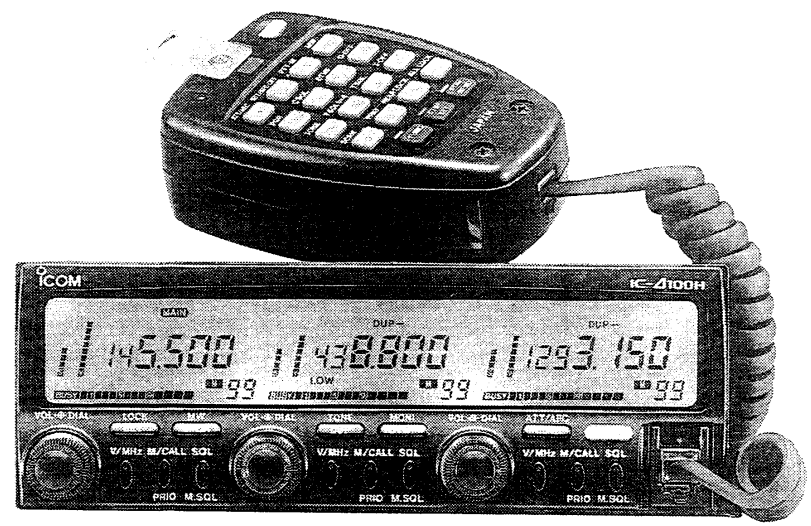
ICOM

INSTRUCTION MANUAL

TRIBAND FM TRANSCEIVER

IC-4100H



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.

Icom Inc.

IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the transceiver.

SAVE THIS INSTRUCTION MANUAL – This instruction manual contains important safety and operating instructions for the IC-⊿100H.

FOREWORD

Thank you for choosing this Icom product.

The IC-⊿100H is a compact, easy-to-operate, multi-function transceiver designed using Icom's state-of-the-art technology. It is operational on 3 bands: 144, 430(440) and 1200 MHz.

NOTE: See "Unpacking" on p. 79 for included accessories.

CAUTIONS

NEVER connect the transceiver to an AC outlet or to a power source of more than 16 V DC. These connections will ruin the transceiver.

NEVER connect the transceiver to a power source using reverse polarity. This connection will ruin the transceiver.

NEVER place the transceiver where normal operation of the vehicle may be hindered or where it could cause bodily injury.

NEVER allow children to touch the transceiver.

DO NOT use or place the transceiver in areas with temperatures below −10℃ (+14℉) or over +60℃ (+140℉) or, in areas subject to direct sunlight, such as the dashboard.

AVOID the use of chemical agents such as benzine or alcohol when cleaning, as they can damage the transceiver surfaces.

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

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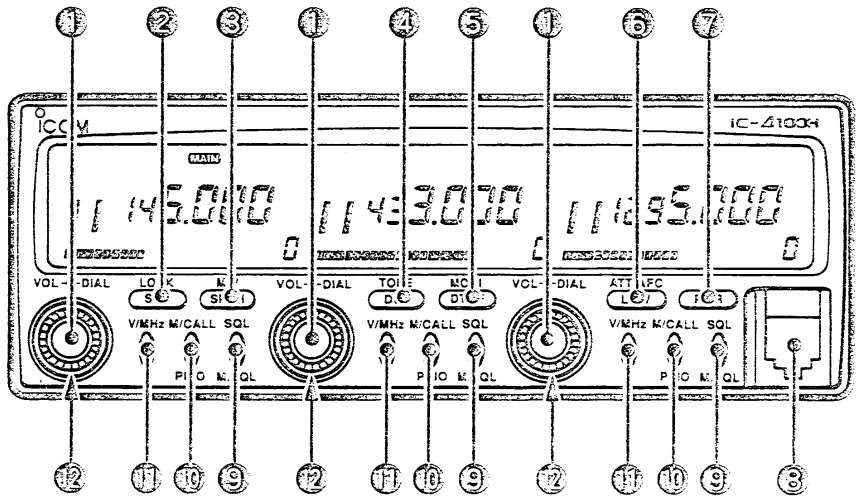
1 PANEL DESCRIPTION

Front panel (remote controller)



① TUNING DIALS [DIAL]
- Select the operating frequency (p. 21), the memory channel (p. 37), the contents of the set mode display (p. 17) and the scanning direction (pgs. 45, 49).
- Select the main band by pushing a dial. (p. 19)
- Activate the sub band access function when pushed and held (when the main band is not selected). (p. 27)
- Change the operating band for para-watch when pushed and held (when the main band is selected). (p. 29)

