# SPECIFICATIONS

#### HANDHELD TRANSCEIVERS

	IC-A25N IC-A25C	IC-A25NE IC-A25CE	IC-A24 IC-A6	IC-A24E IC-A6E	IC-A14 IC-A14S	IC-A15 IC-A15S
NAV/COM channels	VOR NAV & COM (IC-A25N) COM (IC-A25C)	VOR NAV & COM (IC-A25NE) COM (IC-A25CE)	VOR NAV & COM (IC-A24) COM (IC-A6)	VOR NAV & COM (IC-A24E) COM (IC-A6E)	COM	COM
Built-in GPS	✓(IC-A25N)	✓(IC-A25NE)	-	-	-	-
Bluetooth®	✓(IC-A25N)	✓(IC-A25NE)	-	-	-	-
IP rating	IP57	IP57	IPX4	IPX4	IPX4	IPX4
Flip-flop channel recall	<ul> <li>✓</li> </ul>	~	<ul> <li>✓</li> </ul>		_	-
MIL-STD 810	✔(G)	✔(G)	✔(F)	✔(F)	✔(F)	✓(F)
Android <sup>TM</sup> /iOS <sup>TM</sup> app for flight planning		✓(IC-A25NE)	-	-	-	-
TX		-136.992	118.000-	136.992	118.000	-136.975
Frequency range (unit: MHz) RX	IC-A25N 108.000-136.992 161.650-163.275 IC-A25C 118.000-136.992 161.650-163.275	IC-A25NE 108.000–136.992 IC-A25CE 118.000–136.992	IC-A24 108.000-136.992 161.650-163.275 IC-A6 118.000-136.992 161.650-163.275	IC-A24E 108.000-136.992 IC-A6E 118.000-136.992	IC-A14 108.000-136.975 161.650-163.275 IC-A14S 118.000-136.975	118.000–136.975
Number of memory channels	300 channel	s (15 groups)	200 channels (20 c	hannels × 10 banks)	200 channels (20 channels × 10 banks, IC-A14, 100 channels (IC-A14/A15)	
Channel spacing*1	25 kHz/	8.33 kHz	25 kHz/8.33 kHz		25	kHz
Power supply requirements		(BP-288) ternal DC jack)	7.2 V DC (BP-210N), 11.0 V DC (External DC jack)		7.4 V DC	(BP-232H)
Current drain TX High RX Stand-by RX Max. audio	90 mA typical (GPS,	B A Bluetooth, Light:OFF) ) mA	70 mA	B A typical mA	50 mA	5 A typical mA
Dimensions*2 (W×H×D)	58.9 × 148.4 × 31.8 r	nm; 2.3 × 5.8 × 1.3 in	54 × 129.3 × 35.5 m	nm; 2.1 × 5.1 × 1.4 in	53 × 120 × 36.9 mi	m; 2.1 × 4.7 × 1.5 in
Weight (approx.)	384 g; 13.6 oz (wit	h BP-288 and ANT)	430 g; 15.2 oz (with	BP-210N and ANT)	350 g; 12.3 oz (with	BP-232H and ANT)
Operating temperature range	-10°C to +60°C	-20°C to +55°C	-10 °C to +60 °C	-20 °C to +55 °C	-10°C to +60°C	-20°C to +55°C
Frequency stability	±0.4 kHz	±1 ppm	±1	opm	±5	ppm
Output power (PEP/carrier power)	6 W typi	cal/1.8 W	5 W/	1.5 W	5 W typical/	1.5W typical
Microphone impedance	15	0 Ω	100	) kΩ		0 Ω
Sensitivity COM	1 µV (6 dB S/N)	1 µV (12 dB SINAD)	1 µV (6 dB S/N)	1 µV (12 dB SINAD)	0.5 µV typical (6 dB S/N)	0.71 µV typical (12 dB SINAD)
Selectivity 8.33 kHz	2.778/7.37 kHz (6 dB/60 dB) 7.5/25 kHz (6 dB/60 dB)	60 dB (6 dB SINAD) 60 dB (6 dB SINAD)		z (6 dB/60 dB) (6 dB/60 dB)	7.5/25 kHz	 (6 dB/60 dB)
Spurious response (COM)	60 dB	70 dB	60 dB	70 dB	60 dB	70 dB
Audio output power (at 10% distortion)		an 8 Ω load	470 mW typical		700 mW into an 8 O load (Internal SP	

