



INSTRUCTION MANUAL

VHF/UHF
ALL MODE TRANSCEIVER

IC-910H



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-910H.

EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠ 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.

PRECAUTIONS

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

⚠ NEVER apply AC to the [DC13.8V] jack on the transceiver rear panel. This could cause a fire or ruin the transceiver.

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

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

AVOID using or placing the transceiver in areas with temperatures below -10°C ($+14^{\circ}\text{F}$) or above $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$). Be aware that temperatures on a vehicle's dashboard can exceed 80°C ($+176^{\circ}\text{F}$), resulting in permanent damage to the transceiver if left there for extended periods.

AVOID placing the transceiver in excessively dusty environments or in direct sunlight.

AVOID placing the transceiver against walls or putting 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, **DO NOT** operate the transceiver without running the vehicle's engine. When the transceiver power is ON and your vehicle's engine is OFF, the vehicle's battery will soon become exhausted.

Make sure the transceiver power is OFF before starting the vehicle. 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 heatsink 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-910H may damage the transceiver.

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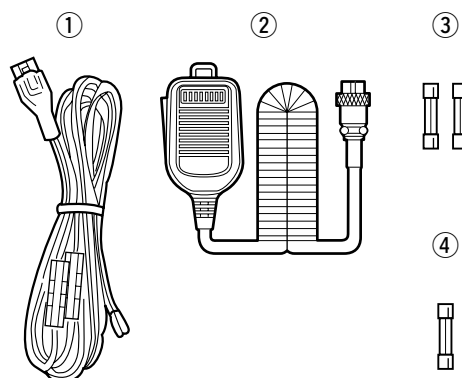
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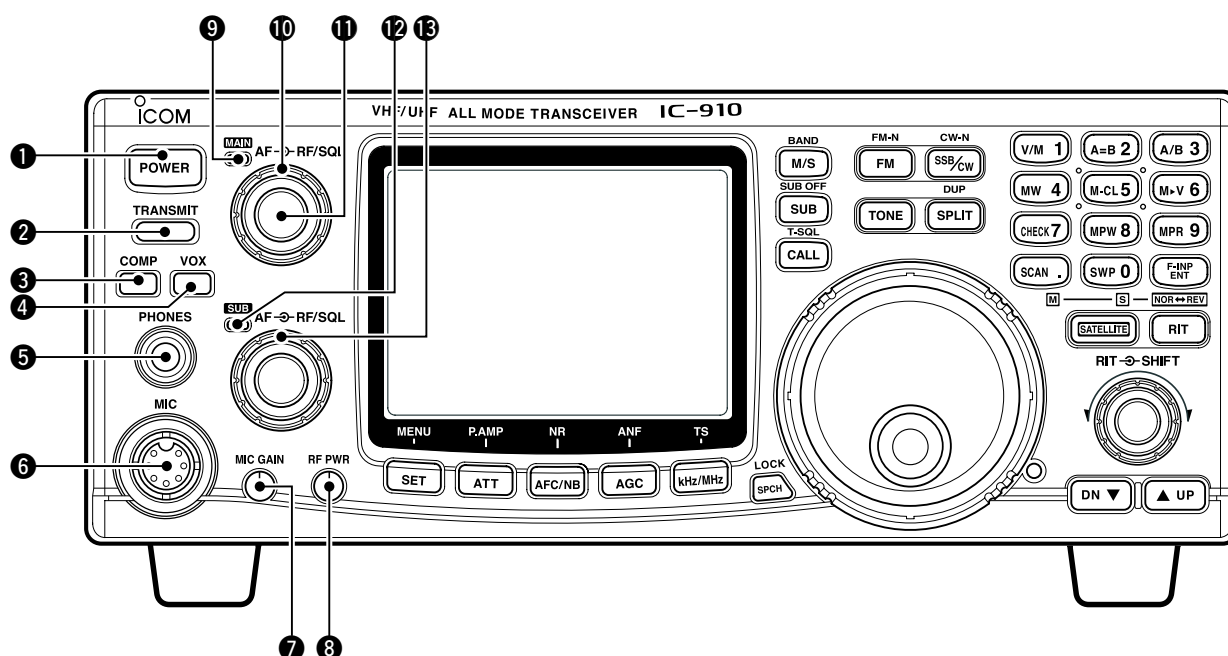
SUPPLIED ACCESSORIES

The transceiver comes with the following accessories.

