer set screen. (p. 5-13)
• A straight key jack is located on the rear panel. See [KEY] on page 1-13.
• Set the keyer polarity (dot and dash) in the Keyer set screen. (p. 5-13)
• Eight keyer memory channels can be used. (p. 5-11)
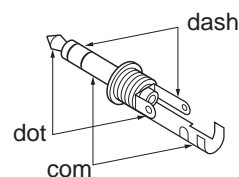
❼ **MICROPHONE CONNECTOR [MIC]**
Connect an optional microphone.
• See page 3-4 for appropriate microphones.
• See page 20-3 for microphone connector information.

❽ **SD CARD SLOT [SD CARD]** (pp. 3-5, 10-2)
Insert the supplied SD card for both reading and storing a wide variety of the transceiver's information and data.
• The indicator beside the slot lights, or blinks when reading from or writing to the card.
• Push the card once to remove it.

❾ **USB INDICATOR [USB]** (p. 10-4)
Lights while accessing a USB flash drive inserted to the [USB A] port.

❿ **MONITOR GAIN CONTROL [MONI GAIN]** (p. 8-5)
Rotate to adjust the transmit IF signal monitor level.

⓫ **COMPRESSION LEVEL CONTROL [COMP]**
(p. 8-6)
Rotate to adjust the speech compression level in SSB.

⓬ **DRIVE GAIN CONTROL [DRIVE]** (p. 4-14)
Rotate to adjust the transmitter level at the driver stage. Activates in all modes (except SSB with [COMP] OFF).

⓭ **VOX GAIN CONTROL [VOX GAIN]** (p. 8-2)
Rotate to adjust the transmit/receive switching threshold level for VOX operation.

⓮ **ANTI VOX CONTROL [ANTI VOX]** (p. 8-2)
Adjusts the VOX deactivate level to prevent unwanted VOX activation from the speaker or other sounds.

⓯ **DISPLAY CONTRAST CONTROL [CONTRAST]**
Adjusts the display contrast.

⓰ **DISPLAY BRIGHTNESS CONTROL [BRIGHT]**
Adjusts the display brightness.

⓱ **MONITOR KEY [MONI]** (p. 8-5)
Push to monitor your transmitted signal.
• The CW sidetone functions regardless of the [MONI] key setting in the CW mode.
• The [MONI] indicator above this key lights white while the function is activated.

⓲ **BREAK-IN DELAY CONTROL [DELAY]** (p. 8-4)
Rotate to adjust the transmit-to-receive switching delay time in the CW semi-break-in mode.

⓳ **ELECTRONIC CW KEYER SPEED CONTROL [KEY SPEED]** (p. 5-7)
Rotate to adjust the internal electronic CW keyer's speed to between 6 wpm (minimum) and 48 wpm (maximum).
• The keyer's speed is displayed.

⓴ **VOX/BREAK-IN KEY [VOX/BK-IN]**
➥ Push to turn the VOX function ON or OFF in the SSB, AM, or FM mode. (p. 8-2)
➥ Push to turn the break-in function ON (Semi break-in, Full break-in) or OFF in the CW mode. (p. 8-4)
➥ Hold down for 1 second to enter the VOX set screen. (p. 8-3)

✔ *What is the VOX function?*
The VOX function (voice operated transmission) starts transmission without pushing the transmit key or PTT switch when you speak into the microphone, then automatically returns to receive when you stop speaking.

✔ *What is the break-in function?*
The break-in function toggles between transmit and receive with CW keying. Full break-in (QSK) can monitor the receive signal during keying.

㉑ **RF POWER CONTROL [RF PWR]** (p. 4-13)
Rotate to continuously vary the RF output power from less than 5 watts (minimum) to 200* watts (maximum).
*AM mode: less than 5 W to 50 W
• The output power setting is displayed.

㉒ **MIC GAIN CONTROL [MIC]**
Rotate to adjust microphone gain.
• The transmit audio tone in the SSB, AM, or FM mode can be independently adjusted in the Level set screen. (p. 4-13)

✔ *How to set the microphone gain.*
Adjust the [MIC] control so that the ALC meter swings within the ALC range during normal voice level transmission in the SSB or AM mode. (The ALC meter must be selected.)