② SET MODE SWITCH [SET/LOCK]
- Accesses set mode and advances the set mode display. (p. 17)
- Activates the lock function when pushed and held. (p. 20)

③ SPEECH/MEMORY WRITE SWITCH [SPCH/MW]
- Programs a memory channel or a call channel. (pgs. 38, 43)
- Transfers the contents of a memory channel or a call channel to the VFO. (pgs. 40, 42)
- Announces the accessed band frequency in a synthesized voice when an optional UT-66 VOICE SYNTHESIZER UNIT is installed. (p. 71)
- Reverses the set mode selection order in set mode. (p. 17)

④ DUPLEX/TONE SWITCH [DUP/TONE]
- Selects simplex, – duplex or + duplex. (p. 33)
- Activates the optional subaudible tone encoder* (p. 34); pocket beep (p. 68) or tone squelch function (p. 69) when pushed and held.

* U.S.A. version : Built-in.
Other versions : Optional except for 88.5 Hz.

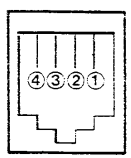
⑤ DTMF/MONITOR SWITCH [DTMF/MONI]
- Activates the DTMF memory function. (p. 54).
- Activates the optional pager, code squelch or external DTMF remote functions when an optional UT-75 DTMF DECODER UNIT is installed. (pgs. 59, 64, 67)
- Opens the accessed band squelch and monitors the transmit frequency when pushed and held. (pgs. 26, 33)

⑥ TRANSMIT POWER SWITCH [LOW/ATT/AFC]
- Selects the transmit output power levels. (p. 31)
- Activates the RF attenuator function when pushed and held on VHF or UHF. (p. 26)
- Activates the AFC, RIT or VXO (selectable in set mode) function when pushed and held on the 1.2 GHz band. (p. 58)

⑦ POWER SWITCH [PWR] (p. 19)
Turns power ON and OFF.

⑧ MICROPHONE CONNECTOR
Connects the supplied microphone.

■ Microphone connector (front panel view)



① +8 V DC output
② Control data input
③ GND (Ground)
④ MIC (Microphone input)

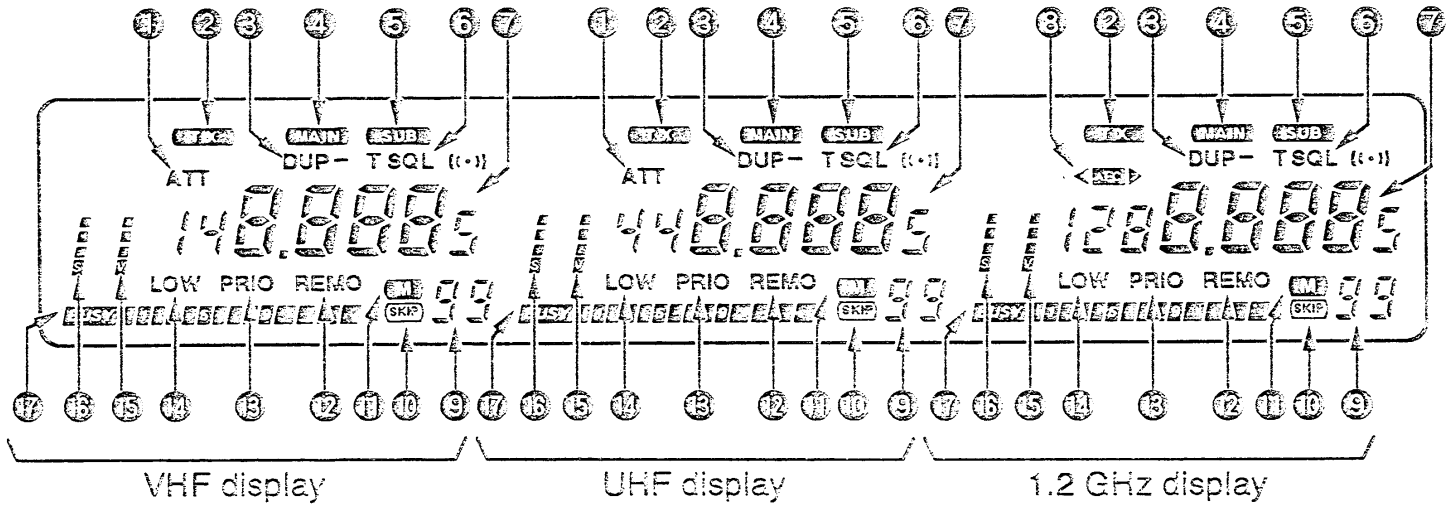
⑨ SQUELCH SWITCHES [SQL/M.SQL] (p. 25)
- Select 1 of the 4 preset squelch levels.
- The [VOL] (outer control) sets the squelch level manually after being pushed and held 1 time.
- Select the squelch threshold point when pushed and held 2 times.

