# SPECIFICATIONS

## HANDHELD TRANSCEIVERS

| | IC-A25N IC-A25C | IC-A25NE IC-A25CE | IC-A16 | IC-A16E |
|---|---|---|---|---|
| NAV/COM channels | VOR NAV & COM (IC-A25N) COM (IC-A25C) | VOR NAV & COM (IC-A25NE) COM (IC-A25CE) | COM | COM |
| Built-in GPS | ✔ (IC-A25N) | ✔ (IC-A25NE) | – | – |
| Bluetooth® | ✔ (IC-A25N) | ✔ (IC-A25NE) | ✔ (Depending on the version) | |
| IP rating | IP57 | IP57 | IP67/IP54 | |
| Flip-flop channel recall | ✔ | ✔ | – | – |
| MIL-STD 810 | ✔ (G) | ✔ (G) | ✔ (G) | ✔ (G) |
| Android™/iOS™ app for flight planning | ✔ (IC-A25N) | ✔ (IC-A25NE) | – | – |
| Frequency range (unit: MHz) — TX | 118.000–136.992 | | 118.000–136.992 | 118.000–136.992 |
| Frequency range (unit: MHz) — RX | IC-A25N 108.000–136.992 161.650–163.275 (Weather) IC-A25C 118.000–136.992 161.650–163.275 (Weather) | IC-A25NE 108.000–136.992 IC-A25CE 118.000–136.992 | 108.000–136.992 161.650–163.275 (Weather) | 118.000–136.992 |
| Number of memory channels | 300 channels (15 groups) | | 200 channels (10 groups) | |
| Channel spacing*1 | 25 kHz/8.33 kHz | | 25 kHz/8.33kHz | |
| Power supply requirements | 7.2 V DC (BP-288) 11.0 V DC (External DC jack) | | 7.2 V DC (BP-280) | |
| Current drain — TX High | 1.8 A | | 1.8 A | |
| Current drain — RX Stand-by | 90 mA typical (GPS, Bluetooth, Light:OFF) | | 65 mA typical | |
| Current drain — RX Max. audio | 500 mA | | 650 mA | |
| Dimensions*2 (W×H×D) | 58.9 × 148.4 × 31.8 mm; 2.3 × 5.8 × 1.3 in | | 52.2 × 111.8 × 34.1 mm; 2.1 × 4.4 × 1.3 in | |
| Weight (approx.) | 384 g; 13.6 oz (with BP-288 and ANT) | | 257 g; 9.1 oz (with BP-280) | |
| Operating temperature range | –10°C to +60°C; 14°F to +140°F | –20°C to +55°C | –10°C to +60°C; 14°F to +140°F | –20°C to +55°C |
| Frequency stability | ±0.4 kHz | ±1 ppm | ±0.4 kHz | ±1 ppm |
| Output power (PEP/carrier power) | 6 W typical/1.8 W | | 6 W typical/1.8 W | |
| Microphone impedance | 150 Ω | | 150 Ω | |
| Sensitivity (COM) | Less than 0 dBµ (at 6 dB S/N) | Less than 0 dBµ (at 12 dB SINAD with CCITT) | Less than 0 dBµ (at 6 dB S/N) | Less than 0 dBµ (at 12 dB SINAD with CCITT) |
| Adjacent channel rejection | – | More than 60 dB | – | More than 60 dB |
| Spurious response (COM) | More than 60 dB | More than 70 dB | More than 60 dB | More than 70 dB |
| Audio output power (at 10% distortion) | 1200 mW typical (Internal SP) 530 mW typical into an 8 Ω load (External SP) | | 1500 mW typical (Internal SP) More than 350 mW into an 8 Ω load (External SP) | |

