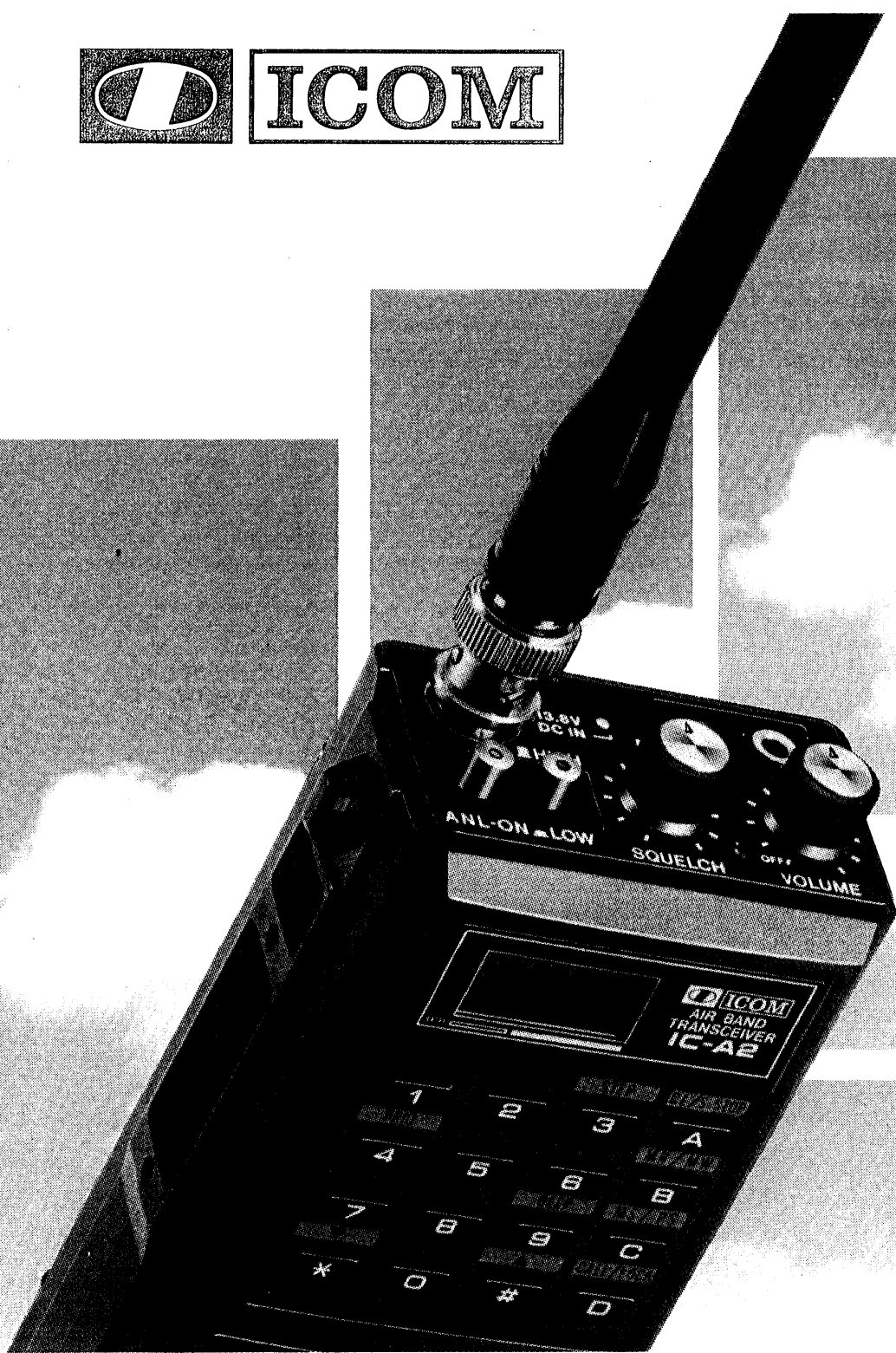




ICOM

VHF AIR BAND TRANSCEIVER

IC-A2



OWNER'S MANUAL

FOREWORD

Thank you for choosing the IC-A2, one of the finest VHF AM Air Band Transceivers on the market today. It was designed and built by ICOM INCORPORATED utilizing the latest computer technology and precision VHF engineering. This transceiver incorporates state-of-the-art technology, and it was built specifically for Air Band applications.