#### PANEL MOUNT TRANSCEIVERS and MOBILE TRANSCEIVERS

	IC-A220 TSO version	IC-A220	IC-A210E	IC-A120	IC-A120E		
TSO certification	V	-	-	-	-		
NAV/COM channels	COM	COM	COM	COM	COM		
Intercom	V	~	v	-	-		
Automatic SQL	V	<ul> <li>✓</li> </ul>	-	-	-		
Active Noise Canceling	-	-	-	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		
Bluetooth®	-	-	-	✓ (Use with UT-133A)	✓ (Use with UT-133A)		
IP rating	-	-	_	IP54	IP54		
MIL-STD 810	✔(G)	✔(G)	✓(F)	✔(G)	✔(G)		
Frequency TX		118.000-136.992		118.000	-136.992		
range (unit: MHz) RX	118.000- 161.650-		118.000-136.992	118.000	-136.992		
Number of memory channels	20 channels	s (Regular)	10 channels (Regular)	200 channels			
Channel spacing*1		25 kHz/8.33 kHz	25 kHz/8.33 kHz				
Power supply requirements	13.8	V or 27.5 V DC (automatic selec	tion)	13.75 V or 27.5 V DC (automatic selection)			
TX High		5.0 A maximum		5.0 A maximum			
Current drain RX Stand-by		500 mA		500 mA maximum			
RX Max. audio		4.0 A		4.0 A maximum			
Dimensions*2 (W×H×D)	160	) × 34 × 271 mm; 6.3 × 1.3 × 10.	7 in	161 × 45 × 175 mm; 6.3 × 1.8 × 6.9 in			
Weight (approx.)	1.2 kg; 2.6 lb		; 2.2 lb	1.5 kg; 3.3 l	b (main unit)		
Operating temperature range		-20°C to +55°C		-30°C to +60°C	-20°C to +55°C		
Frequency stability	±5 p		±1 ppm (0°C to +40°C)	±5 ppm (-30°C to +60°C)	±1 ppm (0°C to +40°C)		
Carrier power	8.0		6.0 W (4.5–8 W)	9 W typical	9 W (+1.5 dB/-3 dB)		
Microphone impedance		600Ω			0 Ω		
Sensitivity (COM)	2 μV (6 c		2 µV (12 dB SINAD)	1 µV (6 dB S/N)	1.8 µV (12 dB SINAD)		
Selectivity 8.33 kHz (6 dB/60 dB			±2.778/±7.37 kHz		7.37 kHz		
25 KHZ (6 dB/60 dB	±3/±22 kHz		±3/±22 kHz	±3/±2			
Spurious response (COM)	74 0		70 dB	74 dBµ	70 dB		
Audio output power		5 W into a 4 Ω load (External SP		10 W typical into an 8 Ω load (External SP)			
(at 10% distortion)		mW into a 500 $\Omega$ load (Headpho			100 mW typical into a 500 Ω load (Headphone)		
All stated specifications are subject	to change without notice or obl	igation. *1 Use of 8.33 kHz chai	nnel spacing may be prohibited i	n some countries. *2 Projections	are not included.		

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COM Inc. 1-1-32, Kamiminami, Hirano-Ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013 www.icom.co.jp/world

### Icom America Inc. 12421 Willows Road NE, Kirkland, WA 98034, U.S.A.

Phone: +1 (425) 454-8155 Fax: +1 (425) 454-1509 E-mail: sales@icomamerica.com URL: http://www.icomamerica.com

#### Icom Canada

Glenwood Centre #150-6165 Highway 17A, Delta, B.C., V4K 5B8, Canada Phone: +1 (604) 952-4266 Fax: +1 (604) 952-0090 E mail: inf@inequade.com E-mail: info@icomcanada.com URL: http://www.icomcanada.com