## PANEL MOUNT TRANSCEIVERS and MOBILE TRANSCEIVERS

| | IC-A220 [TSO version] | IC-A220 | IC-A210E | IC-A120 | IC-A120E |
|---|---|---|---|---|---|
| TSO certification | ✔ | – | – | – | – |
| NAV/COM channels | COM | COM | COM | COM | COM |
| Intercom | ✔ | ✔ | ✔ | – | – |
| Automatic SQL | ✔ | ✔ | – | – | – |
| Active Noise Canceling | – | – | – | – | – |
| Bluetooth® | – | – | – | ✔ (Use with UT-133A) | ✔ (Use with UT-133A) |
| IP rating | – | – | – | IP54 | IP54 |
| MIL-STD 810 | ✔ (G) | ✔ (G) | ✔ (F) | ✔ (G) | ✔ (G) |
| Frequency range (unit: MHz) — TX | 118.000–136.992 | | | 118.000–136.992 | |
| Frequency range (unit: MHz) — RX | 108.000–136.992 161.650–163.275 (Weather) | | 118.000–136.992 | 118.000–136.992 | |
| Number of memory channels | 20 channels (Regular) | | 10 channels (Regular) | 200 channels | |
| Channel spacing*1 | 25 kHz/8.33 kHz | | | | |
| Power supply requirements | 13.8 V or 27.5 V DC (automatic selection) | | | 13.75 V or 27.5 V DC (automatic selection) | |
| Current drain — TX High | 5.0 A maximum | | | 5.0 A maximum | |
| Current drain — RX Stand-by | 500 mA | | | 500 mA maximum | |
| Current drain — 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 | 1.0 kg; 2.2 lb | | 1.5 kg; 3.3 lb (main unit) | |
| Operating temperature range | –20°C to +55°C | | | –30°C to +60°C | –20°C to +55°C |
| Frequency stability | ±5 ppm | | ±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 W | | 6.0 W (4.5–8 W) | 9 W typical | 9 W (+1.5 dB/–3 dB) |
| Microphone impedance | 600Ω | | | 600 Ω | |
| Sensitivity (COM) | –101 dBµ (at 6 dB S/N) | | –101 dBµ (at 12 dB SINAD) | Less than 0 dBµ (at 6 dB S/N) | Less than +5 dBµ (at 12 dB SINAD with CCITT) |
| Selectivity — 8.33 kHz | ±2.778/±7.37 kHz (6 dB/60 dB) | | ±2.8 kHz (6 dB) | – | – |
| Selectivity — 25 kHz | ±3/±22 kHz (6 dB/60 dB) | | ±8.5 kHz (6 dB) | – | – |
| Adjacent channel rejection | – | | – | – | More than 60 dB |
| Spurious response (COM) | 74 dBµ | | 70 dB | 74 dBµ | 70 dB |
| Audio output power (at 10% distortion) | 5 W into a 4 Ω load (External SP) 60 mW into a 500 Ω load (Headphone) | | | 1.5W typical (Internal SP) More than 10 W into an 8 Ω load (External SP) More than 100 mW into a 500 Ω load (Headphone) | |

All stated specifications are subject to change without notice or obligation. *1 Use of 8.33 kHz channel spacing may be prohibited in some countries. *2 Projections are not included.

# ICOM

## Aviation Radios

2019

## VHF AIR BAND TRANSCEIVERS

### IC-A25N
NAV & COM channels for USA/EXP

### IC-A25C
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® 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™ /iOS™ app RS-AERO1A/RS-AERO1I

▌ VOR navigation functions

▌ Near station search function
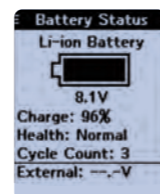
RS-AERO1I map screen example

IC-A25N

IC-A25C
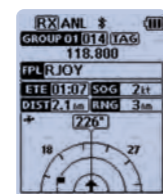
Waypoint NAV screen

VOR screen

Night mode screen

Detailed battery information screen

### 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

**Bluetooth®**
(IC-A25N/NE)

**GPS INTEGRATED GPS RECEIVER**
(IC-A25N/NE)

**IP57**

## VHF AIR BAND TRANSCEIVERS

### IC-A16
For USA

### IC-A16E
For EUR

### General Features

▌ 8.33 kHz and 25 kHz channel spacing

▌ 1500 mW loud audio provides clear communications

▌ 6 W (PEP) /1.8 W (carrier) RF output power

▌ Built-in Bluetooth® for Hands-Free Operation*
* Bluetooth® operation depends on the transceiver version.

▌ Large capacity battery pack provides 17 hours* of long battery life
* With BP-280. Typical operation with TX : RX : Standby = 5:5:90. (Bluetooth® OFF, backlight OFF)

▌ Compact, waterproof and durable body (IP67/IP54 and MIL-STD-810-G)

▌ LCD and key backlight for night time operation

▌ Compatible* with third-party aviation headsets
* Optional headset adapter OPC-2401 required.

