ICOM

VHF AND UHF TRANSCEIVERS

IC-F1721D
P25 digital VHF transceiver without 10-keypad
IC-F1721
VHF transceiver without 10-keypad
IC-F1821D
P25 digital VHF transceiver with 10-keypad
IC-F1821
VHF transceiver with 10-keypad

IC-F2721D
P25 digital UHF transceiver without 10-keypad
IC-F2721
UHF transceiver without 10-keypad
IC-F2821D
P25 digital UHF transceiver with 10-keypad
IC-F2821
UHF transceiver with 10-keypad

IC-F1721D, F1821D, F2721D, F2821D only.

MDC 1200 Compatible
AES/DES Upgradable

Photo includes optional separation kit, RMK-2 and separation cable, OPC-609.
For organizations who run an analog radio system and must migrate to a conventional P25 digital system, Icom provides one of the best solutions. The new F1721D series mobile allows you to program P25 digital and/or FM analog mode per channel. Flash ROM capability means future upgrades and flexible customization, tailored for your system. Moreover, built-in multiple tone signaling capability and an optional voice scrambler satisfy existing analog FM system requirements. This new Icom’s frequency coverage and rugged construction ensures a flexible, long life radio for you. Icom is the smart choice for current – and future – public safety communication needs.

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<td><strong>IC-F1721</strong> (VHF Analog version)</td>
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</table>
**Interoperability**
The IC-F1721D, F1821D series is APCO Project 25 (P25) compliant. The mixed mode scan allows you to detect and receive both analog FM and P25 digital modes.

**Mixed mode operation**
The IC-F1721D/F1821D is compatible with both analog FM mode and P25 digital mode. Program digital and/or analog FM modes per channel. The mixed mode scan allows you to detect and receive both analog FM and P25 digital modes and to transmit either mode depending on programming.

**Detachable front panel**
With the optional remote control kit, RMK-2 and separation cable, the front panel of the radio can be detached from the main unit. It allows you flexible installation even in limited installation space. Separation cable length is selectable from 1.9, 3.0 and 8.0m.

**Dot matrix, multi-function LCD**
Using a high contrast LCD, the IC-F1721/F1821 series shows operating channels, tone and other settings clearly under nearly any lighting conditions. With a dot matrix display, upper and lower case characters can be easily distinguished. In addition, you can change the display setting to show one line and 12 characters, or two lines and 24 characters via programming.

**Self-ground microphone, HM-148G**
The heavy-duty hand microphone, HM-148G, uses a dynamic design that is made to handle punishment. The oversize dimensions allow for easy use with gloves on. And the curl cord can be easily replaced by simply opening the case — easy maintenance for long term use.

**Rugged construction**
With heavy-duty construction, the IC-F1721/F1821 series is built to last. The IC-F1721/F2721 series incorporates a 4W speaker in an impact resistant polycarbonate front panel for crisp clear audio, and the IC-F1821/F2821 series has a backlit 10-keypad for extended operation. The 10-keypad version is supplied with an external speaker.

**Built-in versatile tone signaling**
Use the built-in CTCSS, DTCS, 2-Tone, or 5-Tone capability to set up your own talk groups, and have your radio standby quietly when other groups are talking. You can also set up selective calls to individuals or control a repeater.

**Multiple 2-Tone, Multiple 5-Tone**
Encode or decode up to 10 2-Tone, 8 5-Tone codes on a single memory channel. This is perfect for professionals who require multiple district paging on one channel. When a matched tone is received, the following items are programmable for each code.
- Bell icon
- Beep sound
- Auto transmit
- External out
- * Not available in digital mode.

**MDC 1200 compatible**
The following selective calling and ANI features are available with the built-in MDC signaling.
- PTT ID/Caller ID
- Selective call
- Emergency, emergency mic monitoring
- Radio stun/revive
- Status/message
- * Not available in digital mode.

**256 memory channels, 32 zones**
Up to 256 memory channels can be divided into 32 memory zones, and allows you quick access to the intended channel.

**Tactical group function**
The tactical group function allows you to copy memory channels to the tactical zone (zone 32) and dynamically regroup memory channels. Using the optional zone copy cable, memory channels in the tactical zone can be transferred from a master radio to other radios.

**AES/DES digital encryption activation software**
AES and DES are encryption standards required by public safety agencies. The IC-F1721D and F1821D series provides secure encryption with DES and AES accordingly when activated with EX-2785 J02 (for DES) and EX-2785 J03 (for AES) activation software.

**Upgrade to digital option**
The IC-F1721/F1821 series is available in two digital versions. One version is P25 compliant out of the box. Version two is an analog only radio* that is future upgradeable to P25 digital compatibility — grow into digital with Icom.

* Optional UT-120 and EX-2785 J01 required.

**Built-in voice scrambler**
The IC-F1721/F1821 series includes a built-in inversion type voice scrambler in all models. When a more secure system is required, the optional voice scrambler unit UT-109 or UT-110 is available.

**Radio stun/kill and Power-on password function**
The radio stun/kill functions* disable a lost or stolen radio over the air, eliminating security threats from undesired listeners. The power-on password prevents unauthorized people turning on the radio.