	Qty.
① DC power cable (OPC-657A)	1
② Hand microphone (HM-36)	1
③ Spare fuses (FGB 30 A)	2
④ Spare fuse (FGB 4 A)	1



■ Front panel



❶ POWER SWITCH [POWER]

- ➡ Push momentarily to turn power ON.
- ➡ Push for 2 sec. to turn power OFF.

❷ TRANSMIT SWITCH [TRANSMIT]

Push to select transmitting or receiving.

❸ COMPRESSION SWITCH [COMP] (p. 36)

Push to switch the speech compressor function ON and OFF.

- The speech compressor increases average RF output power, improving signal strength and readability in SSB.

❹ VOX SWITCH [VOX] (p. 33)

Push to switch the VOX function ON and OFF.

- The VOX (Voice-Operated Transmission) function toggles between transmit and receive with your voice. This function provides an opportunity to input log entries into your computer, etc., while operating.

❺ HEADPHONE JACK [PHONES]

Accepts headphones.

- Output power: 5 mW with 8–16 Ω load.
- When headphones are connected, the internal speaker or connected external speaker does not function.
- The MAIN and SUB band audio can be mixed or separated when using stereo headphones according to set mode settings. (p. 57)

❻ MICROPHONE CONNECTOR [MIC]

Accepts the supplied or optional microphone.

- See p. 81 for appropriate microphones.
- See p. 15 for microphone connector information.

❼ MIC GAIN CONTROL [MIC GAIN]

Adjusts microphone input gain.

Recommended level for
an Icom microphone



✓ How to set the microphone gain.

Set the [MIC] control so that the [MAIN]/[SUB] indicator (ALC indicator) some times lights brighter during normal voice transmission in SSB mode.

❽ RF POWER CONTROL [RF PWR]

Continuously varies the RF output power from minimum to maximum.

144 MHz band	5–100 W
430(440) MHz band	5–75 W
1200 MHz band	1–10 W (optional UX-910)



9 MAIN BAND INDICATOR [MAIN]

- ➔ Lights green while the squelch is opened or a signal is received on the MAIN band; lights red while transmitting on the MAIN band.
- While transmitting, the indicator also shows ALC condition. Brightness increases more than usual when the ALC function is activated.
- ➔ Flashes when an off-frequency signal is received and the FM center detector is activated. (p. 28)

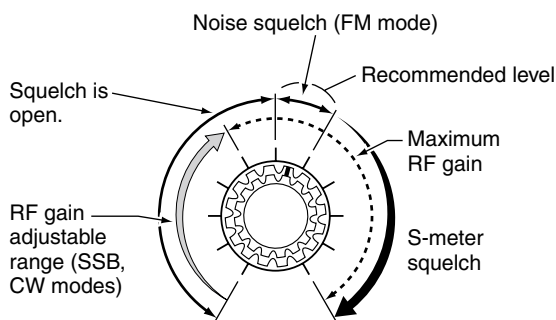
10 RF GAIN CONTROL/SQUELCH CONTROL [RF/SQL] (outer control)

Adjusts the RF gain and squelch threshold level for the MAIN band. The squelch removes noise output from the speaker (closed condition) when no signal is received.

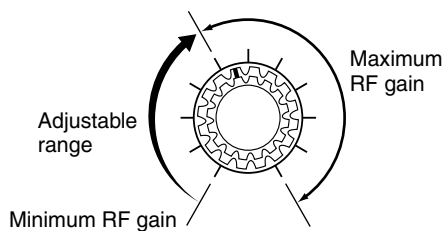
- The squelch is particularly effective for FM. It is also available for other modes.
- 12 to 13 o'clock position is recommended for any setting of the [RF/SQL] control.
- The squelch threshold position for SSB/CW mode can be set from 12 or 13 o'clock position in SSB/CW set mode. (p. 62)
- The control can be set as 'Auto' (RF gain control in SSB and CW; squelch control in FM) or squelch control (RF gain is fixed at maximum) in set mode as follows. (p. 56)

MODE	SET MODE SETTING		
	AUTO	SQL	RF GAIN + SQL
SSB, CW	RF GAIN	SQL	RF GAIN + SQL
FM	SQL	SQL	SQL

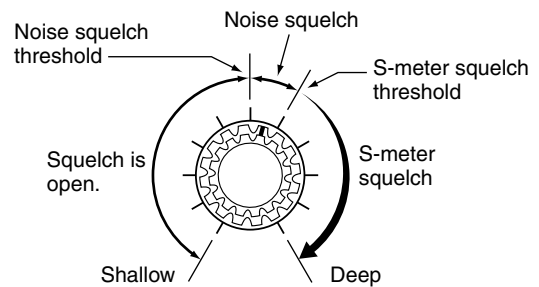
• When setting as RF gain/squelch control



• When functioning as RF gain control (Squelch is fixed open; SSB, CW only)

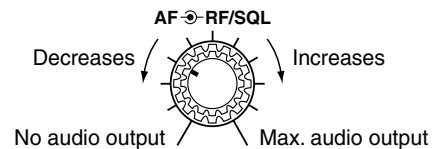


• When functioning as squelch control (RF gain is fixed at maximum.)



