144/430MHz DUAL BAND

IC-3200A/E

FM TRANSCEIVER

INSTRUCTION MANUAL

ICOM

FOREWORD

Thank you very much for choosing this ICOM product.

The IC-3200A/E is a complete VHF/UHF FM transceiver in one small, compact package developed by ICOM which utilizes the latest computer technology and precision VHF/UHF engineering.

To fully enjoy the benefits of this high-performance transceiver, please study the operating manual thoroughly prior to operation. Also, feel free to contact an authorized ICOM dealer if you have any questions relating to the operation of this model.

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SECTION 1 SPECIFICATIONS

1 - 1 GENERAL

Number of semiconductors : Transistors 49
FETs 10
Diodes 85

Frequency coverage & Channel resolution :

VERSION	BAND	FREQUENCY COVERAGE (MHz)	CHANNEL RESOLUTION (kHz)
IC-3200A U.S.A.	VHF UHF	140.0 ~ 150.0 440.0 ~ 450.0	15 or 5 25 or 5
IC-3200A VK	VHF UHF	144.0 ~ 148.0 430.0 ~ 440.0	25 or 5
IC-3200A ASIA	VHF UHF	140.0 ~ 150.0 430.0 ~ 440.0	15 or 5 25 or 5
IC-3200E EUROPE	VHF UHF	144.0 ~ 146.0 430.0 ~ 440.0	25 or 12.5

Frequency control : Microcomputer-based 5kHz steps (or 12.5kHz steps) Digital PLL synthesizer with independent dual VFO capability

Frequency stability : Within ±0.001%

Memory channels : 10 channels with any in-band frequency programmable

Usable temperature range : −10°C to +60°C
(−14°F to +140°F)

Antenna impedance : 50 ohms unbalanced

Power supply requirement : 13.8V DC ±15% (negative ground)
7.5A maximum

Current drain (13.8V DC) : Transmitting
HIGH (25W): Approx. 7.5A
LOW (5W): Approx. 3.5A
Receiving
At max. audio output: Approx. 0.65A
Squelched: Approx. 0.5A

Dimensions : 140(140)mm(W) x 50(50)mm(H) x 207(218)mm(D)
( ) Dimensions include projections

Weight : 1.9kg

1 - 2 TRANSMITTER

Output power	:	HIGH: 25W, LOW: 5W
Emission mode	:	16F3 (F3E 16K0)
Modulation system	:	Variable reactance frequency modulation
Max. frequency deviation	:	±5kHz
Spurious emissions	:	More than 60dB below carrier
Microphone	:	600 ohm electret condenser microphone with push-to-talk and frequency UP/DOWN switches IC-3200A (U.S.A. only): 16 key DTMF pad IC-3200E : 1750Hz tone burst unit
Operating modes	:	Simplex, Semi-duplex Programmable

1 - 3 RECEIVER

Receiving system	:	Double-conversion superheterodyne
Modulation acceptance	:	16F3 (F3E 16K0)
Intermediate frequencies	:	1st: 30.875MHz 2nd: 455kHz
Selectivity	:	More than 15kHz at –6dB point Less than 30kHz at –60dB point
Sensitivity	:	Less than 0.2μV for 12dB SINAD Less than 0.4μV for 20dB noise quieting
Audio output power	:	More than 1.7W at 10% distortion with 8 ohm load
Audio output impedance	:	4 ~ 8 ohms

NOTE: Specifications are approximate and are subject to change without notice or obligation.

SECTION 2 DESCRIPTION

*COMPACT VHF/UHF MOBILE

The IC-3200A/E measures only 50 millimeters high by 140 millimeters wide by 207 millimeters deep, yet contains a full-featured 144/440MHz (430MHz) transceiver. Through careful ICOM engineering, the IC-3200A/E includes a built-in speaker to facilitate installation; resulting in a compact but complete package.

Access to all transceiver functions is available with surprisingly few front panel controls through use of convenient, double function keys.

*EASY-TO-READ DISPLAY

The new liquid-crystal display with a soft green illumination provides good operating frequency visibility even in sunlight, and indicates VFO A/B, MEMORY status, DUPLEX mode and S/RF meter readings.

*10 MEMORIES AVAILABLE

The IC-3200A/E has ten memories to store the receive frequency, the transmit offset frequency, the offset direction and the subaudible tone.

*MULTI-PURPOSE SCANNING

The Programmed Scan function allows scanning between two programmed frequencies while the Memory Scan function allows monitoring of ten different memory channels. In addition, unwanted memory channels may be skipped when using Memory Scan to reduce the total scan time.