⑩ MEMORY/CALL CHANNEL SWITCHES [M/CALL/PRIO]
- Select memory mode or call channel. (pgs. 37, 42)
- Activate the priority watch function when pushed and held. (p. 53)
- Cancel the priority watch function when the function is activated. (p. 53)

⑪ VFO/MHz SWITCHES [V/MHz]
- Select VFO mode. (p. 21)
- Select the 1 MHz tuning step in VFO mode. (p. 21)
- Select the 10 MHz tuning step when pushed and held. Some versions do not have this tuning step. (p. 21)

⑫ VOLUME CONTROLS [VOL]
- Adjust the audio level. (p. 24)
- Vary the squelch level after pushing and holding the [SQL] switch. (p. 25)

Function display



① RF ATTENUATOR INDICATORS (p. 26)
Appear while the RF attenuator is in use.

② TRANSMIT INDICATORS
Appear while transmitting. (p. 31) Blink while transmitting with the one-touch PTT function. (p. 32)

③ DUPLEX INDICATORS (p. 33)
"DUP –" or "DUP" appear during semi-duplex operation (repeater operation).

④ MAIN BAND INDICATORS (p. 19)
Appear above the frequency readout to show the main band for transmitting and function control.

⑤ SUB BAND ACCESS INDICATORS (p. 27)
Appear above the frequency readout to show the accessed band for function control (except transmitting).

⑥ TONE INDICATORS
- "T" appears while the subaudible tone encoder is in use. (p. 34)
- "T SQL" appears while the optional tone squelch function is in use. (p. 69)
- "T SQL ((•))" appears while the optional pocket beep function is in use. (p. 68)

⑦ FREQUENCY READOUTS
Show the operating frequency, set mode contents, etc.
- The decimal point of the frequency flashes while scanning. (pgs. 45, 49)
- "P," "C" or "d" appears in place of the 100 MHz digit while the DTMF memory function, optional pager or optional code squelch is in use, respectively. (pgs. 54, 64, 67)

⑧ AFC INDICATORS
- " AFC " appears while the AFC (Automatic Frequency Control) function is in use. (p. 58)
- " ◀ " or " ▶ " indicates a fine tuning direction. (p. 58)
- Both " ◀ " and " ▶ " appear when the center frequency is set during manual RIT/VXO operation or when the RF attenuator is in use during 430(440) MHz band receiving on the 1.2 GHz band. (p. 26)

⑨ MEMORY CHANNEL READOUTS
Show the selected memory channel numbers. (p. 37)
- 3 large "L" 's appear while the lock function is in use. (p. 20)
- A large "C" appears while on the call channel. (p. 42)
- A small "c" appears when VFO mode is selected from the call channel. (p. 42)

⑩ SKIP INDICATORS (p. 50)
Appear when the displayed memory channel is specified as a skip channel.

⑪ MEMORY INDICATORS (p. 37)
Appear when memory mode is selected.

⑫ REMOTE INDICATORS (p. 59)
Appear while the optional external DTMF remote is in standby. Blink while the function is activated.

⑬ PRIORITY WATCH INDICATORS (p. 53)
Appear while the priority watch is activated; flash while the watch is paused.

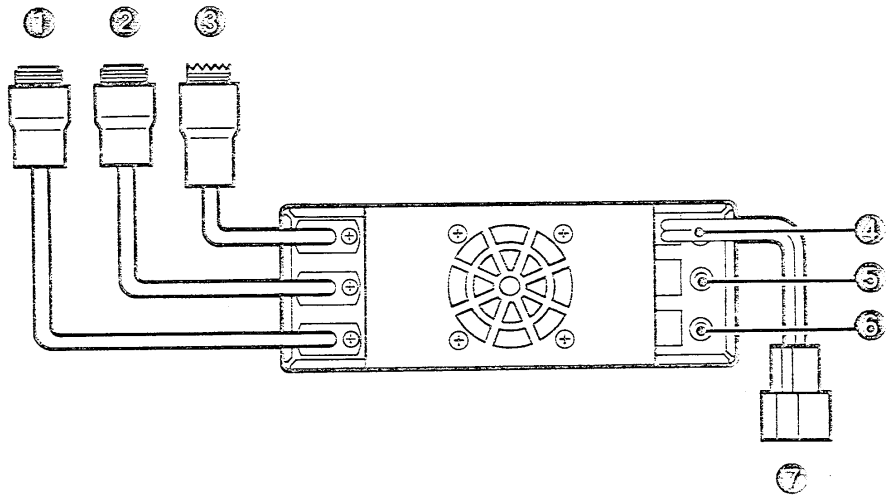
⑭ LOW POWER INDICATORS (p. 31)
Appear while low output power 1 or 2 is selected.