#### Icom Brazil

Rua Itororó, 444 Padre Eustáquio Belo Horizonte MG, CEP: 30720-450, Brazil Phone: +55 (31) 3582 8847 Fax: +55 (31) 3582 8987 E-mail: sales@icombrazil.com

#### Icom (Europe) GmbH Icom France s.a.s.

Communication Equipment Auf der Krautweide 24 65812 Bad Soden am Taunus, Germany Phone: +49 (6196) 76685-0 Fax: +49 (6196) 76685-0 E-mail: Info@icomeurope.com URL: http://www.icomeurope.com Zac de la Plaine, 1 Rue Brindejonc des Moulinais, BP 45804, 31505 Toulouse Cedex 5. France Phone: +33 (5) 61 36 03 03 Fax: +33 (5) 61 36 03 00 E-mail: icom@icom-france.com UBL: http://www.icom-france.com Icom (Australia) Pty. Ltd.

### Icom Spain S.L. Ctra. Rubi, No. 88 "Edificio Can Castanyer" Bajos A 08174, Sant Cugat del Valles,

Barcelona, Spain Phone: +34 (93) 590 26 70 Fax: +34 (93) 589 04 46

E-mail: icom@icomspain.com URL: http://www.icomspain.com

Phone: +44 (0) 1227 741741 Fax: +44 (0) 1227 741742 E-mail: info@icomuk.co.uk URL: http://www.icomuk.co.uk

Unit 1/103 Garden Road, Clayton, VIC 3168 Australia Phone: +61 (03) 9549 7500 Fax: +61 (03) 9549 7505 E-mail: sales@icom.net.au URL: http://www.icom.net.au Shanghai Icom Ltd.

#### Icom (UK) Ltd. Blacksole House, Altira Park, Herne Bay, Kent, CT6 6GZ, U.K.

No.101, Building 9, Cairkungyuan Park, No.188 Maoting Road, Chedun Town, Songjiang District, Shanghai, 201611, China Phone: +86 (021) 6153 2768 Fax: +86 (021) 5765 9987 E-mail: bjicom@bjicom.com URL: http://www.bjicom.com

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# **Aviation Radios**

# 2017–2018 Edition



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## VHF AIR BAND TRANSCEIVERS

IC-A25N NAV & COM channels for USA/EXP



IC-A25NE

NAV & COM channels for EUR/AUS

IC-A25CE COM channels for EUR/AUS

## **General Features**

Class-leading 6 W typical (PEP) and 1.8 W typical (carrier) high power RF output

Easy-to-use interface

2.3 inch large high-visibility LCD with night mode

"Flip-Flop" channel recall

Built-in Bluetooth<sup>®</sup> for hands-free operation (IC-A25N/NE)

Intelligent battery with detailed battery status

25 kHz/8.33 kHz dual channel spacing

### Navigation Functions (IC-A25N/NE)

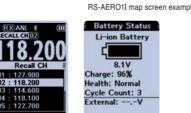
Built-in GPS with simplified waypoint NAV (Direct-To NAV and Flight Plan NAV)

Flight plans with Android<sup>™</sup> /iOS<sup>™</sup> app RS-AERO1A/RS-AERO1

VOR navigation functions

Near station search function





Vavpoint NAV screen VOR screen

#### Night mode screer Detailed battery information scre

### And more

• IP57 dust-protection and waterproof construction • 2350 mAh typ. battery pack, BP-288 supplied • BP-289 battery case supplied (depending on version) BNC antenna • 121.5 MHz emergency key • NOAA weather channels (IC-A25N/C) · Priority watch · VFO scan, memory channel scan and priority scan · ANL (Auto Noise Limiter) for pulse-type noise reduction • Side tone function enables you to hear your own voice through a third party aviation headset • Built-in VOX capability • 300 memory channels (in 15 memory groups) with 12 character names • 8.33 kHz/25 kHz channel spacing (depending on version) • External DC power jack • Optional waterproof speaker microphone, HM-231





## VHF AIR BAND TRANSCEIVERS

IC-A24 NAV & COM channels for USA/EXP

IC-A6 COM channels for USA/EXP

IC-A24E NAV & COM channels for EUR

IC-A6E COM channels for EUR

Simple one-hand operation

"Flip-Flop" channel recall

Dedicated 121.5 MHz emergency key

25 kHz/8.33 kHz dual channel spacing

(depending on version)