### And more

• Auto Noise Limiter (ANL) for noise reduction
• Side Tone function
• Internal VOX capability
• 200 memory channels with names up to 8 characters
• BNC type antenna connector
• VFO scan for all frequencies over the COM band and memory channel scan for tagged channels
• NOAA Weather channels (USA version only)
• Optional waterproof speaker microphone, HM-240
• Low battery indication
• 121.5 MHz emergency key
• Duplex function to call a flight service station while receiving on a VOR frequency (USA version only)

IC-A16

IC-A16E

LCD and keypad backlight

IP67 waterproofing

1500 mW powerful audio

**Bluetooth®**
(Depending on the version)

**IP67/54**
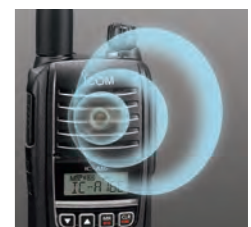
## High-Quality Panel Mount Radio with TSO Certification

**IC-A220 TSO version**

**VHF AIR BAND TRANSCEIVER**

# IC-A220 [TSO version]

**TSO APPROVED**

- **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**

### And more
• 8.33 kHz/25 kHz channel spacing with the mixed selection function • 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 • 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 or adjustment information will be provided from Icom America. (http://www.icomamerica.com)

---

## Stay Connected with Various Airport Systems

**IC-A210E**

**VHF AIR BAND TRANSCEIVER**

# IC-A210E
For EUR

- **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 dimmer function**
- **Intercom function**
- **Easy installation with two types of rear-panel adapters**

### And more
• 8.33 kHz/25 kHz channel spacing with the mixed selection function • 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

---

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

**IC-A220**

**VHF AIR BAND TRANSCEIVER**

# IC-A220
For USA

- **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**

### And more
• 8.33 kHz/25 kHz channel spacing with the mixed selection function • 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 • 8 W carrier power

---

## Enhanced Ground Crew Communications

**IC-A120**

**IP54**

**VHF AIR BAND TRANSCEIVERS**

# IC-A120
For USA/EXP

# IC-A120E
For EUR

- **Full dot-matrix display, simple operation**
- **Optional Bluetooth® 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
• 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-PG4 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 | | MULTI-CHARGER | AC ADAPTER |
|---|---|---|---|---|---|---|---|---|---|
| **MODEL NAME** | **BP-288** Li-ion: 7.2 V/2200 mAh (min.) 2350 mAh (typ.) | **BP-278** Li-ion: 7.2 V/1130 mAh (min.) 1190 mAh (typ.) | **BP-279** Li-Ion: 7.2 V/1485 mAh (min.) 1570 mAh (typ.) | **BP-280** Li-ion: 7.2 V/2280 mAh (min.) 2400 mAh (typ.) | **BP-289** LR6 (AA) × 6 cells | **BC-224** Rapid charger | **BC-213** Rapid charger | **BC-214** Rapid multi-charger | **BC-123S**[2] 12 V/1 A |
| **IC-A25N/A25NE IC-A25C/A25CE** | ✔ | | | | | ✔ | | | ✔ (Use with BC-224) |
| **IC-A16/A16E** | | ✔ | ✔ | ✔ | | | ✔ | ✔[1] | ✔ (Use with BC-213) |

*1 AD-130 charger adapter is supplied with the BC-214, depending on the charger version.
*2 BC-123SA for USA plug. SE for Europe plug. SV for Australia plug. UK for UK plug.

| | AC ADAPTER | DC POWER CABLES | | CIGARETTE LIGHTER CABLES | | SPEAKER MICROPHONES | | HEADSET ADAPTERS | Bluetooth® HEADSET |
|---|---|---|---|---|---|---|---|---|---|
| **MODEL NAME** | **BC-157S** 12 V/7.5 A | **OPC-515L** | **OPC-656** | **CP-20** | **CP-23L** | **HM-231** Waterproof | **HM-240** Waterproof | **OPC-2379 OPC-2401** (Photo shows OPC-2379) | **VS-3** The side tone function is available. |
| **IC-A25N/A25NE IC-A25C/A25CE** | | | | ✔ | | ✔ | | ✔ (OPC-2379) | ✔ |
| **IC-A16/A16E** | ✔ (Use with BC-214) | ✔ (Use with BC-213) | ✔ (Use with BC-214) | | ✔ (Use with BC-213) | | ✔ | ✔ (OPC-2401) | ✔[3] |

