

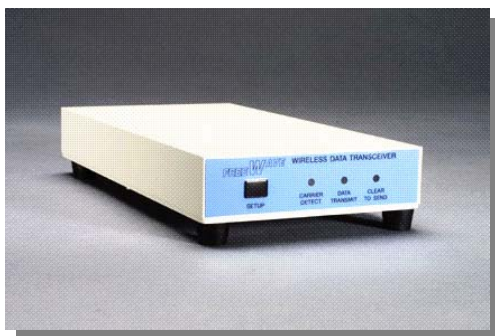


FGR-115H 900 MHz Spread Spectrum Radios

Features:

FreeWave® Technologies FGR-115H spread spectrum radio provide reliable long range data communications. FreeWave radios set up quickly and result in no ongoing access fees. When used in conjunction with other data links it is possible to combine wireless and wire line data communications, essentially allowing data from the most remote areas to be made available around the world.

- **Frequency Hopping**
- **High Speed** –115.2 Kbps true throughput.
- **Long Range** – 60+ mile range with clear line of sight, ability to extend through repeaters.
- **Error Free Communications** – 32 bit CRC with automatic retransmission.
- **Industrial Grade Specifications** – 100% tested for full performance from -40°C to +75°C.
- **Repeater** and simultaneous Slave and Repeater function all in a single radio.
- **Improved supply voltage range and power consumption.** Input voltage range is now 6-30 VDC at full RF output power. Receive current is less than 86 mA @ 12 VDC. A new sleep mode consumes only 6 mA. A unit in sleep mode will wake up, synchronize with the network, and accept data in less than 150 *microseconds*.
- **RS232 Interface.**
- **Noise Immunity** – Superior performance in noise congested environments.
- **Secure** – proprietary spread spectrum technology prevents detection and unauthorized access.
- **100% backward compatible** with every 900 MHz FreeWave radio ever shipped.



FGR-115H





Communication without barriers

FGR- 115H 900 MHz Spread Spectrum Radios Technical Specifications

Transmitter & Receiver	Transmitter	
	Frequency Range	902-928 MHz
	Output Power	100 mW to 1 watt (+30 dBm)
	Range, Line of Sight	60 miles with clear line of sight
	Modulation	Spread Spectrum GFSK
	Occupied Bandwidth	230 kHz
	Spreading Method	Frequency Hopping
	Hopping Patterns	15 per band, 105 total, user selectable
	Hopping Channels	50 to 112, user selectable
	Hopping Bands	7, user selectable
	Receiver	
	Sensitivity	-108 dBm for 10 ⁻⁶ BER -110 dBm for 10 ⁻⁴ BER
	Selectivity	20 dB at fc ± 115 kHz 60 dB at fc ± 145 kHz
System Gain	140 dB	

Data Transmission & Power	Data Transmission																					
	Error Detection	32 bit CRC, Retransmit on Error																				
	Data Encryption	Substitution, Dynamic Key																				
	Maximum Throughput	115.2 Kbps																				
	Data Interface	RS232																				
	Data Connector	Standard DB9 connector																				
	Power Requirement																					
	Operating Voltage	6-30 VDC																				
	Current Drain	<table border="1"> <thead> <tr> <th>Mode</th> <th>6VDC</th> <th>12 VDC</th> <th>30 VDC</th> </tr> </thead> <tbody> <tr> <td>Transmit</td> <td>1 A</td> <td>500 mA</td> <td>200 mA</td> </tr> <tr> <td>Receive</td> <td>152 mA</td> <td>86 mA</td> <td>43 mA</td> </tr> <tr> <td>Idle</td> <td>40 mA</td> <td>21 mA</td> <td>12 mA</td> </tr> <tr> <td>Sleep</td> <td>8 mA</td> <td>6 mA</td> <td>3 mA</td> </tr> </tbody> </table>	Mode	6VDC	12 VDC	30 VDC	Transmit	1 A	500 mA	200 mA	Receive	152 mA	86 mA	43 mA	Idle	40 mA	21 mA	12 mA	Sleep	8 mA	6 mA	3 mA
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General	General Information	
	Operating Temperature Range	-40°C to +75°C 100% full performance tested
	Dimension	205 mm L x 102 mm W x 28 mm H
	Weight	560 grams
	External Antenna Connector	Reverse SMA
	Humidity	0 to 95% non-condensing

Specifications may change at any time without notice
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