

Redundant Base Controller

Digital Wireless' Redundant Base Controller (RBC™) is the most dependable data radio controller on the market. Completely redundant and fault tolerant, the RBC™ manages base radio traffic without interruption.



The supervisory board automatically detects and corrects component failures. The

unit has two identical processor boards and two power supplies. In the event that one fails, the other will immediately take over.

Since the RBC™ is located at the radio antenna site, Digital Wireless engineers have

incorporated through the MNC™ a direct communication link. A technician can tune the radio modem, adjust parameters, or monitor the radio channels simply by using the MNC™ as the remote access terminal.

The remote access capability, combined with the unit's self-correcting mechanisms, prevent inconvenient trips to the radio transmitter site.

The RBC™ tracks many types of statistics, including the total number of outbound and inbound messages, the number of message errors, and the total number of base radio resets. These statistics are accessible via the unit's 4 line by 40 character LCD, a dial-up modem, or a terminal connection.



Specifications

Dimensions	■	The RBC™'s dimensions are fitted to a standard radio rack: 16.5(L) x 5.2(H) x 15.4(D) in. 419(L) x 132(H) x 391(D) mm
Weight	■	16 lbs. (7 kg)
Enclosure	■	0.1 in. (2.5 mm) rack mount aluminum case
Display	■	4 lines x 40 character supertwist Liquid Crystal Display
Processor	■	16 bit Intel 80188 CPU Processor runs under AMX, a Real Time Operating System for embedded software
Memory	■	32 Kilobytes Nonvolatile RAM 32 Kilobytes Static RAM (expandable to 128 KBytes) 256 Kilobytes Programmable Eprom
Radio Modem	■	4800 QPSK Hamming Forward Error Correction 9600 16-QAM Trellis Coded Modulation 12.5, 20 and 25 kHz bandwidth
Environmental	■	Operating Temperature: -4°F to +140°F (-20°C to +60°C) Storage Temperature: -40°F to +194°F (-40°C to +90°C)
Operating System	■	Based on AMX with layered software for communications, device drivers and local applications
Electrical	■	120 VAC, 2 Amps, 60 Hz 220 VAC, 1.2 Amps, 50 Hz Supports optional 12VDC rechargeable battery backup
Fault Tolerant	■	Dual redundant processor boards Dual redundant power supplies Automatic fault detection and immediate fault correction
LED Indicators	■	5 status bi-colored LED indicators
Speaker	■	0.2 Watt speaker for audio monitoring of the RF transmit and receive channel
Network Gateway	■	RS232C serial interface Digital Wireless proprietary network protocol
Laptop Interface	■	RS232C serial interface Remote access via a dial-up Hayes compatible modem Digital Wireless proprietary terminal protocol
Communications Protocol	■	RF Data Channel: Digital Wireless Mobile Data Terminal with DSMA inbound contention scheme
Data Collection	■	Real-time data logging facility Operational statistics and diagnostics for activity analysis

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