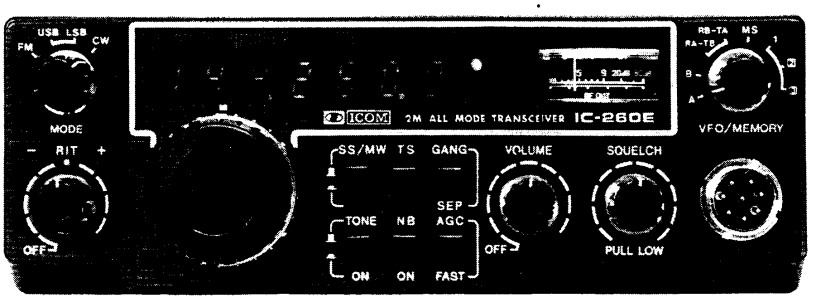
IC-260A/E

144MHz ALL MODE TRANSCEIVER

INSTRUCTION MANUAL



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SECTION I SPECIFICATIONS

GENERAL

Numbers of semi-conductors	:	Transistor	72
		FET	9
		IC	45 (IC-260A : 44)
		Diode	91 (IC-260A : 90)
Frequency coverage	:	144.0000～145.9999MHz	
		(IC-260A : 143.8000～148.1999MHz)	
Frequency resolution	:	SSB 100Hz steps FM 5KHz steps	
		1KHz steps with TS button depressed	
Frequency Control	:	Microcomputer based 100Hz step Digital PLL synthesizer	
		Independent Transmit-Receive Frequency Capability	
Frequency Readout	:	7 digit LED 100Hz readout	
Frequency stability	:	Within ±1.5KHz	
Memory channels	:	3 channels, any inband frequency programmable	
Usable conditions	:	Temperature: −10°C～60°C (14°F～140°F)	
		Operationable time: Continuous	
Antenna impedance	:	50 ohms unbalanced	
Power supply requirement	:	13.8V DC ±15% (negative ground) 3.5A Max.	
Current drain (at 13.8V DC)	:	Transmitting	
		SSB (PEP 10W)	Approx. 2.2A
		CW, FM (10W)	Approx. 3.1A
		FM (1W)	Approx. 1.6A
		Receiving	
		At max audio output	Approx. 0.8A
		Squelched	Approx. 0.6A
Dimensions	:	64mm (H) x 185mm (W) x 223mm (D)	
Weight	:	Approx. 2.7Kgs	

TRANSMITTER

Output power	:	SSB	High 10W (PEP) Low 1W (PEP)
		CW	High 10W Low 1W
		FM	High 10W Low 1W
Emission mode	:	SSB	(A3J, USB/LSB), CW (A1), FM (F3)
Modulation system	:	SSB	Balanced modulation
		FM	Variable reactance frequency modulation
Max. frequency deviation	:	±5KHz	
Spurious emission	:	More than 60dB below peak power output	
Carrier Suppression	:	More than 40dB below peak power output	
Unwanted Sideband	:	More than 40dB down at 1000Hz AF input	
Microphone	:	1.3K ohm dynamic microphone with built-in preamplifier and push-to-talk switch.	
Operating mode	:	Simplex, Duplex	
		(Any inband frequency separation programmable)	
Tone Burst	:	1750Hz ±0.1Hz (IC-260A : Not installed)	

RECEIVER

Receiving system	:	SSB, CW	Single conversion superheterodyne
		FM	Double conversion superheterodyne
Receiving Mode	:	SSB (A3J, USB/LSB), CW (A1), FM (F3)	
Intermediate Frequency	:	SSB, CW	10.75MHz
		FM	10.75MHz, 455KHz
Sensitivity	:	SSB, CW	Less than 0.5 microvolts for 10dB S+N/N
		FM	More than 30dB S+N+D/N+D at 1 microvolt
			Less than 0.6 microvolts for 20dB Noise quieting
Squelch sensitivity	:	Less than 0.4 microvolts	
Spurious response rejection ratio	:	More than 60dB	
Selectivity	:	SSB, CW	More than ±1.2KHz at –6dB point
			Less than ±2.4KHz at –60dB point
		FM	More than ±7.5KHz at –6dB point
			Less than ±15KHz at –60dB point
Audio output power	:	More than 2W	
Audio output impedance	:	8 ohms	

SECTION II DESCRIPTION

144MHz ALL-MODE TRANSCEIVER INCORPORATING A MICROCOMPUTER

CPU control with ICOM's original programs provides various operating capabilities. No-backlash dial controlled by ICOM's unique photo-chopper circuit. Band-edge detector and Endless System provides out-of-band protection. No variable capacitors or dial gear, giving problem-free use. The IC-260A/E provides FM, USB, LSB, CW coverage in the 144～146MHz (IC-260A : 143.8～148.2MHz) frequency range. Thus the IC-260A/E can be used for mobile, DX, local calls, and satellite work.

MULTI-PURPOSE SCANNING

Memory Scan allows you to monitor three different memory channels. Program Scan provides scanning between two programmed frequencies. Adjustable scanning speed. Auto-stop stops scanning when a signal is received, in all modes.

DUAL VFO'S

Two separate VFO's can be used either independenty or together for simplex operation, and any desired frequency split in duplex operation.