11 AF CONTROL [AF] (inner control)

Varies the audio output level from the speaker for the MAIN band.



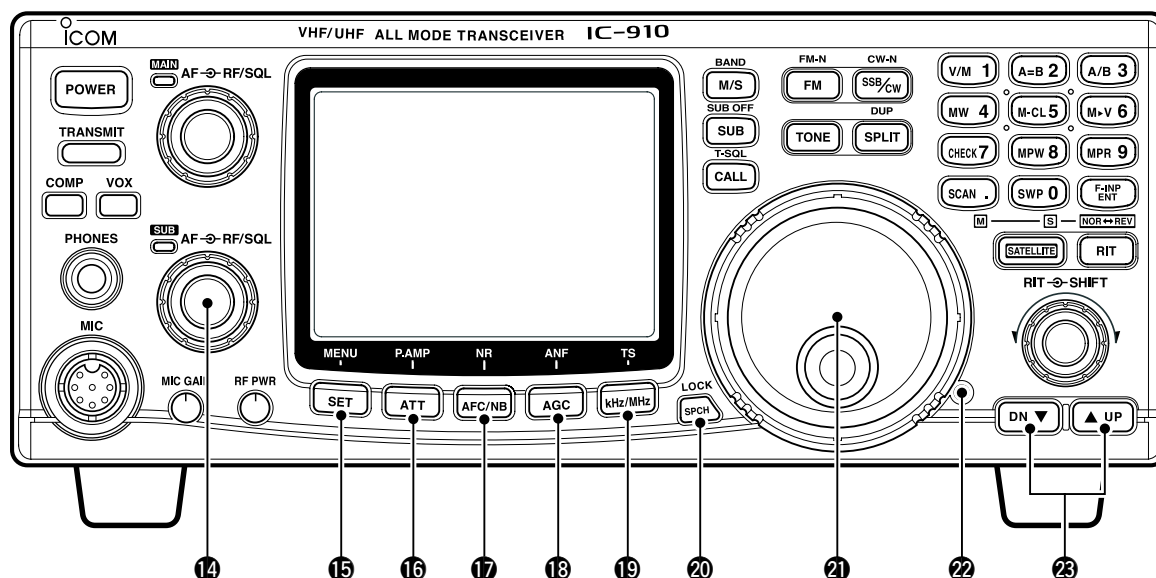
12 SUB BAND INDICATOR [SUB]

Lights green while the squelch is opened or a signal is received on the SUB band; lights red while transmitting in satellite operation.

13 RF GAIN CONTROL/SQUELCH CONTROL [RF/SQL] (outer control)

Adjusts the RF gain and squelch threshold level for the SUB band. The squelch removes noise output from the speaker (closed condition) when no signal is received.

■ Front panel (continued)



14 AF CONTROL [AF] (inner control)

Varies the audio output level from the speaker for the SUB band.

15 SET•MENU SWITCH [SET•MENU] (p. 55)



- ➔ Push this switch then one of [FM], [SSB/CW], [RIT], [SCAN], [NR], [TRANSMIT], [COMP], [VOX], [ATT], [SWP], [MPW] or [SPCH] to enter the independent item set mode.



- ➔ Push for 1 sec. to enter the set mode for commonly used item settings.

For 1 sec.

16 ATTENUATOR•PRE-AMP SWITCH [ATT•P.AMP]



- ➔ Push to switch the attenuator function ON and OFF. (p. 29) Use this function to protect from signal distortion from excessively strong signals.

- The attenuation level is independently adjustable for 144 MHz or 430(440) MHz band in the ATT set mode. The optional 1200 MHz band attenuation level is fixed and is approx. 20 dB. (p. 65)



- ➔ Push for 1 sec. to switch the connected pre-amplifier ON and OFF, when an optional pre-amplifier unit, AG-25, AG-35 and/or AG-1200, is connected. (p. 16)

For 1 sec.

DO NOT connect any equipment, such as an SWR or power meter between the transceiver and preamplifier. In such case, the preamplifier may not activate properly.