**Public address (PA) and RX speaker functions**
When an external loud speaker is connected with the radio, you can speak through the radio’s microphone. The RX speaker function allows you to relay the received audio over the loud speaker.

**Other features**
- Microphone hanger action programmable (Scan, monitor, priority channel)
- Optional OPC-617 D-SUB 9 pin connector for dimmer control, modem connection
- D-SUB 25 pin connector
- Built-in audio compander*
- Wide frequency coverage (136–174, 400–470 and 450–512MHz)
- * Not available in digital mode.
VHF AND UHF TRANSCEIVERS

IC-F1721/D/F1821/D • IC-F2721/D/F2821/D

SPECIFICATIONS

GENERAL
- Frequency range: IC-F1721/D, F1821/D 136–174MHz, IC-F2721/D, F2821/D 400–470MHz, 450–512MHz
- Number of channels: 256 channels/32 zones
- Channel spacing: 12.5/25kHz, 15/30kHz
- PLL channel step: 2.5kHz, 3.125kHz (VHF), 6.25kHz, 6.75kHz (UHF)
- Antenna impedance: 50Ω
- Operating Temp. range: −30˚C to +60˚C
- Power supply requirement: 13.6V DC nominal
- Current drain (approx): Tx 50W/45W 14.0A, Rx Max. audio 1200mA
- Dimensions (W×H×D): 175×45×170 mm (projections not included)
- Weight (approx): 1.5kg; 3.3lb

TRANSMITTER
- Output power (approx): 50W (VHF), 45W (UHF)
- Max. frequency deviation: ±5.0/2.5kHz (Wide/Narrow)
- Frequency error: ±0.02ppm
- Spurious emissions: 75dB typ.
- FM Hum and Noise: 45/40dB typ. (Wide/Narrow)
- Adjacent channel power: 70/60dB min. (Wide/Narrow)
- Audio harmonic distortion: 3% typ. (40% deviation)
- Modulation limiting: 70–100% of Max. deviation
- Ext. microphone impedance: 600Ω (8-pin modular)

RECEIVER
- Sensitivity: Analog (12dB SINAD) 0.25/0.3µV typ. (VHF/UHF), Digital (5% BER) 0.25/0.3µV typ. (VHF/UHF)
- Squelch sensitivity (at threshold): 0.25/0.3µV typ. (VHF/UHF)
- Adjacent channel selectivity: Analog 80/75dB typ. (Wide/Narrow), Digital 73dB typ.
- Spurious response: 80dB typ.

SPECIFICATIONS

TRANSMITTER
- Intermodulation
  - Analog: 77/75dB typ. (Wide/Narrow)
  - Digital: 77dB typ.
- Hum and noise ratio: 50/45dB typ. (Wide/Narrow)
- Audio output power: 4W typ.
- External audio (D-sub) cable
  - Digital: 220V typ. at 10% distortion with a 4Ω load
- External speaker connector: 2-conductor 3.6 (mm) (‘”)/(4)Ω

Applicable U.S. Military Specifications

| Standard | Method | Proc.
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<td>Low Pressure</td>
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<tr>
<td>Low Temperature</td>
<td>50°F</td>
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<tr>
<td>Temperature Shock</td>
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<td>I</td>
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<tr>
<td>Vibration</td>
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<td>II</td>
</tr>
<tr>
<td>Impact</td>
<td>11g</td>
<td>II</td>
</tr>
<tr>
<td>Salt Fog</td>
<td>50 g</td>
<td>I</td>
</tr>
<tr>
<td>Rain</td>
<td>31g</td>
<td>I</td>
</tr>
<tr>
<td>Shock</td>
<td>31g</td>
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Also meets equivalent MIL-STD-810-C, -D and -E.

OPTIONS

Some options may not be available in some countries. Please ask your dealer for details.

HAND MICROPHONES
- HM-152: Regular hand microphone.
- HM-152T: DTMF microphone.

DESKTOP MICROPHONE
- SM-25: Compact mobile speaker.

EXTERNAL SPEAKERS
- SP-30: 20W rated input power (40W max. input).
- SP-22: Compact and easy-to-install. Same as supplied with IC-F1821/F2821.
- SP-10: Compact mobile speaker. SP-5: Large speaker for good audio quality.

For front panel detachment installation. Use with one of the following separation cables.

SEPARATION CABLES
- OPC-609: 1.9m; 6.2ft separation cable.
- OPC-608: 8m; 26.2ft separation cable.
- OPC-607: 1.9m; 6.2ft separation cable.
- OPC-609: 1.9m; 6.2ft separation cable.
- OPC-608: 8m; 26.2ft separation cable.
- OPC-607: 1.9m; 6.2ft separation cable.
- OPC-608: 8m; 26.2ft separation cable.

For external connection such as dimmer control, PTT control, horn drive, etc.

ZONE COPY CABLES
- OPC-1532: Mobile to mobile zone copy cable.
- OPC-1533: Mobile to handy zone copy cable.

ACTIVATION SOFTWARE
- EX-2785 J01: P25
- EX-2785 J02: DES
- EX-2785 J03: AES

ACC CABLE
- OPC-617

For IC-F1821/D, F2821/D only.

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