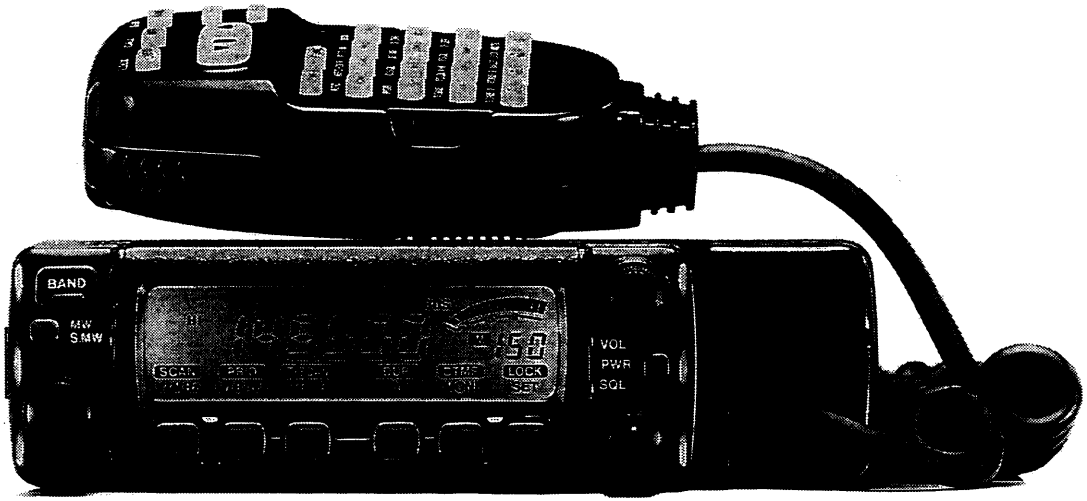
ICOM

INSTRUCTION MANUAL

VHF/UHF FM TRANSCEIVER

IC-207H



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 operating instructions for the IC-207H.

EXPLICIT DEFINITIONS

The explicit definitions below 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 risk of personal injury, fire or electric shock.

CAUTIONS

⚠**WARNING! NEVER** connect the transceiver to an AC outlet. This may pose a fire hazard or result in an electric shock.

⚠**WARNING! NEVER** operate the transceiver while driving a vehicle. Safe driving requires your full attention—anything less may result in an accident.

NEVER connect the transceiver to a power source of more than 16 V DC. This connection will ruin the transceiver.

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

NEVER cut the DC power cable between the DC plug and fuse holder. If an incorrect connection is made after cutting, the transceiver might be damaged.

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

NEVER let objects impede the operation of the cooling fan on the rear panel.

DO NOT push the PTT when not actually desiring to transmit.

DO NOT allow children to play with any radio equipment containing a transmitter.

During mobile operation, **DO NOT** operate the transceiver without running the vehicle's engine. When transceiver power is ON and your vehicle's engine is OFF, the vehicle's battery will soon become exhausted.

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

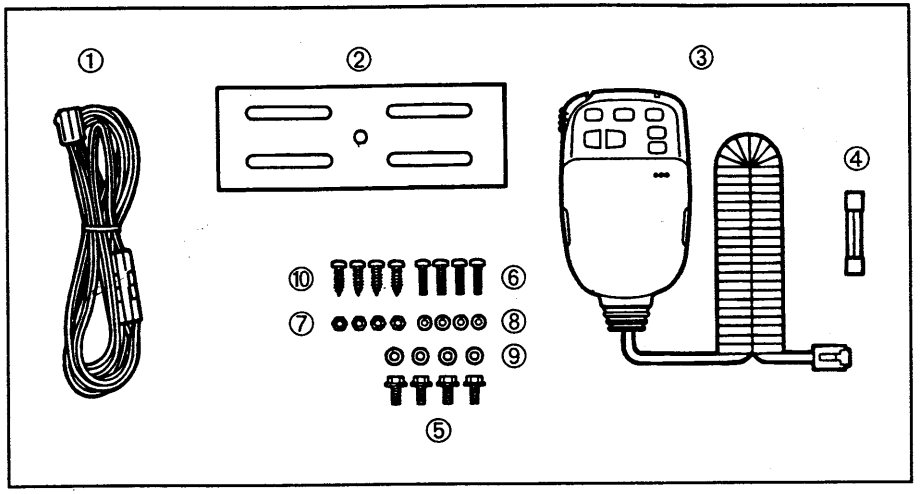
AVOID using or placing the transceiver in areas with temperatures below –10°C (+14°F) or above +60°C (+140°F) or in areas subject to direct sunlight, such as the dashboard.