⑮ VOLUME LEVEL INDICATORS
- Show the audio volume level. (p. 24)
- Blink while the audio mute function is in use. (p. 26)

⑯ SQUELCH LEVEL INDICATORS (p. 25)
- Show the squelch volume level.
- " S " blinks while the [VOL] control is set for squelch level adjustment.

⑰ S/RF INDICATORS
- Show the relative strength while receiving signals. (p. 24)
- Show the output power selection while transmitting. (p. 31)

Rear panel



① 1.2 GHz ANTENNA CONNECTOR [1200 MHz ANT]
Accepts a 50 Ω 1.2 GHz band antenna with a type-N connector. (p. 15)

② 430(440) MHz ANTENNA CONNECTOR [430(440) MHz ANT]
Accepts a 50 Ω 430(440) MHz band antenna with a type-N connector. (p. 15) This connector is used for the 430(440) MHz band operation even when a 430(440) MHz band frequency is selected in the VHF display or 1.2 GHz display. (p. 29)

③ 144 MHz ANTENNA CONNECTOR [144 MHz ANT]
Accepts a 50 Ω 144 MHz band antenna with a PL-259 connector. (p. 14) This connector is used for the 144 MHz band operation even when a 144 MHz band frequency is selected in the UHF display. (p. 29)

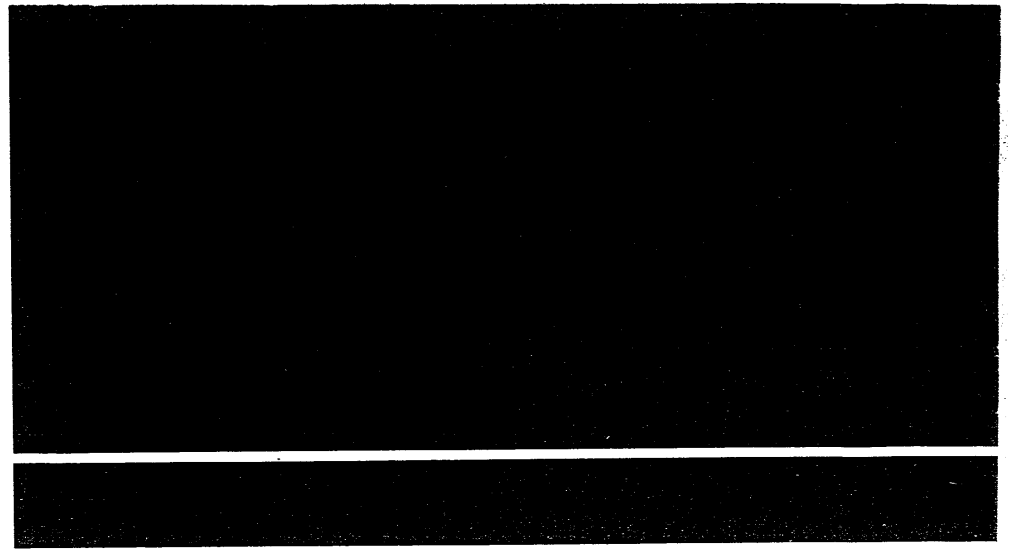
④ 144 MHz SPEAKER JACK [144 MHz SP]
Connects a 4–8 Ω speaker, if required. Outputs the 144 MHz band audio or all band audio according to the initial set mode selection. (p. 70)

⑤ 430(440) MHz SPEAKER JACK [430(440) MHz SP]
Connects a 4–8 Ω speaker. Outputs the 430(440) MHz band audio or no audio according to the initial set mode selection. (p. 70)

⑥ 1.2 GHz SPEAKER JACK [1200 MHz SP]
Connects a 4–8 Ω speaker. Outputs the 1.2 GHz band audio or no audio according to the initial set mode selection. (p. 70)

⑦ POWER RECEPTACLE [DC13.8V] (p. 13)
Accepts 13.8 V DC with the supplied DC power cable.

Count on us!



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