■ Front panel (Continued)
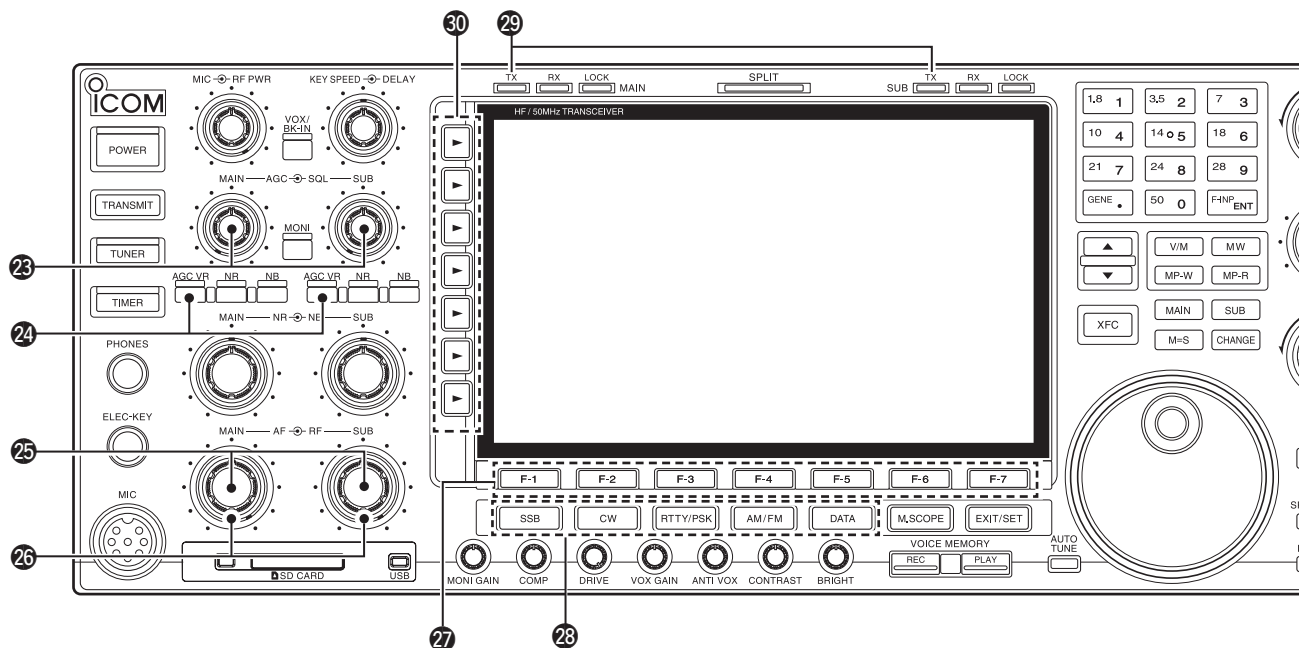
㉓ AGC CONTROL [AGC] (p. 7-4)

Rotate to adjust the continuously-variable AGC circuit time constant.

• To use the [AGC] control, push the appropriate band's [AGC VR] (The [AGC VR] indicator lights white).

㉔ AGC VOLUME KEY [AGC VR] (p. 7-4)

➡ Push to toggle the [AGC] control ON or OFF.
   • Use the [AGC] control to set the AGC time constant when switched ON.
   • The [AGC VR] indicator above this key lights white when the control is ON.
➡ Hold down for 1 second to turn OFF the AGC function.

㉕ AF CONTROL [AF] (p. 4-4)

Rotate to adjust the audio output level of the speaker or headphones.

㉖ RF GAIN CONTROL [RF] (p. 4-4)

Rotate to adjust the RF gain level.

While rotating the RF gain control, you may hear noise. This comes from the DSP unit and does not indicate a malfunction.

㉗ FUNCTION KEYS [F-1]–[F-7]

Push to select the function indicated in the display above these keys.

• Functions vary, depending on the operating mode.

㉘ MODE KEYS

Selects the desired mode. (p. 4-10)

• The Voice synthesizer announces the selected mode. (p. 16-2)

SSB ➡ Push to alternately select the USB or LSB mode.

CW ➡ Push to alternately select the CW or CW-R (CW reverse) mode.

RTTY/PSK ➡ Push to toggle between the RTTY and PSK modes.
   ➡ Hold down for 1 second to toggle between the RTTY and RTTY-R (RTTY reverse) modes.
   ➡ Hold down for 1 second to toggle between the PSK and PSK-R (PSK reverse) modes.

AM/FM ➡ Push to alternately select the AM or FM mode.

DATA ➡ Push to toggle between the SSB, AM, or FM data (USB-D, LSB-D, AM-D, FM-D) and voice modes.
   ➡ Hold down for 1 second to toggle between D1, D2, and D3.

㉙ TRANSMIT INDICATOR [TX]

Lights red while transmitting.

• The SUB band's [TX] indicator lights only when in split operation.

30 MULTI-FUNCTION KEYS

Push to select the functions indicated in the display to the right of these keys.
• Functions vary, depending on the operating mode.

ANT 1
➡ Push to select the ANT1, ANT2, ANT3 or ANT4 antenna connector. (p. 13-2)
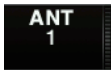➡ Hold down for 1 second to display the antenna selection memory. (p.13-5)
  • When the receive antenna is activated, the antenna that is connected to [ANT4] is used only for receive.

⫽ When a transverter is used, this [ANT] does not function and "TRV" appears.