17 AUTO FREQUENCY CONTROL/NOISE BLANKER•NOISE REDUCTION SWITCH [AFC/NB•NR]



- ➔ During FM/FM narrow mode operation, push to switch the AFC (Automatic Frequency Control) function ON and OFF. (p. 28)

- Automatically tunes the operating frequency, when an off-frequency signal is received, in 100 kHz steps. This function also follows the signal even if the frequency is shifted.



- ➔ During SSB or CW mode operation, push to switch the noise blanker function ON and OFF. (p. 30)

- Reduces pulse-type noise, such as ignition noise from a vehicle.



- ➔ Push for 1 sec. to switch the noise reduction function ON and OFF when an optional DSP unit, UT-106, is installed. (p. 31)

- Reduces unwanted noise and pulls out the desired signal only for clear readability.

For 1 sec.

18 AUTO GAIN CONTROL•AUTO NOTCH FILTER SWITCH [AGC•ANF]



➔ Push to switch the time constant of the automatic gain control to SLOW and FAST for the MAIN band.* (p. 28)

- SLOW selection ("FAGC" disappears) during SSB (USB or LSB) operation, FAST selection ("FAGC" appears) during CW, data operation and while tuning with fast tuning dial rotation are recommended.

*The AGC time constant can be selected on the MAIN band only. FAST selection is fixed on the SUB band.



For 1 sec.

➔ Push for 1 sec. to switch the automatic notch filter function ON and OFF when the optional DSP unit, UT-106, is installed. (p. 31)

- Reduces interference signals such as beat, RTTY or CW signals and the notch frequency automatically follows the interfering signal.

19 kHz/MHz•TUNING STEP SELECTION SWITCH [kHz/MHz] (p. 22)



➔ Push to select tuning step for the tuning dial or scanning from 1 kHz, 1 MHz step and regular tuning step* in sequence

- "▼" appears above the 1 kHz or 1 MHz digit when 1 kHz or 1 MHz tuning step is selected, respectively.

*The regular tuning step is selected for each operating mode as follows.



For 1 sec.

➔ Push for 1 sec. to enter the regular tuning step selection mode.

- The tuning step can be selected for each operating mode independently.
- SSB/CW mode: 1, 10, 50 and 100 Hz step; FM mode: 0.1, 5, 6.25, 10, 12.5, 20, 25 and 100 kHz step can be selected by rotating the tuning dial.

20 SPEECH•LOCK SWITCH [SPCH•LOCK]



➔ Announces the receiving signal strength and/or selected readout frequency when the optional UT-102 is installed. (pgs. 69, 71)



For 1 sec.

➔ Push for 1 sec. to switch the tuning dial lock function ON and OFF to prevent accidental setting changes. (p. 25)

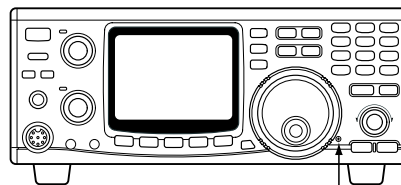
21 TUNING DIAL

Changes the displayed frequency, selects set mode items, etc.

22 BRAKE ADJUSTMENT SCREW

Adjust the tension of the tuning dial.

- Rotate clockwise to increase the tension; counterclockwise to decrease the tension.



Brake adjustment screw

23 MEMORY CHANNEL UP/DOWN SWITCHES [▲ UP]/[DOWN ▼] (p. 40)



OR



➔ Push [▲ UP] to change the memory channel up; push [DOWN ▼] to change the memory channel down.

- Memory channel changes continuously while holding either switch.
- Memory channels can be selected both in VFO and memory modes.