*38 SUBAUDIBLE TONE ENCODER

(U.S.A. version only)

The IC-3200A comes equipped with a ready-to-use subaudible tone encoder fully controllable from the front panel. Each tone may be selected by the main tuning knob and stored in memory along with the operating frequency.

*SPEECH SYNTHESIZER

As an added feature, the IC-3200A/E has an optional speech synthesizer available to verbally announce the receive frequency. This allows the operator to know which frequency the receiver is tuned to without looking at the frequency display.

*HIGH OUTPUT POWER

Though small in size, the IC-3200A/E still provides 25 watts of output power on both the 144MHz and 440MHz (430MHz) bands.

*SINGLE TRANSMISSION LINE

The IC-3200A/E is equipped with only one antenna connector although it is a dual band radio, due to the built-in duplexer which provides more than 40dB of isolation. This both simplifies and lowers the cost of antenna installation.

*EASY OPERATION

The IC-3200A/E comes with an UP/DOWN hand microphone to allow frequency changes smoothly and easily, for example, while driving.

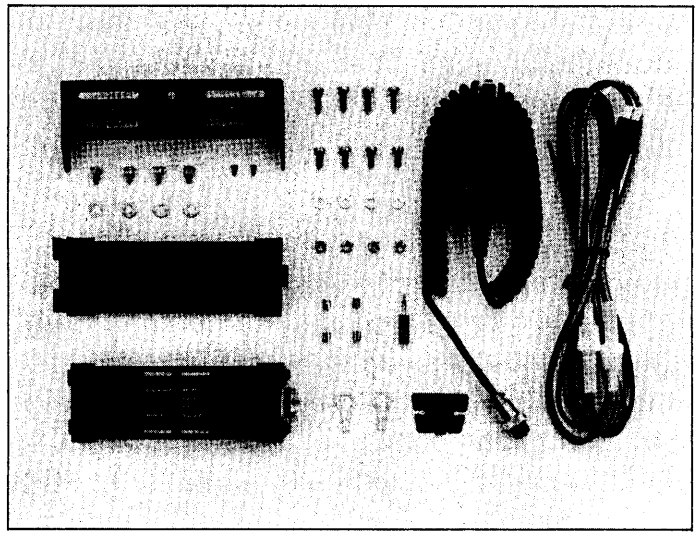
*RAPID FREQUENCY CHANGES

Two independent, programmable CALL FREQUENCY memories are available which allow instant frequency shifts by pushing one button.

SECTION 3 INSTALLATION

3 - 1 UNPACKING

Carefully remove your transceiver from the packing carton and examine it for signs of shipping damage. Notify the delivering carrier or dealer immediately, stating full details, should any damage be apparent. It is recommended you keep the shipping cartons for storing, moving or reshipping the transceiver if necessary. Accessory hardware, cables, etc. are packed with the transceiver. Make sure you have removed all equipment and parts before discarding the packing material.



1. Microphone* 1
2. Microphone hook 1
3. DC power cord 1
4. Spare fuses 2
5. External speaker plug 1
6. Mounting bracket 1
7. Angle bracket 1
8. Gimp screws 4
9. Flat washers 8
10. Mounting screws 8
11. Additional bracket screws 2
12. Mounting screw nuts 4
13. Battery terminal lugs 2

* The IC-3200A (U.S.A.) is supplied with an HM-14 (DTMF encoder), the IC-3200E (Europe) is supplied with an HM-15 (1750Hz tone burst unit), and the other versions are supplied with an HM-12.

3 - 2 LOCATION

Where you place the transceiver in your automobile is not critical and should be governed by convenience and accessibility. There are many mounting possibilities since the unit is so compact. In general, the mobile mounting bracket provides some guide as to placement. Any location where the transceiver can be mounted with metal screws, bolts or pop-rivets would be suitable.

