



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)

YOUR MOBILE ANALOG TO DIGITAL CONVERSION



IC-F1721D, F1821D, F2721D,
F2821D only.

Photo includes optional separation kit, RMK-2 and separation cable, OPC-609.

Icom Inc.

The smart migration to an APCO P25 digital radio system

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.



VHF AND UHF TRANSCEIVERS without 10-keypad

IC-F1721D

(VHF P25 digital version)

IC-F1721

(VHF Analog version)

IC-F2721D

(UHF P25 digital version)

IC-F2721

(UHF Analog version)



VHF AND UHF TRANSCEIVERS with 10-keypad

IC-F1821D

(VHF P25 digital version)

IC-F1821

(VHF Analog version)

IC-F2821D

(UHF P25 digital version)

IC-F2821

(UHF Analog version)

Project 25 (P25) Digital Features



Interoperability

The IC-F1721D/F1821D series is APCO Project 25 (P25) compliant. It ensures interoperability with other manufacturer's P25 digital radios in conventional mode.

Upgrade to digital option*

The IC-F1721D/F1821D 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.

Flash Upgradeable*

Enables future enhancements such as AES/DES digital encryption capability to be uploaded from a PC.

Mixed mode operation

The IC-F1721D/F1821D series 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.

Other features

- NAC (Network Access Code) operation provides quiet stand-by in a large group and is used to open a closed digital repeater.
- Selective call/individual call using Unit ID and talkgroup ID
- 100 Unit ID, 250 talkgroup ID memories

(* Upgrade software and AES/DES digital encryption will be available in the near future.)

Mechanical and Analog Features

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.



Two line setting display example

Heavy-duty microphone, HM-148

The new heavy-duty hand microphone, HM-148, uses a dynamic design that is made to handle punishment. The oversized 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
- External out
- Answer back
- Auto transmit
- Stun
- Scan

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 into a new memory zone (using Zone 32) without using PC programming. This function allows you to construct a temporary work group on site for working with interorganization groups, such as in case of a large scale disaster.

Built-in inversion type 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.

* These voice scrambler functions are not available in digital mode.

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 for future PC connection
- Built-in audio compander (Analog mode only)
- Wide frequency coverage (136–174, 400–470 and 450–512MHz)
- LTR® Trunking system capability with the optional UT-111 installed.
- PC programming capability

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)
5kHz, 6.25kHz (UHF)
- Antenna impedance : 50Ω
- Operating Temp. range : –30°C to +60°C
: –22°F to +140°F
- Power supply requirement : 13.6V DC nominal
- Current drain (approx) :
Tx 50W/45W 14.0A
Rx Max. audio 1200mA
Stand-by 600mA
- Dimensions (W×H×D) : 175×45×170 mm
(projections not included) ; 6⁷/₈ × 1²⁹/₃₂ × 6¹/₁₆ in
- Weight (approx.) : 1.5kg; 3.3lb

Measurements made in accordance with EIA-152C/204D, TIA-603. All stated specifications are subject to change without notice or obligation.

TRANSMITTER

- Output power (approx) : 50W (VHF)
45W (UHF)
- Max. frequency deviation : ±5.0/2.5kHz (Wide/Narrow)
- Frequency error : ±2.0ppm
- 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%
- Ext. microphone impedance : 600Ω (8-pin modular)

Supplied Accessories

- Hand microphone, HM-148
 - Microphone hanger
 - External speaker, SP-22*
 - DC power cable
 - Mounting bracket kit
 - Key assign stickers
- * For IC-F1821/D, F2821/D only.

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.
- 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) 22W typ.
at 10% distortion with a 4Ω load
- External speaker connector : 2-conductor 3.5 (d) mm
(¹/₈")/4Ω

OPTIONS

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

HAND MICROPHONES



HM-100N



HM-100TN



HM-148

HM-100N : Regular hand microphone.

HM-100TN : DTMF microphone.

HM-148 : Dynamic microphone for heavy duty use. Same as supplied.

SM-25
DESKTOP MICROPHONE

Convenient for dispatching,
equipped with monitor switch.

EXTERNAL SPEAKERS



SP-5



SP-22

SP-5 : Large speaker for good audio quality.

SP-22 : Compact and easy-to-install. Same as supplied
with the IC-F1821/D and F2821/D.

SEPARATION KIT



RMK-2

SEPARATION CABLES

OPC-607
(3m; 9.8ft)OPC-608
(8m; 26.2ft)OPC-609
(1.9m; 6.2ft)

RMK-2 : For front panel detachment installation.

Use with one of the following cables: OPC-609 (1.9m; 6.2ft), OPC-607 (3m; 9.8ft), or
OPC-608 (8m; 26.2ft).

OPC-617
ACC CABLE

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

INTERNAL UNITS

UT-109 (Ver. 02)
VOICE SCRAMBLER
UNITUT-110 (Ver. 02)
VOICE SCRAMBLER
UNITUT-111
LTR® TRUNKING
UNIT

UT-109 (Ver. 02): Non-rolling type voice scrambler.

UT-110 (Ver. 02): Rolling type voice scrambler.

UT-111 : Provides LTR® trunking capabilities.

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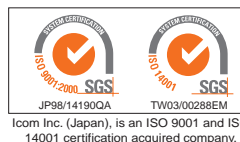
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