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

USE Icom microphones only (supplied or optional). Other manufacturer's microphones have different pin assignments and may damage the transceiver if attached.

Note that in this manual, sections beginning with a microphone icon (as at left) designate operation via the HM-98 microphone.

UNPACKING



Accessories included with the transceiver:

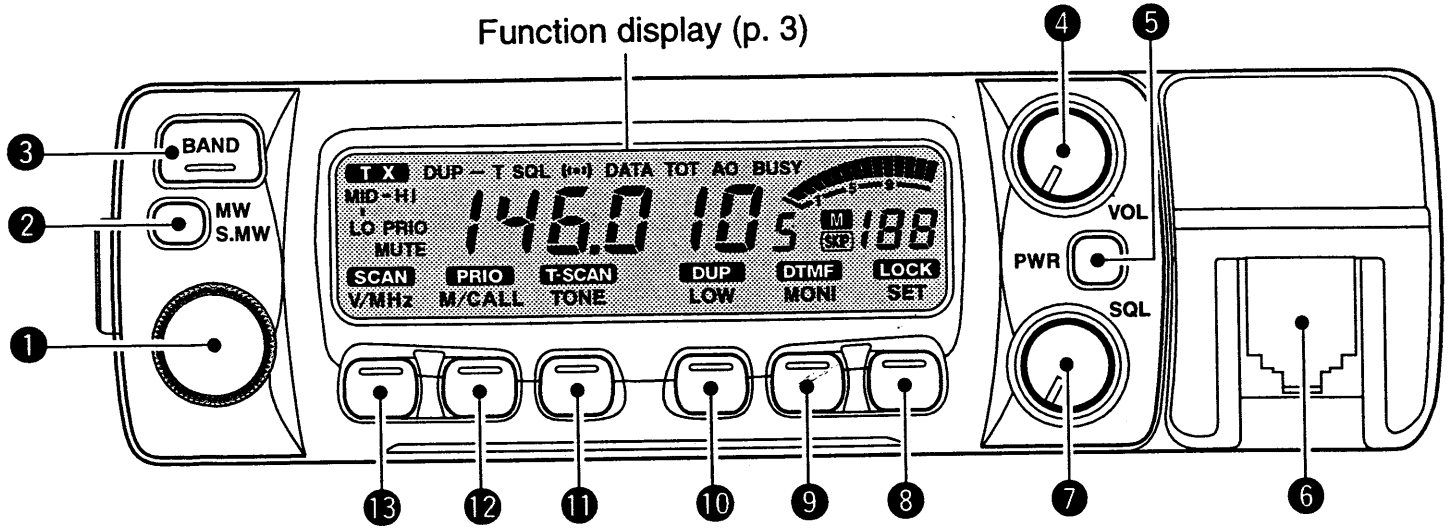
	Qty.
① DC power cable (OPC-346)	1
② Mobile mounting bracket	1
③ Microphone (HM-98*)	1
④ Fuse (20 A)	1
⑤ Knob bolt (M4 × 8)	4
⑥ Mounting bolt (M5 × 12)	4
⑦ Nut (M5)	4
⑧ Spring washer (M5)	4
⑨ Flat washer (M5)	4
⑩ Self-tapping screws (A0 5 × 16)	4

*Some versions are supplied with the HM-96 instead.

TABLE OF CONTENTS

1 PANEL DESCRIPTION

■ Front panel



❶ TUNING DIAL

Selects the operating frequency (p. 17), the memory channel (p. 29), the contents of the set mode display and the scanning direction. (p. 39)

❷ SELECT MEMORY/MEMORY WRITE SWITCH [S.MW(MW)]

➥ Selects a memory channel for programming. (p. 30)

➥ Programs selected memory when pushed and held. (p. 30)

❸ BAND SWITCH [BAND]

➥ Toggles between 144 and 430(440) MHz operation. (p. 15)

➥ When a call channel is selected, this switch toggles between the 2 available call channels. (p. 34)

❹ VOLUME CONTROL [VOL]

Adjusts the audio level. (p. 20)

❺ POWER SWITCH [PWR]

Turns power ON and OFF when pushed for 1 sec.

❻ MICROPHONE CONNECTOR

Connects the supplied microphone. (p. 11)

❼ SQUELCH CONTROL [SQL]

Varies the squelch level. (p. 20)

- RF attenuator activates and increases the attenuation when rotated clockwise to the center position and further.