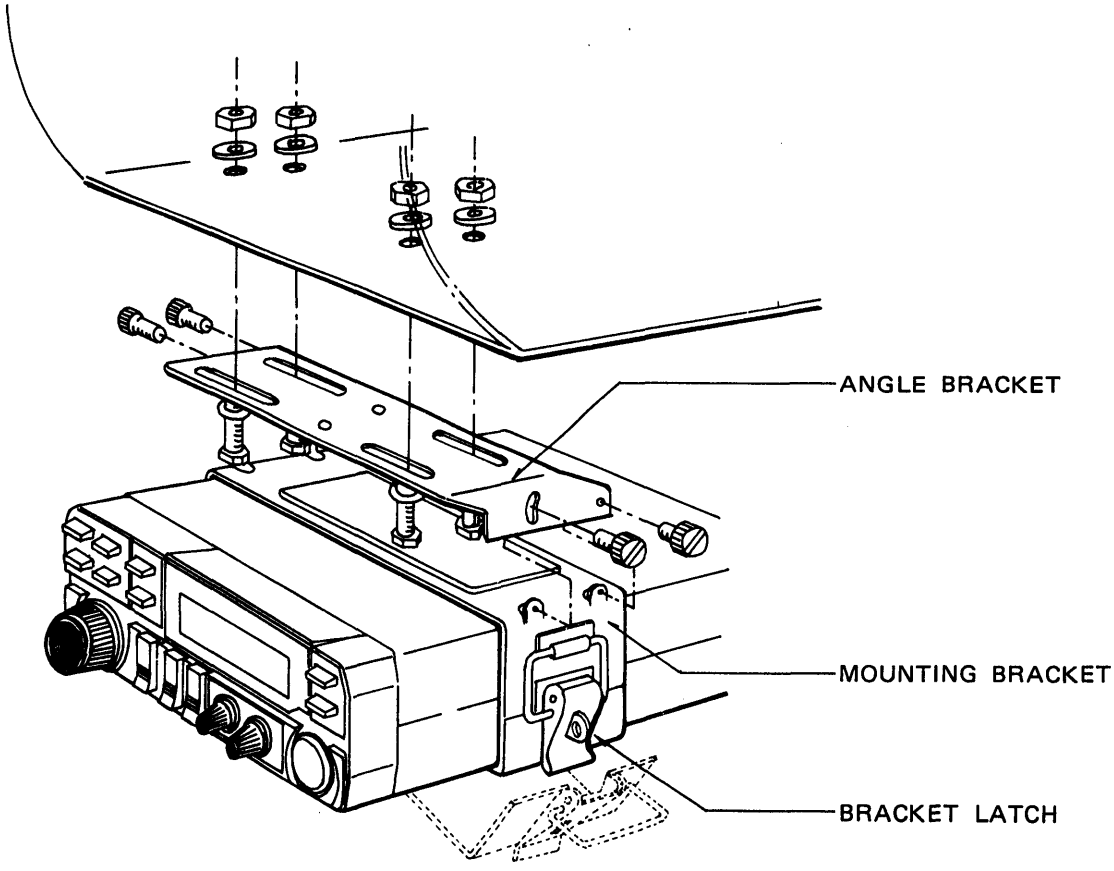
3 - 3 VEHICLE INSTALLATION

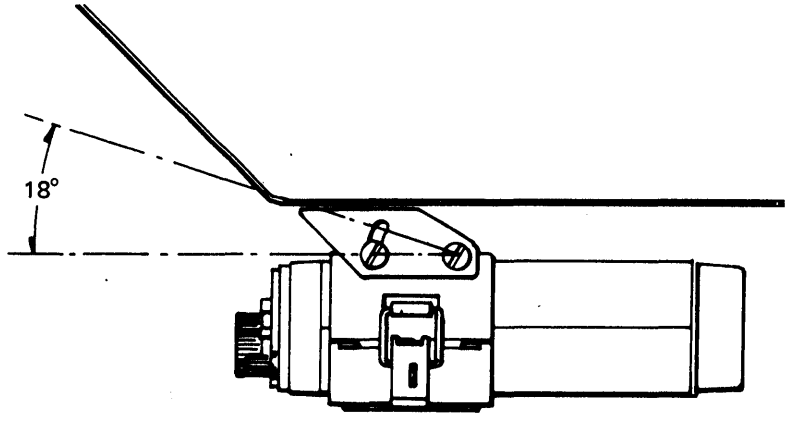
Use the following method to install the transceiver after choosing the installation location.

1. Place the angle bracket in the mounting location to mark the bracket's screw holes.
2. Drill the holes.
3. Mount the brackets and tighten the screws as shown in the figure.

■ VEHICLE INSTALLATION RECOMMENDATIONS

1. Install the transceiver and brackets securely to minimize physical vibration.
2. To remove the transceiver, lift upward on the bracket latch and lower the bottom half of the mounting bracket.
3. The installation angle of the IC-3200A/E can be varied by about 18 degrees to provide the best visibility.
4. Loosen one screw on each side of the mounting bracket nearest the faceplate of the transceiver, and tilt the unit to the best angle.





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