



AVIATION COMMUNICATIONS + NAVIGATION



Icom Inc.

Rugged
MIL-STD 810

VHF AIR BAND TRANSCEIVERS

IC-A24
IC-A24E
NAV & COM channels


IC-A6
IC-A6E
COM channels

The pilot's favorite handheld is here!

Easy to use while flying

Simple one-handed operation is the most essential feature of the IC-A24/A6 series. The well labeled, large keypad provides user friendly operation. The large display shows both letters and numbers and is easy to see, making for fast frequency recognition. The display is backlit, and so is the keypad. The light stays on until you turn it off – a very handy feature for flying at night.

"Flip-flop" channel recall

The IC-A24/A6 series stores the last 10 channels used. You can easily recall those channels by pushing the "flip-flop" recall  buttons on the front panel. It is convenient for switching between several channels, such as NAV and COM channels.

VOR navigation*

The IC-A24/E has VOR navigation functions. The DVOR mode shows the radial to or from a VOR station and the CDI mode shows the course deviation to/from a VOR station. You can also input your intended radial to/from the VOR station and show the course deviation on the display. In the USA version, the duplex operation allows you to call a COM channel, while you are using VOR navigation. (* IC-A24/E only)



External DC power jack

An external DC power jack allows for operation with the wall charger, BC-110 or the cigarette lighter cable, CP-20. When the battery pack is installed, simultaneous charging during operation is also possible. In addition, an optional battery case, BP-208N, is available.

And more...

- Water resistant construction
- * Equivalent to IPX4 of the corresponding international standard IEC 60529 (2001).
- 200 memory channels (20 Ch × 10 banks) with 6 character names
- Dedicated 121.5MHz emergency key
- Side tone function allows you to hear your own voice via an external aviation headset.
- Optional Ni-Cd, Ni-MH and Li-Ion battery packs
- NOAA marine weather channels* (* IC-A24/A6 only)
- Tag scanning and memory bank scanning
- ANL (Auto Noise Limiter) for noise reduction



IC-A24

IC-A6E



VHF AIR BAND TRANSCEIVER

IC-A110
IC-A110EURO

Rugged and reliable for serious ground crew communications

Capable for use in any vehicle

The IC-A110/EURO are adaptable to vehicles working on a 12V, as well as a 24V power source.

Front mounted loud speaker

A loud speaker mounted in front of the transceiver is free of any obstacles blocking audio reproduction. And, 10W of powerful output power is available for the external speaker.

TSO version available

Version 100 has been TSO C37d and C38d approved. This version of the IC-A110 may be used as a primary avionic VHF transceiver.

Memory channel name display

Up to 7-character memory names can be assigned for each channel. Allows simple and quick channel recognition and selection.

Side tone function

The operator's transmitted messages and calls are audio modulated and can be heard by standard airband headsets*, even in the most demanding airport operating conditions.

*Option OPC-871 is required.

Convenient on hook scan functions

Hanging the microphone on the mic. hanger activates the auto scan function. When released, the transceiver will return to the last used, or priority channel, depending on the selection.

Usable in extreme cold

The adopted LCD is guaranteed usable in temperatures from -30°C to $+70^{\circ}\text{C}$ (-22°F to $+158^{\circ}\text{F}$). Normal performance, as well as display indications, are guaranteed even in extremely cold areas.

Other features

- Extra 8.33kHz channel spacing version available
- Equipped EEPROM system provides maintenance free memory backup capability, without the use of a separate backup battery
- Various scan functions, such as VFO and priority scans
- A total of 20 memory channels are available
- 36W (pep) of powerful output
- Ideal compact size of 150(W) \times 50(H) \times 180(D) mm* to mount in various types of vehicles
*5²⁹/₃₂(W) \times 1³¹/₃₂(H) \times 7³/₃₂(D) in



VHF AIR BAND TRANSCEIVER

IC-A200

Easy to see, simple to operate in the cockpit

Easy-to-see function display

All important information is provided in extra large characters for easy viewing, day or night. The effective viewing angle increases side visibility making the IC-A200 easier to read. At all times, the USE and STBY (standby) window frequencies simultaneously appear on a large function display.

Simple operation

The automatic squelch function eliminates the need to make inconvenient squelch adjustments. All required functions are activated with a minimum number of switches and controls.