❽ SET/LOCK SWITCH [SET(LOCK)]

➥ Selects SET mode when pushed. (p. 70)

➥ Toggles the lock function ON and OFF when pushed and held. (p. 16)

❾ MONITOR/DTMF SWITCH [MONI(DTMF)]

➥ Toggles squelch opened and closed when pushed. (pgs. 20, 24)

➥ Turns the DTMF memory encoder ON and OFF for auto patch operation when pushed and held. (p. 46)

❿ OUTPUT POWER/DUPLEX SWITCH [LOW(DUP)]

➥ Each push changes the output power selection. (p. 22)

- There are 4 output powers available: low, mid-low, mid-high and high.

➥ Push and hold to select a duplex setting. (p. 24)

- There are 3 duplex settings available: minus duplex ("– DUP" appears, plus duplex ("+ DUP" appears) and simplex.

⓫ TONE/TONE SCAN SWITCH [TONE(T-SCAN)]

➥ Each push selects a tone function. (p. 50)

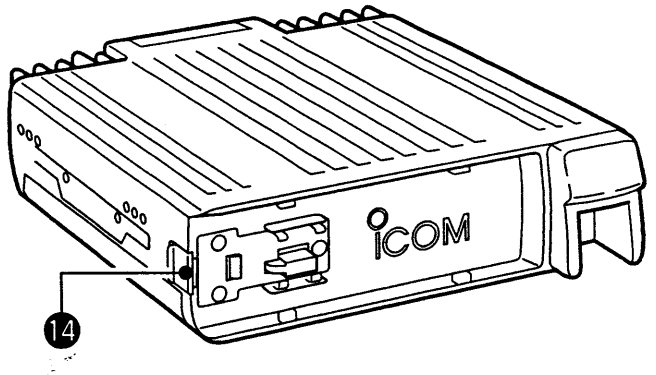
- Tone encoder, pocket beep, tone squelch or tone function OFF can be selected.

➥ Push and hold to start/stop the tone scan function. (p. 52)

⓬ MEMORY/CALL CHANNEL SWITCH [M/CALL(PRIO)]

➥ Selects and toggles memory mode or a call channel (pgs. 29, 34)

➥ Activates the priority watch function when pushed and held. (p. 44)



⓭ VFO/MHz SWITCH [V/MHz(SCAN)]

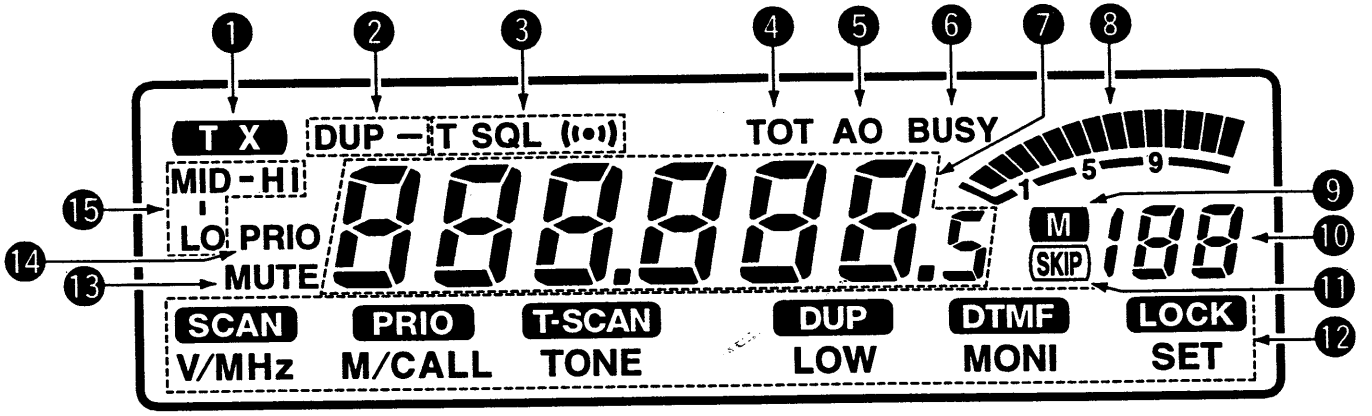
➥ Selects and toggles VFO mode and 1 MHz tuning display. (p. 17)

➥ Starts a scan when pushed and held. (p. 39)

⓮ FRONT PANEL RELEASE LATCH

While pushing this latch, slide the front panel to the left to remove it.

■ Function display



❶ **TRANSMIT INDICATOR** (p.22)
- ➥ Appears while transmitting.
- ➥ Flashes while transmitting with the one-touch PTT function (p. 23).

