



VHF AND UHF TRANSCEIVERS

IC-F70DT

(P25 digital VHF transceiver with 10-keypad)

IC-F70T

(VHF transceiver with 10-keypad)

IC-F70DS

(P25 digital VHF transceiver without 10-keypad)

IC-F70S

(VHF transceiver without 10-keypad)

IC-F80DT

(P25 digital UHF transceiver with 10-keypad)

IC-F80T

(UHF transceiver with 10-keypad)

IC-F80DS

(P25 digital UHF transceiver without 10-keypad)

IC-F80S

(UHF transceiver without 10-keypad)

DIGITAL



IC-F70DT/DS, IC-F80DT/DS only.



Submersible
1m depth for 30 minutes

Icom Inc.

The Smart Migration to an APCO P25 Digital Radio System



▲ IC-F70T

▲ IC-F80S

Icom provides an intelligent solution for digital migration to an APCO P25 digital radio system from an existing analog system in the IC-F70D/F80D series. Programmable conventional P25 digital and/or FM analog mode per channel, Flash ROM CPU for future upgrades allows you to tailor the system you connect. Moreover, advanced mechanical and analog features such as rugged waterproof construction, built-in multiple signalings and a large capacity Lithium-Ion battery pack satisfy the needs of current analog users. Icom is the smart choice for current – and future – public safety communication needs.

IPX7 waterproof protection

The water removal design from the speaker grill keeps the communication clear, no matter what the elements are. The IC-F70/F80 series has waterproof construction that is sealed with waterproof gaskets.

* According to the International Standard IEC 60529 (2001). 1m depth for 30 minutes.

Built-in multiple signaling

Use the built-in CTCSS, DTCS, 2-Tone, 5-Tone and BIIS capability to set up your own talk groups and quiet stand-by when others are talking. You can also set up selective calls to individuals or control a repeater.

Multiple 2-Tone, Multiple 5-Tone

Up to 10 2-Tone and 8 5-Tone codes can be decoded 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
- Answer back
- Stun
- Beep sound
- Auto transmit
- Scan

VHF TRANSCEIVERS

IC-F70DT/T

P25 digital/analog FM with 10-keypad

IC-F70DS/S

P25 digital/analog FM without 10-keypad

UHF TRANSCEIVERS

IC-F80DT/T

P25 digital/analog FM with 10-keypad

IC-F80DS/S

P25 digital/analog FM without 10-keypad

Project 25 (P25) Digital Features



Interoperability

The IC-F70D, F80D 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-F70D, F80D 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-F70D, F80D 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.)

Advanced Mechanical and Analog Features

Li-Ion battery pack

The large capacity 1600mAh Lithium-Ion (Li-Ion) battery pack, BP-235 provides a practical 8 hours* of operating time. Li-Ion batteries allow flexible charging and have almost no memory effect.

* Typical operation Tx:Rx: Stand-by=5:5:90

Alphanumeric display

The large high contrast LCD clearly shows a variety of information with a full dot-matrix display. Program the display to show either 1 line with 12 characters or 2 lines with 24 characters. The functions assigned to the P buttons (P0–P3) are shown at the bottom of the display.



The bottom side shows the assigned functions.

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.

Built-in voice scrambler

The IC-F70/F80 series includes a built-in inversion type voice scrambler. 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.

Wide range coverage and large channel capacity

The IC-F70/F80 series covers a wide frequency range in one version. The large capacity of 256 memory channels with 32

memory zones allow you to divide and store a variety of channels from local to wide area network channels.

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.

Other features

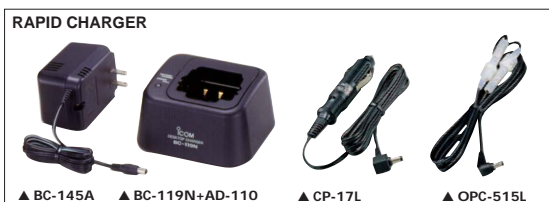
- Built-in audio compander
- 8 DTMF autodial memories
- Normal and priority scans
- 2 step power saver
- Busy, repeater lockout functions
- Wide and narrow (25/12.5kHz) channel spacing is programmable
- Power ON password, and more...

OPTIONS

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



BP-235 Li-Ion BATTERY PACK, 7.4V/1600mAh Provides 8 hours operating time* (approx.).
BP-236 Li-Ion BATTERY PACK, 7.4V/2400mAh Provides 12 hours operating time* (approx.).
BP-237 BATTERY CASE: AA (LR6)x6 alkaline cells. BP-237 is water-resistant, equivalent to IPX4.
 * Tx: Rx: standby=5:5:90.