Remote control capability

Memory channel selection and exchanging of the USE and STBY window frequencies can also be accomplished with remote switches. Hence, you can set these switches into the most convenient positions.

Full frequency coverage

The advanced IC-A200 covers 118.000–136.975MHz continuously in 25kHz tuning steps. A total of 760 communication channels are available.

TSO version available

Version 100 has been TSO C37d and C38d approved. This version of the IC-A200 may be used as a primary avionic VHF transceiver.

Other features

- 9 memory channels
- Stable 7W of RF output
- Illuminated switches and function display
- 2 ways to select the desired frequency
- 3 kinds of tuning steps for quick and easy channel selection
- Intercom functions









PS-80 DC POWER SUPPLY






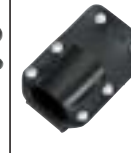


Provides convenient operation of the IC-A200 on the ground. Built-in speaker and microphone, EM-91 included*. (* Not all versions)






Dimensions :
200(W) × 200(H) × 300(D) mm
7⁷/₈(W) × 7⁷/₈(H) × 11¹³/₁₆(D) in
Output: 13.8V DC/6A







OPTIONS FOR HANDHELD TRANSCEIVERS

	BATTERY PACKS			BATTERY CASE	WALL CHARGER	CHARGERS		
MODEL NAME	BP-209N Ni-Cd: 7.2V / 1100mAh 	BP-210N Ni-MH: 7.2V / 1650mAh 	BP-211N Li-Ion: 7.4V / 1800mAh 	BP-208N AA (LR6)×6 cells 	BC-110AR/DR 	BC-119N 	BC-144N 	BC-121N 
IC-A24/A24E	✓	✓	✓	✓	✓	✓	✓	✓
IC-A6/A6E	✓	✓	✓	✓	✓	✓	✓	✓

	AC ADAPTERS		CHARGER ADAPTER	BELT CLIPS		LEATHER BELT HANGERS		CARRYING CASE
MODEL NAME	BC-157 	BC-145 	AD-101 	MB-86 	MB-103 	MB-96F 	MB-96N 	LC-159 
IC-A24/A24E	✓ (Use with BC-121N)	✓ (Use with BC-119N/BC-144N)	✓ (Use with BC-119N/BC-121N)	✓	✓	✓ (Use with MB-103)	✓	✓
IC-A6/A6E	✓ (Use with BC-121N)	✓ (Use with BC-119N/BC-144N)	✓ (Use with BC-119N/BC-121N)	✓	✓	✓ (Use with MB-103)	✓	✓

	DC POWER CABLES		CIGARETTE LIGHTER CABLE	HEADSET ADAPTER CABLE	ANTENNA			
MODEL NAME	OPC-515L 	OPC-656 	CP-20 	OPC-499 	FA-B02AR 			
IC-A24/A24E	✓ (Use with BC-119N)	✓ (Use with BC-121N)	✓	✓	✓			
IC-A6/A6E	✓ (Use with BC-119N)	✓ (Use with BC-121N)	✓	✓	✓			

OPTIONS FOR MOBILE TRANSCEIVERS

	HAND MICROPHONE	HEADSET ADAPTER	DC POWER SUPPLY	MOUNTING BRACKET			
MODEL NAME	HM-161 	OPC-871 	PS-80 	MB-53 			
IC-A110/EURO	✓	✓					
IC-A200			✓	✓			