❷ **DUPLEX INDICATORS** (p. 24)
"DUP–" or "DUP" appears during semi-duplex operation (repeater operation).

❸ **TONE INDICATORS**
- ➥ "T" appears while the subaudible tone encoder is in use. (p. 26)
- ➥ "T SQL" appears while the tone squelch function is in use. (p. 51)
- ➥ "T SQL ((•)) " appears while the pocket beep function is in use. (p. 50)

❹ **TOT (TIME-OUT TIMER) INDICATOR** (p. 59)
Appears while the time-out timer has been activated.

❺ **AUTO POWER-OFF INDICATOR** (p. 60)
Appears while the auto power-off function is in use.

❻ **BUSY INDICATOR** (p. 20)
Appears while a signal is being received or the squelch is open ([MONI] is being pushed).

❼ **FREQUENCY READOUT**
Shows the operating frequency, set mode contents, etc.
- The decimal point of the frequency flashes while scanning. (p. 39)
- "d" appears in place of the 100 MHz digit while the DTMF memory function is in use.

⑧ S/RF INDICATORS (p. 22)
- ➥ Show the relative signal strength while receiving signals.
- ➥ Show the output power while transmitting.

⑨ MEMORY INDICATOR (p. 15)
Appears when memory mode is selected.

① MEMORY CHANNEL READOUTS
- ➥ Show the selected memory channel numbers.
- ➥ A capital "L" appears while the frequency lock function is in use. (p. 16)
- ➥ "C1" or "C2" appears while on a call channel. (p. 34)
- ➥ One of "L1–L5" appears when a scratch pad memory is selected. (p. 36)
- ➥ One of "r1–r5" appears when a duplex scratch pad memory is selected. (p. 36)
- ➥ A small "c" appears when VFO mode is selected from the call channel or a scratch pad memory. (pgs. 34, 37)

⑪ SKIP INDICATOR (p. 42)
Appears when the displayed memory channel is specified as a skip channel.

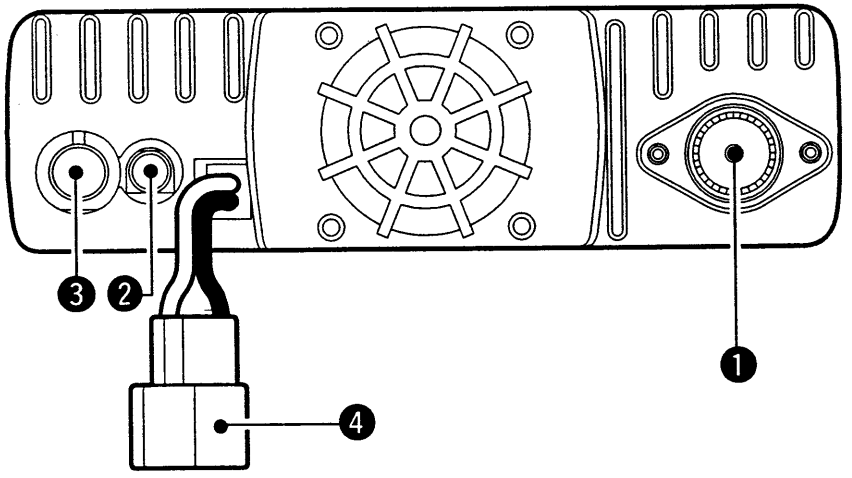
⑫ SWITCH INDICATORS
Indicate the function(s) of the front panel switches directly below the function display.

⑬ AUDIO MUTE INDICATOR (p. 56)
Appears when the audio mute function is activated via microphone control.
- This function is cancelled when any switch or control is operated.

⑭ PRIORITY WATCH INDICATOR (p. 45)
Appears while the priority watch is activated; flashes while the watch is paused.

⑮ OUTPUT POWER INDICATORS (p. 22)
- ➥ "LO" appears for low output power. (5 W)
- ➥ "MID-LO" appears for mid-low output power. (10 W)
- ➥ "MID-HI" appears for mid-high output power. (20 W)
- ➥ "HI" appears for high output power. (50 W VHF; 35 W UHF)

■ Rear panel



❶ ANTENNA CONNECTOR [ANT]
Accepts a 50 Ω dual band antenna with a PL-259 connector. (p. 14)

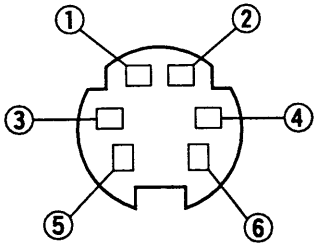
❷ SPEAKER JACK [SP]
Connects a 4–8 Ω speaker, if required. Outputs the selected band's audio.

