



VHF AND UHF DIGITAL REPEATERS

**IC-FR5200H**

VHF Repeater (50 W)

**IC-FR6200H**

UHF Repeater (50 W)

# **Fanless dPMR™ Digital Repeater** **Reliable 50 W Full Duty Operation**



**IDAS™**  
ICOM DIGITAL ADVANCED SYSTEM

**dPMR™**  
digital

6.25 kHz FDMA  
True RF Efficiency

## **50 W 100% Duty Cycle Operation**

Employing a high performance power amplifier, together with the solid heatsink built into the chassis, the IC-FR5200H series provides 50W output at 100% duty cycle operation. No internal cooling fan required.

## **dPMR™ Mode 3 Digital Trunking**

With the external controller, IC-FC5000E, the IC-FR5200H series can be used in a dPMR Mode 3 digital trunking system. A small number of communication channels are automatically and dynamically allocated to accommodate a large number of subscribers. The trunking sites can be interconnected over an IP network.

## **dPMR™ Mode 2, Analog FM and Mixed Mode**

The IC-FR5200H series is compatible with both analog FM mode and dPMR single site conventional mode (Mode 2). Program digital and/or analog FM modes per channel. The mixed mode operation allows you to receive both analog FM and dPMR Mode 2 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.

## **Multiple CTCSS, DTCS Tone and CC Decode**

The IC-FR5200H series decodes multiple CTCSS and DTCS as well as digital CC 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.

## **19-inch Rack Mount, 2U Height Low Profile Design**

The IC-FR5200H series uses only 2U height. This low profile configuration allows you to stack multiple units in an industry standard 19-inch rack and provides great space efficiency.

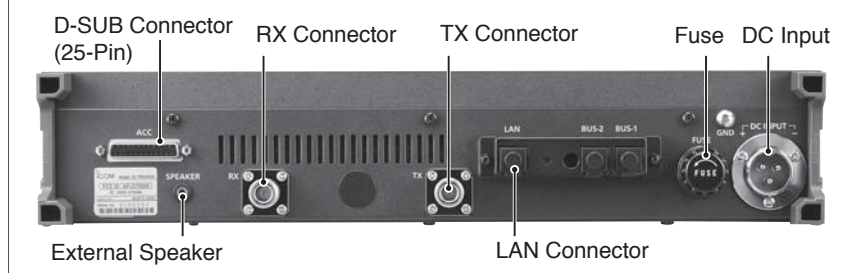


## Other Features

- CW ID transmission
- ±0.5ppm high frequency stability
- D-SUB 25-pin accessory connector
- PTT priority setting (Local microphone, external PTT or repeater operation)
- Normal and priority scan
- Key assign stickers supplied
- Digital voice scrambler provides 15-bit key (about 32,000 codes)
- Built-in inversion voice scrambler\*
- Built-in audio compander\*
- 5-Tone and DTMF encoder/decoder\*
- Low voltage alert

\* Analog mode only.

## REAR VIEW



## OPTIONS

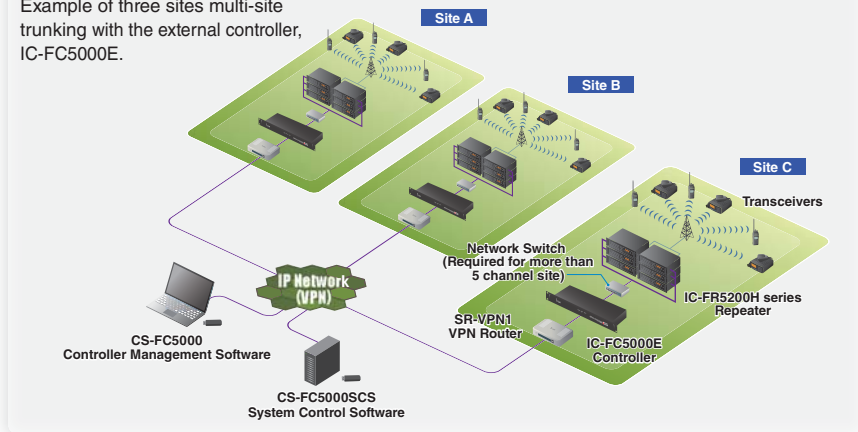
**HAND MICROPHONE HM-152**

**DESKTOP MICROPHONE SM-26**

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

## dPMR Mode 3

Example of three sites multi-site trunking with the external controller, IC-FC5000E.



## SPECIFICATIONS

	IC-FR5200H	IC-FR6200H
<b>GENERAL</b>		
Frequency coverage	136–174 MHz	350–400, 400–470 MHz
Number of channels	Max. 32 channels	
Channel spacing	6.25/12.5/20/25 kHz	
Type of emission	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E/F1D/F3E	
Frequency stability	±0.5 ppm	
Antenna impedance	50 Ω (Type-N x 2)	
Operating temperature range	–30°C to +60°C; –22°F to +140°F	
Power supply voltage	13.2 V DC	
Current drain TX 50 W	11 A	
(at 13.6 V DC) RX Max. audio Stand-by	1.2 A 550 mA typ. (at LCD backlight OFF)	
Dimensions (W x H x D)	483 x 88 x 360 mm	
Weight	10 kg (approx.)	
<b>TRANSMITTER</b>		
Output power	50 W (adjustable to 5 W) 100% duty cycle (at 20–35°C, 24 hours)	
Max. frequency deviation	±5.0/±4.0/±2.5 kHz (W/M/N)	
Spurious emissions	0.25 μW (≤1 GHz), 1.0 μW (>1 GHz)	
Audio harmonic distortion	1% typ. (40% deviation)	
Intermodulation attenuation	40 dB min.	
Digital FSK error	5% Max.	
Microphone impedance	600 Ω (8-pin modular)	
<b>RECEIVER</b>		
Sensitivity Analog	–10 dBμV max. (12 dB SINAD)	
Digital	0 dBμV emf. max. (1% BER)	
Adjacent channel selectivity (W/M/N) (Digital)	86/83/75 dB typ.	79/76/71 dB typ.
Spurious response (W/M/N) (Digital)	80 dB 90 dBμV emf	
Intermodulation (W/M/N) (Digital)	75/75/73 dB typ.	72/72/71 dB typ.
rejection (Digital)	76 dBμV emf typ.	76 dBμV emf typ.
Audio output power	3.5 W min. (5% distortion, 4 Ω load)	
External speaker connector	2-conductor 3.5 (d) mm (1/8")/4 Ω	

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

Supplied Accessories		
• DC power cable	• Handle kit	• Key assign stickers
• Mounting rack	• Spare fuse	

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