*3 For the versions with built-in Bluetooth®.

| | BELT CLIP | LEATHER BELT HANGERS | | | CHARGER BRACKET | ANTENNA | APPLICATION | PROGRAMMING CABLES | PROGRAMMING SOFTWARE |
|---|---|---|---|---|---|---|---|---|---|
| **MODEL NAME** | **MB-133** | **MB-96F** Fixed type | **MB-96FL** Long type | **MB-96N** Swivel type | **MB-130** | **FA-B02AR** | **RS-AERO1A** Android™ app **RS-AERO1I** iOS™ app | **OPC-478UC** USB type **OPC-2144** Plug adapter cable | **CS-A25 CS-A16** For Windows® PC |
| **IC-A25N/A25NE IC-A25C/A25CE** | ✔ | ✔ (Use with MB-133) | ✔ (Use with MB-133) | ✔ | | ✔ | ✔ (IC-A25N/A25NE) | ✔ (OPC-478UC+OPC-2144) | ✔ (CS-A25) |
| **IC-A16/A16E** | ✔ | ✔ (Use with MB-133) | ✔ (Use with MB-133) | ✔ | ✔ (Use with BC-213) | ✔ | | ✔ (OPC-478UC) | ✔ (CS-A16) |

## RS-AERO1A/RS-AERO1I Flight Planning Software

(Free Download Android™/iOS™ Application from Google Play™ /App Store)

Using the RS-AERO1A (Android™) or RS-AERO1I (iOS™) application, you can make flight plans on an Android/iOS device and import the plan into the IC-A25N/A25NE via Bluetooth®. The following four functions are available:

**1. Create a flight plan**
You can make flight plans on an Android/iOS device by using preprogrammed waypoints.
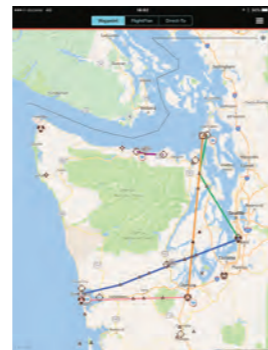
**2. Set Direct-To NAV**
You can select a point on the map and export it to the IC-A25N/NE for Direct-To NAV.

**3. Display flight plan information**
A flight plan in the IC-A25N/NE can be displayed on an Android/iOS device.

**4. Display waypoint information**
Preprogrammed waypoints can be exported to an Android /iOS device and plotted on an map application.

RS-AERO1I map screen example
©2017 Google-Map data /©2017 Google

---

# OPTIONS FOR PANEL MOUNT AND MOBILE TRANSCEIVERS

| | HAND MICROPHONES | | | Bluetooth® HEADSET | Bluetooth® UNIT | HEADSET ADAPTER | REAR PANEL ADAPTERS | |
|---|---|---|---|---|---|---|---|---|
| **MODEL NAME** | **HM-176** Same as supplied with PS-80 and MB-53. | **HM-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-PG4** | **OPC-2275** For connection with VE-PG4. 5m; 16.4ft |
| **IC-A220 TSO version** | | | | | |
| **IC-A220** | ✔ | ✔ | ✔ | | |
| **IC-A210E** | | ✔ | | | |
| **IC-A120/A120E** | | | | ✔ | ✔ |

| | PROGRAMMING CABLES | PROGRAMMING SOFTWARE |
|---|---|---|
| **MODEL NAME** | **OPC-1529R** RS-232 cable **OPC-478UC** USB type **OPC-592** Adapter cable | **CS-A220 CS-A210 CS-A120** For Windows® PC |
| **IC-A220 TSO version** | ✔ (OPC-1529R) | ✔ (CS-A220) |
| **IC-A220** | ✔ (OPC-1529R) | ✔ (CS-A220) |
| **IC-A210E** | ✔ (OPC-1529R) | ✔ (CS-A210) |
| **IC-A120/A120E** | ✔ (OPC-478UC+OPC-592) | ✔ (CS-A120) |

✔ :Applicable    :Not applicable

Some options may not be available in some countries, or unavailable due to no T/A. Please ask your dealer for details.