



VHF AND UHF DIGITAL REPEATERS

IC-FR5200H

VHF Repeater (50W)

IC-FR6200H

UHF Repeater (50W)

50W Full Duty Cycle Digital Repeater



IDAS™
ICOM DIGITAL ADVANCED SYSTEM



TYPE-D

50W 100% Duty Cycle Operation

Employing a high performance power amplifier, together with the solid heatsink built into the chassis, the IC-FR5200H series provides a reliable 100% duty cycle operation at 50W output.

IDAS, Analog FM and Mixed Mode

The IC-FR5200H series is compatible with both analog FM mode and IDAS conventional and NXDN™ Type-D trunking mode. Program digital and/or analog FM modes per channel. The mixed mode operation allows you to receive both analog FM and IDAS conventional modes and to transmit either mode depending on the received signal.

32 Channel Capacity and 5 Programmable Buttons

The 12-digit dot-matrix display, 5 programmable buttons, 32 memory channels and internal speaker allow you to use the repeater as a simple base station or to check repeater activity. LEDs on the front panel show channel conditions.

Type-D Trunking and Network Controller*

The Type-D multi-site trunking/conventional functions can be integrated in the repeater. The IP network capability extends your communication coverage and allows you to remotely control the repeater settings.

*By adding UC-FR5000 & CF-FR5000.

D-SUB 25-pin Accessory Connector

The IC-FR5200H series has a programmable D-SUB 25-pin accessory connector for connecting external remote control devices. Also, modulation/demodulation signals can be input/output from the D-SUB connector.

Multiple CTCSS, DTCS Tone and RAN Code Decode

The IC-FR5200H series decodes multiple CTCSS and DTCS as well as digital RAN (Radio Access Number) codes on a per channel basis (up to 16 tones/codes) and downlinks the received signal with a specified tone/code. This function is useful for sharing a channel with multiple groups.

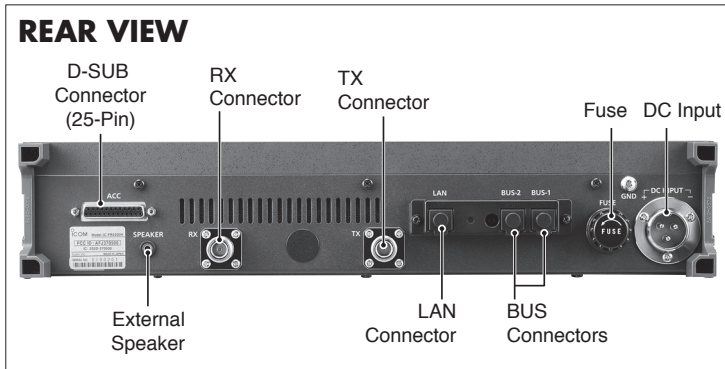


Other Features

- CW ID transmission
- ±0.5ppm high frequency stability (Digital mode)
- 2U low profile for 19-inch rack mount
- Digital voice scrambler provides 15-bit key (about 32,000 codes)
- Built-in inversion voice scrambler (Analog mode)
- Built-in audio compander (Analog mode)
- PTT priority setting (Local Mic., external PTT or repeater operation)
- 5-Tone and DTMF encoder/decoder (Analog mode)
- Normal and priority scan
- Convenient key assign stickers supplied
- Beat cancel capability
- Low voltage alert (Analog mode)

SPECIFICATIONS

	IC-FR5200H	IC-FR6200H
GENERAL		
Frequency coverage	136–174MHz	400–470, 450–512, 450–520, 350–400* MHz (* Non-FCC)
Number of channels	Max. 32 channels	
Channel spacing	6.25/12.5kHz	6.25/12.5/25kHz*
Type of emission	16K0F3E, 11K0F3E/F7E/F7D/F7W, 4K00F1E/F1D/F3E	
Frequency stability	±0.5ppm	
Antenna impedance	50Ω (Type-N x 2)	
Operating temperature range	–30°C to +60°C; –22°F to +140°F	
Power supply voltage	13.6V DC	
Current drain (at 13.6V DC)		
TX 50W	11A	11A
RX Max. audio/Stand-by	1.2A/500mA (LCD backlight OFF)	1.2A/450mA (LCD backlight OFF)
Dimensions (W×H×D)	483×88×360 mm ; 19.02×3.46×14.17 in	
Weight	10kg ; 22lb (approx.)	
TRANSMITTER		
Output power	50W (adjustable to 5W)	
100% duty cycle	50W (at 20–35°C, 24 hours)	
Max. frequency deviation	±5.0kHz/±2.5kHz (W/N)	
Spurious emissions	80dB typ.	
FM hum and noise	52/49dB typ. (W/N)	50/45dB typ. (W/N)
Audio harmonic distortion	1% typ. (40% deviation)	
Digital FSK error	5% Max.	
Microphone impedance	600Ω (8-pin modular)	
RECEIVER		
Sensitivity 12dB SINAD	0.30μV typ.	0.25μV typ.
5% BER	0.25μV typ.	0.25μV typ.
Adjacent channel selectivity	85/56dB typ. (W/N)	78/56dB typ. (W/N)
	68dB typ. (Digital)	63dB typ. (Digital)
Spurious response	80dB (W/N)	80dB (W/N)
	75dBμV emf (Digital)	80dBμV emf (Digital)
Intermodulation rejection	78dB typ. (W/N)	78dB typ. (W/N)
	75dBμV typ. emf (Digital)	75dBμV typ. emf (Digital)
Hum and noise ratio	52/50/66dB typ. (W/N/D)	50/45/55dB typ. (W/N/D)
Audio output power	4.0W typ. at 5% distortion with a 4Ω load	
External speaker connector	2-conductor 3.5 (d) mm (1/8")/4Ω	



OPTIONS

HAND MICROPHONE HM-152

DESKTOP MICROPHONE SM-26

EXTERNAL SPEAKERS
 SP-35: 2m cable
 SP-35L: 6m cable

TRUNKING/NETWORK CONTROL BOARD UC-FR5000

MULTI-SITE IP REPEATER LINK CARD CF-FR5000 02
 (conventional)
CF-FR5000 MT
 (conventional & trunking)

Requires UC-FR5000 board

Measurements made in accordance with TIA-603-C (for FM) and EN 301 166 (for Digital). All stated specifications are subject to change without notice or obligation. * 25kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions. Ask your dealer if you need 25kHz bandwidth.

Applicable U.S. Military Specifications

Standard	MIL 810 G	
	Method	Procedure
Low Pressure	500.5	I, II
High Temperature	501.5	I, II
Low Temperature	502.5	I, II
Temperature Shock	503.5	I-C
Humidity	507.5	II
Vibration	514.6	I
Shock	516.6	I

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

Supplied Accessories

- DC power cable
- Handle kit
- Key assign stickers
- Mounting rack
- Spare fuse

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