METER Po
➡ Push to select the RF power (Po), SWR, ALC, COMP, VD or ID metering while transmitting. (p. 4-11)
➡ Hold down for 1 second to turn the Digital multi-function meter ON or OFF. (p. 4-11)
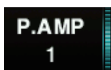
P.AMP 1
➡ Push to select one of two receive RF preamps, or bypass them. (p. 7-2)
  • "P.AMP1" activates a 10 dB preamp.
  • "P.AMP2" activates a 16 dB high-gain preamp.

✔ What is a preamp?
A preamp amplifies received signals in the front end circuit to improve S/N ratio and sensitivity. Select "P.AMP1" or "P.AMP2" when receiving weak signals.
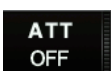
ATT OFF
➡ Push to select the 6 dB, 12 dB or 18 dB attenuator. (p. 7-2)
➡ Hold down for 1 second to select the 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, or 21 dB attenuator. (p. 7-2)

✔ What is an attenuator?
An attenuator prevents a desired signal from distorting when very strong signals are near the desired frequency, or when very strong electric fields, such as from a broadcasting station, are near your location.

AGC MID
➡ Push to activate and then select the "FAST," "MID," or "SLOW" AGC time constant. (p. 7-4)
  • In the FM mode, only "FAST" is selectable.
➡ Hold down for 1 second to enter the AGC set mode. (p. 7-4)

⫽ The AGC time constant can be set between 0.1 to 8.0 second (depending on the mode), or turned OFF. When AGC is "OFF," the S-meter does not function.

✔ What is AGC?
The AGC controls receiver gain to produce a constant audio output level, even when the received signal strength varies dramatically. Select "FAST" for tuning and then select "MID" or "SLOW" depending on the receiving condition.

COMP OFF WIDE
➡ Turns the speech compressor ON or OFF in the SSB mode. (p. 8-6)
➡ Selects the narrow, middle or wide compression when held down for 1 second.

✔ What is a speech compressor?
A speech compressor compresses the transmitter audio input to increase the average audio output level, and therefore increase the talk power. This function is effective for long-distance communication, or when propagation conditions are poor.
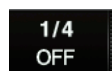
1/4 OFF
➡ Push to turn the ¼-speed tuning function ON or OFF in the SSB data, CW, RTTY and PSK modes. (p. 4-9)
  • ¼ function sets the dial rotation to ¼ of the normal speed for fine tuning.

TONE OFF
➡ In the FM mode, push to toggle between the tone encoder, tone squelch function and no-tone operation. (p. 5-39)
➡ In the FM mode, hold down for 1 second to enter the Tone set mode. (pp. 5-38, 5-39)

VSC OFF
➡ Push to turn the Voice squelch control function ON or OFF. This is useful for scanning. (p. 12-10)

INSTALLATION NOTES

For amateur base station installations it is recommended that the forwards clearance in front of the antenna array is calculated relative to the EIRP (Effective Isotropic Radiated Power). The clearance height below the antenna array can be determined in most cases from the RF power at the antenna input terminals.

Different exposure limits have been recommended for different frequencies, a relative table shows a guideline for installation considerations.

Below 30 MHz, the recommended limits are specified in terms of V/m or A/m fields as they are likely to fall within the near-field region. Similarly, the antennas may be physically short in terms of electrical length and that the installation will require some antenna matching device which can create local, high intensity magnetic fields. Analysis of such installations is best considered in association with published guidance notes such as the FCC OET Bulletin 65 Edition 97-01 and its annexes relative to amateur transmitter installations. The EC recommended limits are almost identical to the FCC specified 'uncontrolled' limits and tables exist that show pre-calculated safe distances for different antenna types for different frequency bands. Further information can be found at http://www.arrl.org/.

• Typical amateur radio installation
Exposure distance assumes that the predominant radiation pattern is forward and that radiation vertically downward is at unity gain (sidelobe suppression is equal to main lobe gain). This is true of almost every gain antenna today. Exposed persons are assumed to be beneath the antenna array and have a typical height of 1.8 m.

The figures assume the worst-case emission of constant carrier.

For the bands 10 MHz and higher the following power density limits have been recommended:

10–144 MHz	2 W/sq m

EIRP clearance heights by frequency band

1 Watts	2.1 m
10 Watts	2.8 m
25 Watts	3.4 m
100 Watts	5 m
1000 Watts	12 m

Forward clearance, EIRP by frequency band

100 Watts	2 m
1000 Watts	6.5 m
10,000 Watts	20 m
100,000 Watts	65 m

In all cases any possible risk depends on the transmitter being activated for long periods. (actual recommendation limits are specified as an average during 6 minutes) Normally the transmitter is not active for long periods of time. Some radio licenses will require that a timer circuit automatically cuts the transmitter after 1–2 minutes etc.

Similarly some types of emission, i.e., SSB, CW, AM etc. have a lower 'average' output power and the assessed risk is even lower.

Please record the serial number of your transceiver below for future servicing reference:

Serial Number :

Date of purchase :

Place where purchased :

Count on us!

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