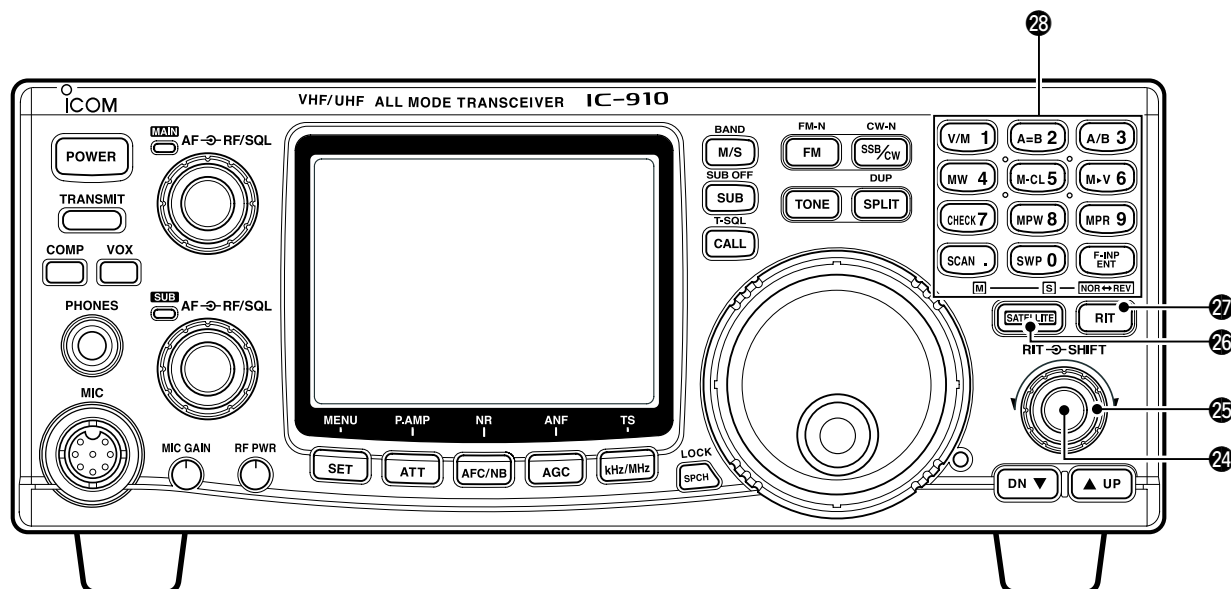
OR



For 1 sec.

2 PANEL DESCRIPTION

■ Front panel (continued)



24 RIT CONTROL [RIT] (p. 27)

Shifts the receive frequency without changing the transmit frequency for the MAIN band only while the RIT function is activated.

- SSB/CW mode : ± 1.0 kHz* in 10 Hz step
- FM mode : ± 5.0 kHz* in 50 Hz step
- *For 1200 MHz band; ± 2.0 kHz and ± 10.0 kHz, respectively when the optional UX-910 is installed.
- By using the Sub dial function, the RIT control can be used as the MAIN/SUB tuning dial or the SUB band IF shift control. See page 24 for details.

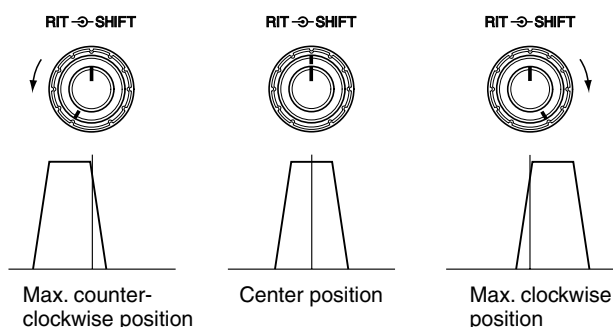
25 IF SHIFT CONTROL [SHIFT]

Shifts the center frequency of the receiver's IF pass-band within 1.2 kHz range.

- By using the Sub dial function, the IF shift control can be used as the MAIN/SUB tuning dial or the SUB band IF shift control. See page 24 for details.

✓ What is the Sub dial function?

The [RIT] and [SHIFT] controls are used for RIT and IF shift controls for the MAIN band by default. However, the Sub dial function assigns these controls as the MAIN/SUB tuning dial or the SUB band IF shift control. (p. 24, 68)



26 SATELLITE SWITCH [SATELLITE]



- ➔ Push to enter satellite mode (RX on MAIN, TX on SUB band). Push again to return to the condition before entering into the satellite mode.



For 1 sec.



For 1 sec.

- ➔ Push to enter satellite mode using the current operating frequencies when pushing for 1 sec.

- To change the normal and reverse satellite operations, push [F-INP/ENT] for 1 sec.

27 RIT SWITCH [RIT] (p. 27)



- ➔ Push to switch the RIT control activity ON and OFF.

- "RIT" indicator appears when the RIT function is in use.



For 1 sec.

- ➔ Push for 1 sec. to switch the Sub dial function ON and OFF.

- "RIT" indicator flashes and the [RIT] and [SHIFT] controllers acts as the controllers specified in the RIT/SHIFT set mode. (p. 68)

28 KEYPAD

Numeral and other function keys for tuning and activating functions.
See the table at right.

Count on us!



IC-910H
#02 (Europe)

< Intended Country of Use >

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IC-910H
#05 (Sweden)

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IC-910H
#08 (Italy)

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