CONTINUOUS TUNING SYSTEM

ICOM's new continuous tuning system features an LED display that follows the tuning knob movement and provides an extermely accurate readout. Frequencies are displayed in 7 LED digits representing 100Hz digits.

Automatic recycling restarts tuning at the top of the band, ie., 145.999.9MHz when the dial goes below 144.000.0MHz. Recycling changes 145.999.9MHz to 144.000.0MHz as well. Quick tuning in 1KHz steps is available, and fine tuning in 100Hz steps in the SSB and CW modes, and 5KHz steps and 1KHz steps in the FM mode, is provided for trouble free QSO.
(IC-260A : 145.999.9MHz and 144.000.0MHz should be read 148.199.9MHz and 143.800.0MHz.)

OUTSTANDING PERFORMANCE

The RF amplifier and first mixer circuits using MOS FETs, and other circuits provide excellent Cross Modulation and Two-Signal Selectivity characteristics. The IC-260A/E has excellent sensitivity demanded especially for mobile operation, high stability, and with Crystal Filters having high shape factors, exceptional selectivity.

The transmitter uses a balanced mixer in a single conversion system, a band-pass filter and a high-performance low-pass filter. This system provides distortion-free signals with a minimum spurious radiation level.

ADDITIONAL CIRCUITS

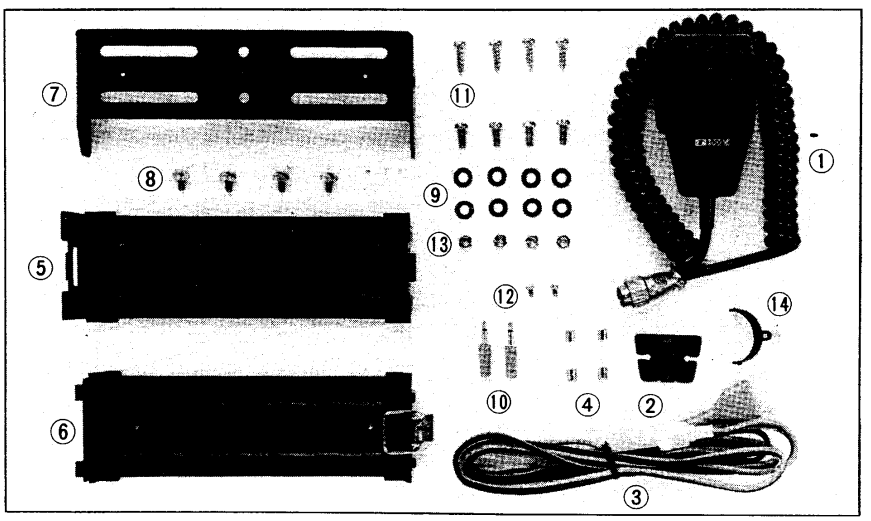
The IC-260A/E has a built-in Noise Blanker, CW Break-in, CW Monitor, APC, and many other circuits for your convenience.

The IC-260A/E has everything you need to really enjoy VHF operation, in an extremely compact, rugged transceiver.

SECTION III INSTALLATION

UNPACKING

Carefully remove your transceiver from the packing carton and examine it for signs of shipping damage. Should any be apparent, notify the delivering carrier or dealer immediately, stating the full extent of the damage. It is recommended you keep the shipping cartons. In the event storage, moving, or reshipment becomes necessary, they come in handy. Accessory hardware, cables, etc., are packed with the transceiver. Make sure you have not overlooked anything.

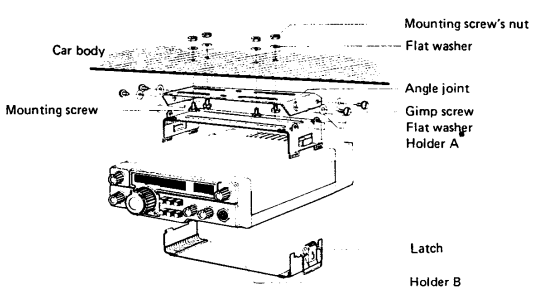


1. Microphone (dynamic type) 1
2. Microphone hook 1
3. Power cord. 1
4. Spare fuses (10A) 2
5. Installing holder A. 1
6. Installing holder B 1
7. Installing angle joint. 1
8. Gimp screws. 4
9. Flat washers 12
10. Plugs for speaker and key 2
11. Mounting screws 8
12. Screws for additional bracket. 2
13. Mounting screw's nuts 4
14. Quick tuning knob adaptor 1

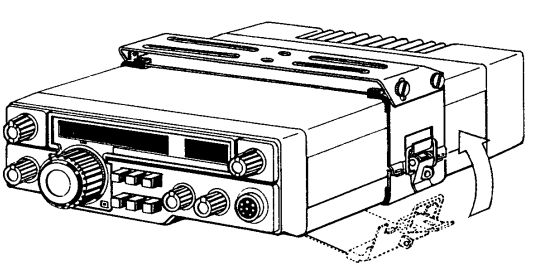
LOCATION

Where you place the transceiver in your automobile is not critical and should be governed by convenience and accessibility. Since the unit is so compact, many mobile possibilities present themselves. In general, the mobile mounting bracket will provide you with some guide as to placement. Any place where it can be mounted with metal screws, bolts, or pop-rivets will work. For fixed station use, a power supply should be designed to produce 3.5 amps for the transceiver.

Mounting bracket installation



Transceiver installation



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