External DC power jack

VOR navigation functions (IC-A24/E) VOR scree

IPX4

### And more

• 5 W (PEP), 1.5 W (carrier) output power • IPX4 water resistant

• 200 memory channels (20 Ch × 10 banks) with 6 character names Side tone function allows you to hear your own voice via a third party aviation headset • NOAA weather channels (IC-A24/A6 only) • Tag scanning and memory bank scanning • ANL (Auto



IC-A25C





IC-A25N

**ICON** 

4.60

OBS 2 FROM 3

4 WPT 5 -0+

RX ANLV\*



# 700 mW Loud Audio with a Compact Body

# VHF AIR BAND TRANSCEIVERS



Full keypad for EUR/AUS

IC-A14S Simple keypad for USA/EXP **IC-A15S** 

Simple keypad for EUR

700 mW loud audio\* \*Internal speaker Full keypad type or simple keypad type Compact, lightweight and IPX4 rugged body 2300 mAh large capacity Lithium-Ion battery pack 200 channels with memory banks

# And more

• 5 W typ. (PEP), 1.5 W typ. (carrier) output power • Side tone function enables you to hear your own voice via a third party aviation headset • LCD backlight for night time operation • ANL (Auto Noise Limiter) for pulse-type noise reduction • Low battery indication and beep alert • Adjustable microphone gain setting • Optional BC-179 holder type battery charger





# **High-Quality Panel Mount Radio** with TSO Certification



IC-A220 TSO version

TSO certified to be used as a primary VHF radio in general aviation (Part 23) aircraft (Certified TSO C128a and C169a) The IC-A220 TSO version is also accepted as an ETSO radio under the TSO/ETSO reciprocal acceptance policy High visibility OLED (Organic Light Emitting Diode) screen Easy channel selection with large "Flip-Flop" arrow button Auto squelch function and quick squelch adjustment Quick squelch adjustment with the Volume knob Auto dimmer function and external dimmer control Intercom function

VHF AIR BAND TRANSCEIVER





### And more

• 8.33 kHz/25 kHz channel spacing (depending on version) Remote control capability via the rear panel connector • 9 V power supply operation • 20 memory channels and 20 history memory channels • Dualwatch and priority watch functions • One touch access to 121.5 MHz emergency frequency • Side tone function for monitoring your voice with a headset • ANL (Automatic Noise Limiter) function reduces pulse type noise • Time-out-timer • D-SUB 25-pin connector and MIL-Spec M39029/63-368 compliant socket pins • Two types of menu mode; settings menu and configuration menu • Both 13.8 V and 27.5 V electrical systems compatible • NOAA weather channel receive (USA version only) • 8 W carrier power

\* For more details, see the Environmental Qualification Form at www.icomamerica.com. The IC-A220 TSO version is manufactured and serviced by Icom America Inc. All repairs o adjustment information will be provided from Icom America. (http://www.icomamerica.com/

# **Stay Connected with Various Airport Systems**



IC-A210E

Hiah visibility OLED (Organic Light Emitting Diode) screen

GPS memory function\* for transmitting frequency data of nearby airports \* External GPS receiver required.

Easy channel selection with large "Flip-Flop" arrow button

Auto dimmer function

Intercom function

Easy installation with two types of rear-panel adapters

# **Ideal Communication Tool for** Your Experimental/Light Sport Aircraft or Ground Use



IC-A220

High visibility OLED (Organic Light Emitting Diode) screen

GPS memory function\* for transmitting frequency data of nearby airports \* External GPS receiver required.

