



VHF AND UHF DIGITAL/ANALOGUE TRANSCEIVERS

IC-F5122D

VHF transceiver

IC-F6122D

UHF transceiver

**Everything you'd expect in a business radio
... Plus Digital!**



IDAS™
ICOM DIGITAL ADVANCED SYSTEM

IDAS™ conventional & IDAS™ single-site trunking

Digital/Analogue mixed mode operation

Superb digital audio clarity

**Built-in 2-tone, 5-tone, CTCSS,
DTCS and MDC 1200 (Analogue mode)**

**MIL-STD-810 F
rugged construction**

**4W (typ.) front
mounted speaker**

25W RF output power

128 channels with 8 zones



Limited functions.

More than Just Smooth Digital Migration!

128 channels with 8 zones

An ample 128 channel capacity allow most companies plenty of room to grow. Up to 8 zones lets you group together channels in logical fashion.

Built military rugged!

The tough aluminum die-cast chassis and polycarbonate front panel have been tested to MIL standard 810F specifications.

Compact hand microphone

Select from 5 levels of mic gain, for clearer transmission.

Optional accessory cable

An external GPS receiver, PC or other device can be connected with the optional OPC-2078 (D-sub 25-pin) or OPC-1939 (D-sub 15-pin). Operating channels can be selected from an external device. (up to 16 preprogrammed channels).

* No digital modulation "IN" using accessory cables.



Photo includes optional OPC-2078.

8-character LCD

An 8-character alphanumeric LCD with user-friendly icons shows a variety of information and operating status such as caller's name, received message, etc.

Large programmable buttons

Programmable P0-P3 buttons provide easy access to frequently used functions. Buttons and LCD display are backlit for night time operation.

Powerful, front-facing speaker

4 watts (typ.) front facing speaker delivers clear and loud audio throughout a vehicle's cabin. Digital modulation adds distinct clarity to received voices.

IDAS™ digital mode operation

The IC-F5122D series provides NXDN™ CAI-based IDAS digital mode operation. It is also compatible with IDAS multi-site conventional and IDAS single-site trunking. The following IDAS features are programmable.

- PTT ID
- Individual/Talkgroup list (Max. 500)
- RAN (Radio Access Number)
- Status
- SDM (Short Data Message)
- Call alert
- Radio check (RX)
- Stun/kill/revive (RX)
- Remote monitor (RX)
- Emergency (No ACK)
- Digital voice scrambler
- GPS data (PC and software required to show received position data)

Built-in 2-Tone and 5-Tone (Analogue mode)

2-Tone and 5-Tone signalings give you selective calling, quiet stand-by and other convenient functions with programming. The stun/kill functions disable a radio over the air and the revive function restores the stunned radio.

MDC 1200 compatible (Analogue mode)

The following MDC features are available with the built-in MDC signaling.

- PTT ID
- Radio check (RX)
- Emergency (No ACK)
- Stun/Revive (RX)
- 500 alias table (Max.)

Lone worker function

When the radio is not operated for a preset period, a warning beep will sound, alerting the radio user to check in. If the radio user does not check in before the preset time runs out, then the radio automatically sends out an emergency signal.

Other features (* = analogue only)

- CTCSS/DTCS encoder/decoder*
- BIIS PTT ID transmission*
- 8 DTMF autodial memories
- Microphone hanger action programmable
- Optional DTMF microphone (HM-152T/HM-148T)
- PC programmable
- Power-on password function
- Time out timer
- Talk around function
- Nuisance delete function*
- Forced narrow function*

TX: Transmit, RX: Receive

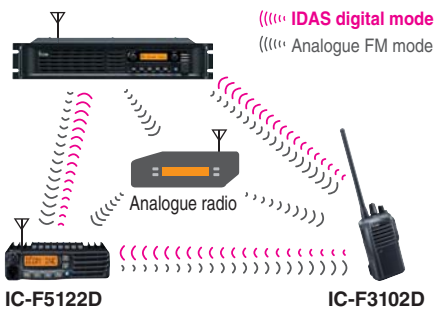
VHF & UHF DIGITAL/ANALOGUE TRANSCEIVERS

IC-F5122D IC-F6122D



The IC-F5122D series : A multitude of advantages because it's IDAS™

Advantage 1 Digital/analogue mixed mode



The IC-F5122D series can receive both analogue and digital mode signals on a single channel and automatically selects the received mode to reply to the received call, while the talk back timer remains. It's a smart way to grow into digital radio – at your own pace, as your budget and comfort allow.

Advantage 2 Digital and analogue individual/group call



The IC-F5122D series allows you to call individual or group users. The radio automatically sends own ID number when the PTT button is held down. The alias name or individual/group ID is displayed on the LCD while receiving a message allowing you to identify who is calling.

Advantage 3 Status message and short data message

Status message example



Preprogrammed status comments are displayed to match the status number.

Short data message example

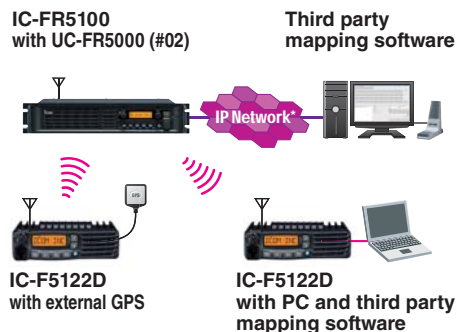


The display shows longer messages by automatic vertical scrolling.