Please read this owner's manual carefully before using your IC-A2 transceiver. With proper care, the IC-A2 will provide years of dependable and enjoyable communication.

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SECTION 1 FEATURES

SYNTHESIZED HANDHELD TRANSCEIVER

The ICOM IC-A2 is a compact, synthesized, 5 watt PEP, VHF handheld transceiver. Using the latest in electronic design, the IC-A2 offers keyboard frequency selection with extremely good stability and frequency accuracy.

ALL CHANNELS

The IC-A2 has all 720 COM channels and 200 NAV channels PLUS 720 additional COM channels and 200 additional NAV channels at 12.5kHz spacing. Wherever you are in the world, you'll be able to communicate with the ICOM IC-A2.

RUGGED CONSTRUCTION

Metal case construction and stainless steel rails for the battery contacts contribute to the ruggedness and long-life of the IC-A2.

12 VOLT OPERATION

The IC-A2 can be operated directly from the aircraft's 12V power panel without draining the battery pack. Also, the standard IC-CM7 battery pack charges in-flight while you operate the transceiver.

10 MEMORY CHANNELS

The IC-A2 has ten memory channels to store your most-used frequencies. An internal lithium battery maintains programmed memory channels.

SECTION 2 SPECIFICATIONS

GENERAL

Number of Semiconductors	:	Transistors	35
		FETs	4
		ICs	10
		Diodes	55
Memory Channels	:		10
Frequency Control	:	Digital PLL synthesizer with keyboard input	
Channel Spacing	:	12.5kHz, 25kHz or 50kHz	
Frequency Stability	:	$\pm 0.002\%$ ($-20^{\circ}\text{C} \sim +50^{\circ}\text{C}$)	
Usable Temperature	:	$-20^{\circ}\text{C} \sim +50^{\circ}\text{C}$ ($-4^{\circ}\text{F} \sim +122^{\circ}\text{F}$)	
Antenna Impedance	:	50 ohms unbalanced	
Power Supply Requirement	:	DC 13.8V within +15% or -20%	
		Attendant power pack, IC-CM7 (negative ground necessary)	
Current Drain at 13.8V	:	Transmitting : High Power	Approx. 0.9A
			Low Power Approx. 0.6A
		Receiving : Standby	Approx. 55mA
			Max. audio output Approx. 220mA
Dimensions	:	65(74)mm(W) x 196(207)mm(H) x 38(47)mm(D)	
		() shows dimensions including projections.	
Weight	:	595g including power pack, IC-CM7 and flexible antenna	

RECEIVER

Frequency Range	: 108.000 ~ 135.975MHz
Receiving System	: Double-conversion superheterodyne
Modulation Acceptance	: A3E 6K00 (6A3)
Sensitivity (50 ohm load)	: Less than $2\mu\text{V}$ for 6dB S/N with 1kHz, 30% modulation on 108.000 ~ 117.975MHz Less than $1\mu\text{V}$ for 6dB S/N with 1kHz, 30% modulation on 118.000 ~ 135.975MHz
Squelch Sensitivity (with 50 ohm load)	: Less than $0.5\mu\text{V}$ at threshold point at frequencies higher than 118.000MHz with 1kHz, 30% modulation.
Spurious Response Rejection Ratio	: More than 60dB
Selectivity	: More than 60dB at adjacent channel
Audio Output Power	: More than 500mW at 10% distortion
Audio Output Impedance	: 8 ohms

TRANSMITTER

Frequency Range	: 118.000 ~ 135.975MHz
Output Power	: High: 1.5W carrier power (4.8W PEP) Low: 0.5W carrier power (1.6W PEP) () shows PEP with 80% modulation by a 1kHz audio tone.
Emission Mode	: A3E 6K00 (6A3)
Modulation System	: Low level modulation
Spurious Emission	: More than 45dB below carrier
Microphone	: Built-in electret condenser microphone