Easy channel selection with large "Flip-Flop" arrow button

Auto squelch function and quick squelch adjustment

Auto dimmer function and external dimmer control

Intercom function

Optional PS-80 power supply for desktop use

VHF AIR BAND TRANSCEIVER

**IC-A220** For USA

### And more

• 8.33 kHz/25 kHz channel spacing (depending on version) · Remote control capability through a rear panel connector • 20 memory channels and 20 history memory channels • Dualwatch and priority watch functions • One touch access to 121.5 MHz emergency frequency • Side tone function for monitoring your voice with a headset • ANL (Automatic Noise Limiter) function reduces pulse type noise • PC programming capability • Dial lock and panel lock • Time-out-timer • D-SUB 25-pin connector and MIL-spec M39029/63-368 compliant socket pins • Two types of menu mode; settings menu and configuration menu • Both 13.8 V and 27.5 V electrical systems compatible • NOAA weather channel receive (USA version only) 8 W carrier power



IC-A120

Full dot-matrix display, simple operation

Optional Bluetooth<sup>®</sup> headset connectivity

Active Noise Cancelling (ANC) for background noise reduction

IP54 dust-protection and water resistance

ON-hook scan function

Optional speaker-microphone, HM-217 with two programmable buttons







## And more

• 8.33 kHz/25 kHz channel spacing (depending on version) • Remote control capability via the rear panel connector • 10 regular memory channels with a 6-character channel name • 200 group memory channels (20 Ch×10 banks) with a channel tag • One touch access to 121.5 MHz emergency frequency Side tone function for monitoring your voice with headset ANL (Automatic Noise Limiter) function reduces pulse type noise • Time-out-timer • PC programming capability • Squelch test function • Dualwatch and priority watch functions • Both 13.8 V and 27.5 V electrical systems compatible • 6 W typ. carrier power • Dial lock and panel lock

# **Enhanced Ground Crew Communications**



VHF AIR BAND TRANSCEIVERS





**IP54** 

### And more

• Dualwatch and priority scan functions • Side tone function enables you to hear your own voice via a third party aviation headset • A total of 200 memory channels with 12-character channel names • Both 13.8 V and 27.5 V electrical system compatible • 8.33 kHz and 25 kHz channel spacing (depending on version) • 36 W (PEP) RF output power • Power on password protection • PC programming capability • CI-V Commands for external control • VE-PG3 RoIP gateway for interconnect with other radio devices • Compliant with European E-marking for installation in vehicles (IC-A120E)

# **OPTIONS FOR HANDHELD TRANSCEIVERS**

	BATTERY PACKS				BATTERY CASES			CHARGERS	
MODEL NAME	BP-288 Li-ion: 7.2 W2200 mAh (min.) 2350 mAh (typ.)		<b>BP-230N</b> Li-Ion: 7.4 V/950 mAh (min.) 980 mAh (typ.)	BP-232H Li-Ion: 7.4 V/2250 mAh (min.) 2300 mAh (typ.)	BP-289 LR6 (AA) × 6 cells	BP-208N LR6 (AA) × 6 cells	BP-261 LR6 (AA) × 6 cells	BC-224 Rapid charger	BC-119N Rapid charger
IC-A25N/A25NE IC-A25C/A25CE	<ul> <li>✓</li> </ul>				~			~	
IC-A24/A24E IC-A6/A6E		~				<ul> <li>✓</li> </ul>			(Use with AD-101)
IC-A14/A14S IC-A15/A15S			~	~			<ul> <li>✓</li> </ul>		(Use with AD-106)

				DITACK
MODEL NAME	MB-96F Fixed type	MB-96FL Long type	MB-96N Swivel type	MB-130
IC-A25N/A25NE IC-A25C/A25CE	(Use with MB-133)	(Use with MB-133)	~	
IC-A24/A24E IC-A6/A6E	(Use with MB-103)	(Use with MB-103)	~	
IC-A14/A14S IC-A15/A15S	(Use with MB-94)	(Use with MB-94)		(Use with BC-

LEATHER BELT HANGERS

# **OPTIONS FOR PANEL MOUNT AND MOBILE TRANSCEIVERS**

	HA	HAND MICROPHONES			Bluetooth <sup>®</sup> UNIT	HEADSET ADAPTER	REAR PANE	L ADAPTERS
MODEL NAME	HM-176 Same as supplied with PS-80 and MB-53.	НМ-216	HM-217 Speaker-microphone	VS-3	UT-133A	OPC-871A	MBA-3 Card edge connector for use with PS-80.	MB-113 For D-sub 15-pin connection system
IC-A220 TSO version*								
IC-A220	(Use with PS-80/MB-53)						~	
IC-A210E	(Use with MB-53)							~
IC-A120/A120E		~	~	(Use with UT-133A)	~	~		