Up to 100 status conditions can be set and sent with voice call. Also, you can request another IDAS radio to send their status and receive it.

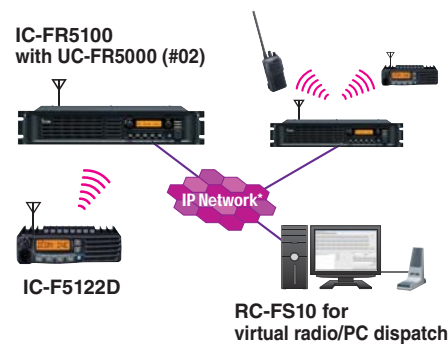
Up to 100-character of short data message can be sent and received. To send more than 9-character short data message, PC connection is required.

Advantage 4 GPS capability



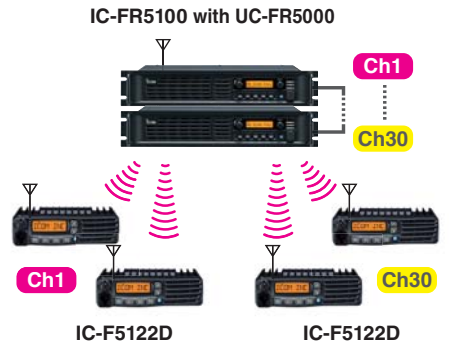
When used with an external GPS receiver, the IC-F5122D series can transmit accurate position data for use with vehicle management applications.

Advantage 5 Multi-site conventional mode



When using the IC-F5122D series in IDAS multi-site conventional mode, the IC-F5122D can communicate with other IDAS radio users working with other repeater sites and/or virtual radio/PC dispatch stations on the IDAS network.

Advantage 6 IDAS single-site trunking



The IC-F5122D series can be used in an IDAS single-site trunking system. The IDAS trunking system is a distributed system with no dedicated control channel, so more voice traffic channels are available for increased system capacity.

All advantages shown represent possible system configurations. Ask your Icom dealer to configure an IDAS system that works best for you.

*Note: Private IP Network or VPN Tunnels through the Internet with static endpoints.

SPECIFICATIONS

	IC-F5122D	IC-F6122D
GENERAL		
Frequency coverage	136–174MHz	400–470MHz
Number of channels	128 channels (8 zones)	
Type of emission	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1D/F1E	
Channel spacing	25/12.5/6.25kHz, 20/12.5/6.25kHz	
PLL channel step	2.5/3.125kHz	
Power supply requirement	13.2V DC	
Current drain (approx.)		
Tx 25W	5A	5A
Rx Max. audio	1.2A	1.2A
Standby	300mA	300mA
Antenna impedance	50Ω (SO-239)	
Operating temperature range	–25°C to +55°C	
Dimensions (W×H×D) (Projections not included)	150×40×117.5mm	
Weight (approx.)	800g	
TRANSMITTER		
Output power (at 13.2V DC)	25W, 10W, 2.5W (Hi, L2, L1)	
Max. frequency deviation	±5.0kHz/±4.0kHz/±2.5kHz (W/M/N)	
Frequency stability	±1.0ppm	
Spurious emissions	0.25μV (<1GHz) 1.0μV (>1GHz)	
Residual modulation	55/53/50dB typ. (Wide/Narrow)	
Audio harmonic distortion	3% typ. (AF 1kHz 40% deviation)	
FSK error	5% Max. (Digital)	
Ext. microphone impedance	600Ω (8-pin modular)	

Measurements made in accordance with EN 300-086, EN 301-166.
All stated specifications are subject to change without notice or obligation.

	IC-F5122D	IC-F6122D
RECEIVER		
Sensitivity (at 20dB SINAD) (at 5% BER)	–4dBμV typ. (emf) –8dBμV typ. (emf)	
Adjacent channel selectivity	80/80/70dB typ. (W/M/N), 65dB typ. (digital)	75/75/70dB typ. (W/M/N), 60dB typ. (digital)
Spurious response rejection	70dB min.	
Intermodulation rejection	67dB typ. (W/M/N)	
Hum and noise	55/53/50dB typ. (W/M/N)	
Audio output power (at 5% distortion, 4Ω load)	4W typ.	
Ext. speaker connector	2-conductor 3.5 (d) mm (1/8")/4Ω	

Applicable U.S. Military Specifications

Standard	MIL 810 F	
	Method	Procedure
Low Pressure	500.4	I, II
High Temperature	501.4	I, II
Low Temperature	502.4	I, II
Temperature Shock	503.4	I
Solar Radiation	505.4	I
Humidity	507.4	–
Settling Dust	510.4	III
Vibration	514.5	I, II
Shock	516.5	I, IV

Also meets equivalent MIL-STD-810-C, -D and -E.

Supplied Accessories

- Hand microphone (HM-152)
- DC power cable
- Mounting bracket kit
- Microphone hanger
- Key assign stickers

OPTIONS

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

HAND MICROPHONES



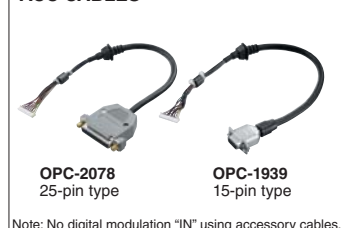
DESKTOP MICROPHONE



EXTERNAL SPEAKERS



ACC CABLES



Note: No digital modulation "IN" using accessory cables.

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