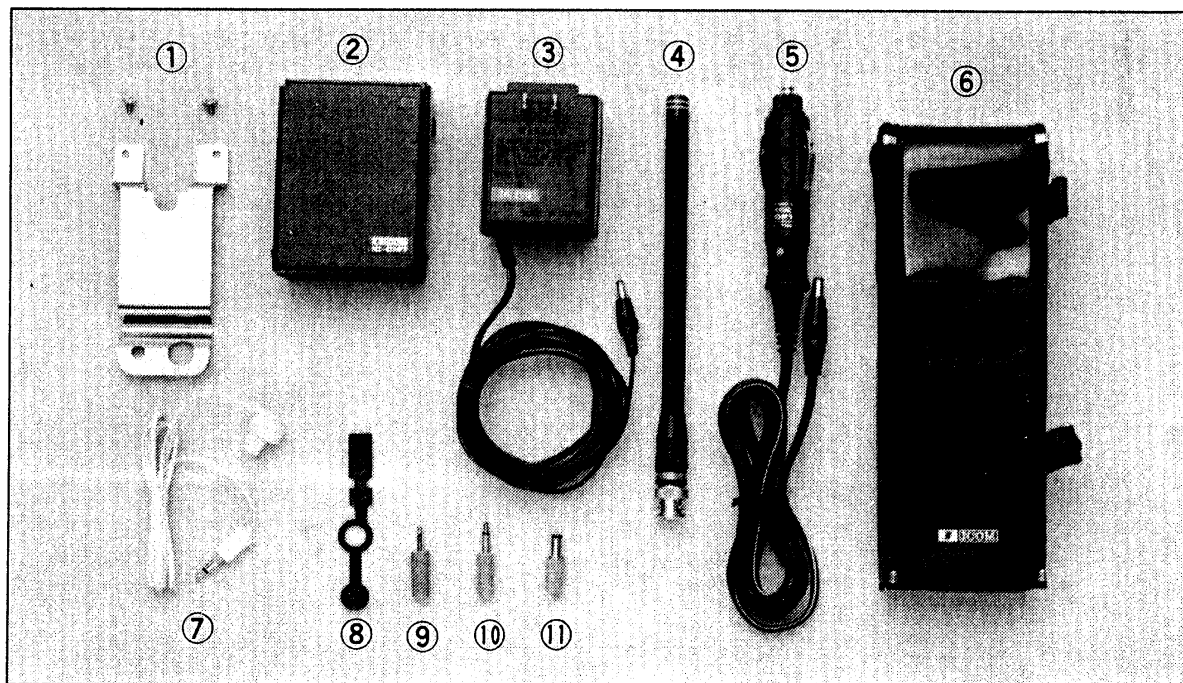
SECTION 3 ACCESSORIES

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. We recommend you keep the shipping carton 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.

Accessories included with the IC-A2:

1. Belt clip 1
2. Power pack IC-CM7. 1
(Attached to the set)
3. Wall charger CM-16U. 1
4. Flexible antenna 1
5. Cigarette lighter cable IC-CM1 1
6. Carrying case LC-14 1
7. Earphone. 1
8. Rainproof cap 1
9. Microphone plug 1
10. Earphone plug. 1
11. DC power plug 1



SECTION 4 PRE-OPERATION

BATTERY INSTALLATION

BATTERY PACK NOTE:

The full charge capacity of NiCd batteries may be reduced if repeatedly charged with only partial discharge periods. This is called the battery memory effect. If the battery capacity seems lower than when new, discharge the pack completely through normal use, then charge fully using the proper charger.

CHARGING METHOD

The supplied IC-CM7 NiCd POWER PACK is rechargeable and can be charged with the supplied CM-16U WALL CHARGER, optional CM-35 DESK CHARGER, or a 12V battery using the supplied IC-CM1 cable. Before using the power pack, charge it for 15 hours with the CM-16U or 1.5 hours with the CM-35.

When the IC-CM7 is fully charged, it may be used in the same manner as dry cells. However, the voltage of NiCd batteries drops rapidly just before they are exhausted, so replace or recharge the power pack when the S/BATTERY INDICATOR does not reach into the silver zone. See page 32 for more information.

When operating the transceiver in environments where re-charging is difficult or impossible, the optional CM-12 BATTERY PACK is recommended for use. See page 34 OPTIONS.

1. Use the supplied CM-16U WALL CHARGER, optional CM-35 DESK CHARGER, or a stable power source with an output voltage of 13.8V DC and a current capacity over 100mA. A 12V battery with the supplied IC-CM1 charger cable is also suitable. Output voltage in all cases must be 12 to 15V but 13.8V is best.



ICOM INCORPORATED

1-6-19, KAMIKURATSUKURI, HIRANO-KU,
OSAKA 547, JAPAN

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