BC-145A AC ADAPTER
BC-119N+AD-110 DESKTOP CHARGER + AD-110 CHARGER ADAPTER + BC-145A AC ADAPTER
 Rapidly charges the BP-235 in 2.5 hours and BP-236 in 3.5 hours.
CP-17L : CIGARETTE LIGHTER CABLE **OPC-515L** : DC POWER CABLE
 For use with the BC-119N. (12–16V DC required)



BC-121N+AD-110 (6 pcs.) MULTI-CHARGER + AD-110 CHARGER ADAPTER
BC-124 AC ADAPTER
 Rapid charges up to 6 battery packs (Six AD-110s are required) in 2.5–3.5 hours.
OPC-656 DC POWER CABLE; For use with the BC-121. (12–20V DC required).



HM-138: Full sized, water-proof construction equivalent to IPX7. (1 m/30 min.).



HS-94: Earhook headset with flexible boom microphone.
HS-95: Behind-the-head headset with flexible boom microphone.
HS-97: Throat microphone fits around your neck and picks up speech vibration.
VS-15C: PTT/VOX unit. Required when using these headsets.



MB-93 : Swivel type belt clip.
MB-94 : Alligator type. Same as supplied.
MB-96N : Swivel type belt hanger.
MB-96F : Fixed type belt hanger. For use with MB-94.



ANTENNAS
FA-SC73US
STUBBY ANTENNAS
 • **FA-SC56VS**: 150–162MHz
 • **FA-SC57VS**: 160–174MHz
 • **FA-SC73US**: 450–490MHz

INTERFACE CABLE
OPC-966 : RS-232C interface cable for connecting with a PC.
INTERNAL UNITS
UT-109 : Provides 32 non-rolling type scrambling codes. Version 01 required.
UT-110 : Provides 1020 rolling type scrambling codes. Version 01 required.
UT-111 : Provides LTR® trunking capabilities. Optional internal unit should be installed at an authorized Icom service center only.
ANTENNA CONNECTOR ADAPTER
AD-98FSC : Allows you to connect a BNC-type antenna. (For maintenance use only)

SPECIFICATIONS

GENERAL

- Frequency range :
 - IC-F70T/S, F70DT/DS 136–174MHz
 - IC-F80T/S, F80DT/DS 400–470MHz
 - 450–520MHz
- Number of channels : 256 channels/32 zones
- Channel spacing : 12.5kHz/25kHz, 15kHz/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 : 7.2V DC
- Output power and current drain (at 7.2V DC; approx.):

		IC-F70, F70D	IC-F80, F80D
Output power		5W	4W
Transmit	High	2.2A	2.4A
	Low (1W)	1.5A	1.5A
Receive	AF max.	450mA	450mA
	stand-by	150mA	150mA

- Dimensions (with battery pack): 58.6 (W) × 152 (H) × 38 (D) mm;
(projections are not included) 2⁵/₁₆ (W) × 5³/₃₂ (H) × 1¹/₂ (D) in
- Weight (approx.) : 400g; 14.1oz (with BP-235)
430g; 15.6oz (with BP-236)

TRANSMITTER

- Max. frequency deviation : ±5.0/2.5kHz (Wide/narrow)
- Frequency error : ±2.0ppm
- Spurious emissions : 70dB typ.
- Adjacent channel power : 70/60dB min. (Wide/narrow)
- FM Hum and Noise :
 - VHF 45/40dB typ. (Wide/narrow)
 - UHF 40/35dB typ. (Wide/narrow)
- Audio harmonic distortion : 3% typ. (AF 1kHz, 40% deviation)
- Modulation limiting : 60–100% of max. deviation
- Ext. microphone connector : 9-pin multi connector/600Ω

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

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RECEIVER

- Intermediate frequency : 1st 46.35MHz 2nd 450kHz
- Sensitivity :
 - Analog (12dB SINAD) 0.25μV typ.
 - Digital (5% BER) 0.25μV typ.
- Squelch sensitivity (at threshold) :
 - VHF 0.25μV typ.
 - UHF 0.32μV typ.
- Adjacent channel selectivity :
 - Analog VHF 80/73dB typ. (Wide/narrow)
 - UHF 78/70dB typ. (Wide/narrow)
 - Digital VHF/UHF 60dB typ.
- Spurious response :
 - VHF 80dB typ.
 - UHF 75dB typ.
- Intermodulation : 75dB typ.
- Hum and noise ratio : 45/40dB typ. (Wide/narrow)
- Audio output power : 500mW typ.
(at 5% distortion with an 8Ω load)
- External speaker connector: 9-pin multi connector/8Ω

Supplied accessories: (May differ according to version)



- Alligator-type belt clip, MB-98
- Battery pack, BP-235

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