	EXTERNAL SPEAKER	MOUNTING BRACKET	DC POWER SUPPLY	RoIP GATEWAY	CONNECTION CABLE
MODEL NAME	SP-35	MB-53	PS-80	VE-PG3	OPC-2275 For connection with VE-PG3. 5m; 16.4ft
IC-A220 TSO version*					
IC-A220	~	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		
IC-A210E		<ul> <li>✓</li> </ul>			
IC-A120/A120E				<b>v</b>	<ul> <li>✓</li> </ul>
		navailable due to no T/A. Please ask your dealer for d		Applicable	:Not a

	CHARGERS				MULTI-CHARGERS		AC ADAPTERS		
MODEL NAME	BC-144N* <sup>1</sup> Rapid charger	BC-160 Rapid charger	BC-171 <sup>*1</sup> Regular charger	BC-179 <sup>*1</sup> Regular charger	BC-121N Rapid multi-charger	BC-197 Rapid multi-charger	BC-123S* <sup>2</sup> 12 V/1 A	BC-145S* <sup>2</sup> 16 V/0.93 A	BC-147S* <sup>2</sup> 12 V/200 mA
		Au to					18:	287	981
IC-A25N/A25NE IC-A25C/A25CE							(Use with BC-224)		
IC-A24/A24E IC-A6/A6E	~				(Use with AD-101)			(Use with BC-119N/ BC-144N)	
IC-A14/A14S IC-A15/A15S		~	~	~	(Use with AD-106)	(Use with AD-122)	(Use with BC-160)	(Use with BC-119N)	(Use with BC-171 /BC-179)

\*1 Not available in USA. \*2 BC-123/BC-145/BC-147SA for USA plug. SE for Europe plug. SV for Australia plug. BC-123/BC-145SUK for UK plug.

	AC ADAPTER	WALL CHARGER	СН	ARGER ADAPTI	ERS	DC POWE	R CABLES		E LIGHTER
MODEL NAME	BC-157S 12 V/6.6 A	BC-167S* <sup>3</sup> 12 V/500 mA	AD-101	AD-106	AD-122 (Supplied with BC-197, depending on version)	OPC-515L	OPC-656	CP-20	CP-22
IC-A25N/A25NE IC-A25C/A25CE								~	
IC-A24/A24E IC-A6/A6E	(Use with BC-121N)	~	(Use with BC-119N /BC-121N)			(Use with BC-119N)	(Use with BC-121N)	~	
IC-A14/A14S IC-A15/A15S	(Use with BC-121N /BC-197)			(Use with BC-119N /BC-121N)	(Use with BC-197)	(Use with BC-119N)	(Use with BC-121N /BC-197)		(Use with BC-179)

\*3 BC-167SA for USA plug. SD for Europe plug. SV for Australia plug.

		AKER PHONES	HEADSET	ADAPTERS	Bluetooth <sup>®</sup> HEADSET		BELT	CLIPS	
MODEL NAME	HM-231 Waterproof	HM-234	OPC-2379	OPC-499	VS-3 The side tone function is available.	MB-133	MB-86	MB-103	MB-94
IC-A25N/A25NE IC-A25C/A25CE	<ul> <li>✓</li> </ul>		~		~	~			
IC-A24/A24E IC-A6/A6E		~		~			~	~	
IC-A14/A14S IC-A15/A15S		~		~					~

CHARGER BRACKET	CARRYING CASE	ANTENNA	APPLICATION			
MB-130	LC-159	FA-B02AR	RS-AERO1A* <sup>3</sup> Android™ app for flight planning.	RS-AERO11 <sup>+4</sup> iOS™ app for flight planning.		
		~	(IC-A25N/A25NE)	(IC-A25N/A25NE)		
	~	~				
(Use with BC-160)		~				

\*3 The application for Android™ can be downloaded free from Google Play™. \*4 The application for iOS™ can be downloaded free from App Store.