

Outdoor RS-232 Communication Up to 14 Miles

LWNxxx Model Series

--Send and receive data at baud rates up to 38400

--Operate on the 915MHz band. No FCC license required.

Introduction

B&B offers radio modems for outdoor use. These modems act like a hard-wired connection, without the wire. These LWN models use programs such as HyperTerminal for their setup. These outdoor products can reach distances up to 14 miles. Line of sight communications is the only recommended use for the outdoor LWN series products. The modem works with any RS-232 device and will support handshaking - either software or hardware. These modems are robust with internal error detection and retransmission, so the data received is 100% accurate.

Use the radio modems in pairs for a simple connection or replace a network with a modem for each network node. Note that these products are sold separately (1 unit per order). Packet radio technology allows you to operate an almost unlimited number of remote transceivers at one time without interference from each other. These radio modems use the CSMA/CD technique to prevent data collisions. Your PC is used to set unique destination codes and names for each node, but once that is done, a PC connection is not required so the units may be taken to any location.

Model LWN210 is a radio modem that provides a transparent connection between network components at distances up to 14 unobstructed miles. They are excellent for communication over rough terrain or connections between buildings with no or bad cabling. They greatly reduce EMI/RFI interference and the possibility of damage from lightning strikes, compared to overhead lines.

Transceivers are protected by weatherproof polycarbonate housings and provide outstanding temperature performance over a range of -40 to +74°C (-40 to +165°F). The transceiver is also internally waterproofed. The circuit boards and all components are sealed to combat moisture and condensation build-up. The transceivers can be mounted on the antenna mast to ensure a minimum cable loss between the radio and antenna, while using a long RS-232 cable for data interface.

An external antenna must be added for each LWN210 transceiver. (NOTE: The transceiver has a special connector so that only approved antennas can be used. Use of this product without an approved antenna may not comply with FCC and radio requirements.) A unity gain antenna (purchase locally) will typically operate at up to 300 feet indoors or 5,000 feet outdoors under normal conditions. The Model LWN913 13dB antenna will operate at distances up to 14 unobstructed miles or more.

Each transceiver requires a 9 VDC power supply of about 300mA. Model C50 provides a suitable 120 VAC to 9 VDC power supply and a 50' power and signal cable.



Two (2) Model LWN210
Outdoor Radio Modems



Model LWN 913, 13dB Antenna

Model LWN210SLP - Outdoor Communication Up to 14 Miles with Sleep Mode Option

Model LWN210SLP is the same as the LWN210 with an added sleep mode option. The sleep mode allows the LWN210SLP to turn itself off when the serial port has been idle for a time longer than the idle time that is factory set to 10 seconds. The idle time is fixed and only can be set by the factory. A range of idle time can be custom configured at the factory from 5 seconds to 1 minute.

When the sleep mode is activated, the LWN210SLP will not be able to receive any data from the air. The user has to wake the LWN210SLP up regularly to see if there is any message for him. To wake the LWN210SLP, the user only needs to send one character to the serial port and the LWN210SLP will be ready to take or give data in 150 milliseconds.

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Model LWN210 Specifications

Frequency - Channel A	907.45 mHz
Frequency - Channel B	914.81 mHz
Frequency - Channel C	921.10 mHz
Modulation	FSK, Spread Spectrum
Transmit Power	13 dbm, typical
Sensitivity	-97 dbm, typical
Range	Up to 14 miles
Operating Temperature	-40 to +74°C (-40 to 165°F)*
Transceiver Size	4.5L x 3.5W x 2.5H in
Transceiver Weight	1.5 lb

* The radio's performance will deteriorate at temperatures above 55°C (131°F).

- LWN210..... Weatherproof Long Distance Wireless Transceiver (Use one for each communicating location)**
- LWN210SLP.... Weatherproof Long Distance Wireless Transceiver w/Sleep Mode (Use one for each communicating location)**
- LWN800..... Omni-directional Whip Antenna (0dB)**
- LWN801..... Omni-directional Fiberglass Antenna (3dB)**
- LWN803..... Omni-directional Antenna (3dB)**
- LWN913..... YAGI Antenna (13dB)**
- C6 Power Supply, 6 foot Signal and Power Cable with DB-9 connector on loose end**
- C25 Power Supply, 25 foot Signal and Power Cable with DB-9 connector on loose end**
- C50 Power Supply, 50 foot Signal and Power Cable with DB-9 connector on loose end**

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