SPECIFICATIONS

		IC-A24/A24E	IC-A6/A6E	IC-A110/A110EURO	IC-A200
Frequency range	Tx	118.000-136.975MHz	118.000-136.975MHz	118.000-136.975MHz	118.000-136.975MHz
	Rx	108.000-136.975MHz 161.650-163.275MHz*	118.000-136.975MHz 161.650-163.275MHz*	118.000-136.975MHz	118.000-136.975MHz
Number of memory channels		200 Ch (20 Ch×10 banks)		20 Ch	9 Ch
Channel spacing (varies according to version)		25kHz		8.33kHz and/or 25kHz	25kHz
Power supply requirement		7.4/7.2V DC (Battery pack) , 11.0V DC (External DC jack)		13.75V DC or 27.5V DC	13.8V DC ± 15%
Current drain	Tx	1.5A typ.		5.0A max.	2.6A
	Rx	70mA typ. 300mA typ.		500mA 4.0A	320mA 600mA
Dimensions (W×H×D) (Projections are not included)		54×129.3×35.5 mm 2 ¹ / ₈ ×5 ¹ / ₃₂ ×1 ¹ / ₃₂ in		150×50×180 mm 5 ² / ₃₂ ×1 ² / ₃₂ ×7 ¹ / ₃₂ in	160×34×271 mm 6 ² / ₁₆ ×1 ¹ / ₃₂ ×10 ² / ₃₂ in
Weight		430g ; 15.2oz (with BP-210N and antenna)		1.5kg ; 3.3lb	1.1kg ; 2.4lb
Frequency stability		±5ppm (-10°C to +60°C)		IC-A110 ± 5ppm (-30°C to +60°C) IC-A110 EURO ± 1ppm (0°C to +40°C)	± 15ppm (-20°C to + 55°C)
RF output power		IC-A24/A6 IC-A24E/A6E	5.0/1.5W typ. (PEP/Carrier power) 3.6/1.0W typ. (PEP/Carrier power)	36W typ. (PEP) 9W typ. (Carrier power)	7W (Carrier power)
Microphone impedance		100kΩ		600Ω	600Ω
Sensitivity		IC-A24/A6 IC-A24E/A6E (with CCITT filter)	VOR 0.71μV typ. (6dB S/N) COM 0.5μV typ. (6dB S/N) WX 0.22μV typ. (12dB SINAD) VOR -3dBμV typ. (6dB S/N) COM -3dBμV typ. (12dB SINAD)	IC-A110 1μV (6dB S/N) IC-A110 EURO 5dBμV (12dB SINAD)	2μV (6dB S/N)
Selectivity		7.5kHz/-6dB 25kHz/-60dB		25kHz CH. spacing : 8kHz/-6dB 25kHz/-60dB 8.33kHz CH. spacing : 2.778kHz/-6dB 7.37kHz/-60dB	8kHz/-6dB 22kHz/-60dB
Spurious response rejection ratio		IC-A24/A6 IC-A24E/A6E	AM 60dB FM 30dB AM 70dB	IC-A110 : 74dBμ IC-A110 EURO : 70dB	80dB
Audio output power (at 10% distortion)		500mW typ. with an 8Ω load		10W with an 8Ω load at 13.75V 100mW with a 500Ω load at 13.75V	5W with a 4Ω load at 13.8V 60mW with a 500Ω load at 13.8V

*IC-A24/A6 only.



Applicable U.S. Military specifications

Icom makes rugged products that have been tested to and passed the following MIL-STD requirements and strict environmental standards.

Standard	Low Pressure Storage (Altitude)	Low Pressure Operation (Altitude)	High Temperature Storage	High Temperature Operation	Low Temperature Storage	Low Temperature Operation	Temperature Shock	Solar Radiation	Rain Blowing	Rain Drip	Humidity Induced	Humidity Aggravate	Salt Fog	Dust Blowing	Vibration	Shock Functional Shock	Shock Transit Drop
MIL-810 C Method. Procedure	500.1 I		501.1 I		502.1 I		503.1 I	505.1 I	506.1 I	506.1 II	507.1 I	507.1 II	509.1 I	510.1 I	514.2 VIII, X	516.2 I	516.2 II, IV
MIL-810 D Method. Procedure	500.2 I	500.2 II	501.2 I	501.2 II	502.2 I	502.2 II	503.2 I	505.2 I	506.2 I	506.2 III	507.2 II	507.2 III	509.2 I	510.2 I	514.3 I	516.3 I	516.3 IV
MIL-810 E Method. Procedure	500.3 I	500.3 II	501.3 I	501.3 II	502.3 I	502.3 II	503.3 I	505.3 I	506.3 I	506.3 III	507.3 II	507.3 III	509.3 I	510.3 I	514.4 I	516.4 I	516.4 IV
MIL-810 F Method. Procedure	500.4 I	500.4 II	501.4 I	501.4 II	502.4-3 I	502.4-3 II	503.4 I	505.4 I	506.4 I	506.4 III	507.4		509.4	510.4 I	514.5 I	516.5 I	516.5 IV
IC-A24/A24E	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-A6/A6E	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-A110/A110EURO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-A200															✓	✓	

The IC-A110/A110EURO and IC-A200 were tested to MIL-810 C, D and E requirements only.

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