❸ DATA JACK [DATA]
6-pin mini DIN jack to connect a TNC, etc. for packet operation.

NOTE: The connection between this jack and the TNC differs depending on whether 1200 bps or 9600 bps operation is chosen in initial set mode (p. 63). See right for pin assignments.

❹ POWER RECEPTACLE [DC13.8V]
Accepts 13.8 V DC with the supplied DC power cable.

◇ DATA JACK PIN ASSIGNMENTS



① DATA IN (1200 bps: AFSK
9600 bps: G3RUH, GMSK)
② GND
③ PTTP
④ DATA OUT (9600 bps)
⑤ AF OUT (1200 bps)
⑥ SQ

① DATA IN
Input terminal for data transmit. See p. 63 for details on how to toggle data speed between 1200 and 9600 bps.

② GND
Common ground for DATA IN, DATA OUT and AF OUT.

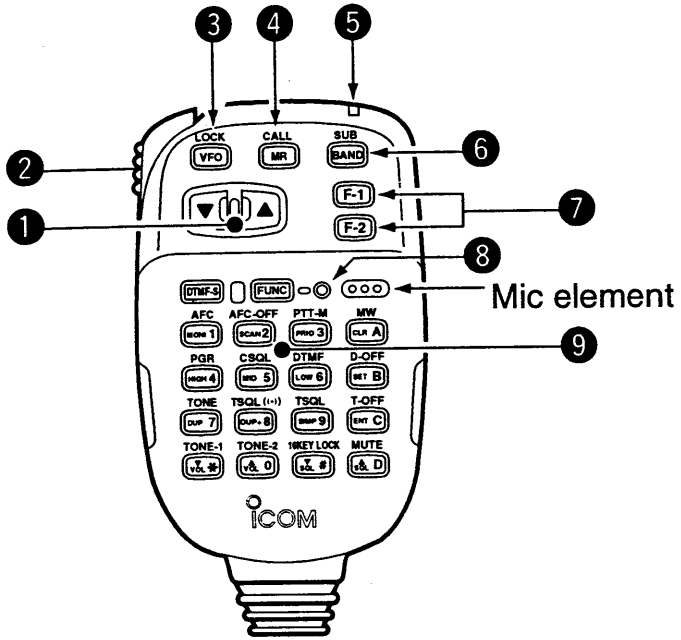
③ PTTP
PTT terminal for packet operation only. Connect ground to transmit data.

④ DATA OUT
Data out terminal for 9600 bps operation only.

⑤ AF OUT
Data out terminal for 1200 bps operation only.

⑥ SQ (squelch out)
Becomes high (+5V) when the transceiver receives a signal which opens the squelch.
- To avoid unnecessary TNC transmission, connect squelch to the TNC to inhibit transmission when receiving signals.
- Keep audio output at a normal level, otherwise a "SQ" signal will not be output.

■ Microphone (HM-98*)



❶ UP/DOWN SWITCHES [▲]/[▼]
- ➥ Push either switch to change the operating frequency, memory channel, set mode contents, etc. (pgs. 17, 29)
- ➥ Push and hold either switch to start scanning. (p. 39)

❷ PTT SWITCH
- ➥ Push and hold to transmit; release to receive. (p. 22)
- ➥ Toggles between transmitting and receiving while the one-touch PTT function is in use. (p. 23)

❸ VFO SWITCH [VFO(LOCK)]
- ➥ Push to select VFO mode.
- ➥ Push and hold to toggle the lock function ON and OFF.

❹ MEMORY SWITCH [MR(CALL)]
- ➥ Push to select memory mode. (p. 29)
- ➥ Push and hold to select the call channel. (p. 34)

❺ ACTIVITY INDICATOR

Lights red while a key is pushed; lights green while the one-touch PTT function is in use.

❻ BAND SWITCH

Push to toggle the operating band. (p. 15)

❼ FUNCTION SWITCHES [F-1]/[F-2] (p. 61)

Assign your desired key function from the front panel switches.
- Default settings are [LOW] for [F-1] and [TONE] for [F-2].

❽ FUNCTION INDICATOR
- ➥ Lights orange while [FUNC] is activated—indicates the secondary function of switches can be accessed.
- ➥ Lights green when [DTMF-S] is activated—DTMF signals can be transmitted with the keypad. (p. 48)

❾ KEYPAD

Used for controlling the transceiver, transmitting a DTMF encoder, etc. See the following 2 pages for details.

*Some versions are supplied with the HM-96 instead.

Count on us!

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