September 2005

Trimble SNB900 Radio

License-free, high-speed data link for the construction jobsite

General Description

Imagine a radio link for GPS that does not require licensing and is virtually immune to jamming and interference. Trimble introduces the 900MHz product family, featuring the Trimble® SNB900, SNR900 and TNR900. The SNB900 radio is ideal for permanent or mobile base stations and repeaters. You can use the versatile SNB900 for a rover in a supervisor's truck or on a range pole.

The 900MHz frequency offers many advantages for the construction site:

- Virtually immune to interference
- No licensing is required
- Low-latency, high-speed link allows two-way data between office and site machines
- Good operating ranges for construction sites. For areas in radio shadow, such as valleys, now it's easy to place a SNB900 as a repeater.
- The internal battery provides added daily productivity, as setup is faster and easier.

Convenient Portability – The SNB900 is so lightweight and portable, it fits in your jacket pocket to carry onto the jobsite. The built-in screen and keyboard make onsite setup and status checking even more convenient–you don't need an external PC or data collector when in the field. You can set up operating modes, network configurations, port and display configurations, and check on battery status, radio status, operating mode, and network number. Then simply call the site office staff to check the status onscreen instead of driving there.

External Antenna – The SNB900 features an external antenna that easily mounts on a single tripod with the GPS base antenna. The external antenna also lets you locate the SNB900 in a locked, secure position with only the antenna outside. Unlike systems with the radio antenna integrated into the top of the GPS antenna. Now it's easy to place the antenna higher to achieve the greater range needed for base station applications. The external antenna also allows for any necessary lighting protection to be added.

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Easy Setup – You can quickly set up a repeater—just find a suitable location, place the SNB900, and turn it on. Because the SNB900 operates on internal batteries, it will run all day with no external power source. As many as four SNB900 repeaters, are supported from a single base station, with the ability to have three in a row. Since no setup software and PC/data collector are required to set up a repeater function, the reception statistics on the display make it easy to select an optimal location.

Internal battery – The SNB900 operates all day with no external battery for fast set up as a repeater or base. Rover operation is simple since the no cables are required. Because the SNB900 internal battery has its own internal battery charger, when it's connected to the site power supply, it is continually charged. If the site loses power, the radio will continue to operate uninterrupted for up to 10 hours

Dual data links – When you need dual data links on site, it is easy to connect an additional narrowband radio such as the Trimble® TRIMMARK3™ to the SNB900. This is possible as correction data can be passed through the SNB900 to a second radio.

Two-way IP data capable – Connect the SNB900 to the TNR900 to create an IP access point onsite. The SNB900 access point does not have to be at the base station; it can be a repeater site—wherever the Internet connection is available onsite.

The Trimble SNB900 is available for use without a license in the U.S., Canada, New Zealand, and Australia.

Standard Features

- 100% sealed weatherproof housing
- Keyboard and Vacuum Florescent Display (VFD)
- Internal battery lasts more than 10 hours in base operation.
- External antenna
- Base, Repeater and Rover modes of operation
- Low-latency, high-speed data transmission of CMR, CMR+, RTCM-SC104
- Up to four SNB900 repeaters are supported from one base station, with the ability to have three in a row
- 902-928 MHz frequency band with frequency hopping (50 channels, 40 networks)
- Compatible with Trimble SNR900, SiteNet900, TRIMCOMM900, 5700/5800 internal radios
- Bluetooth connectivity

Specifications

Physical characteristics	Specifications
Size	Length: 140 mm (5.5") Width: 130 mm (5.1") Height: 55 mm (2.2")
Weight	1.06 kg (2.34 lb)
Screen	2 line, Vacuum Fluorescent Display

Electrical characteristics	Specifications
Input Range	10.5-32 VDC unconditioned
Nominal	3 Watts
Transmit	12 Watts
Protection	Reverse Polarity
Connectors	7-pin Lemo female, RS232/power; DB26 male, triple row, Ethernet/power

Environmental characteristics	Specifications
Temperature	Operating: -40°C to +65°C (-40°F to +149°F)
	Storage: -55°C to +75°C (-67°F to +167°F)
Humidity	100% RH
Sealing	Weather resistant
Shock Vibration	Class A, Personal Portable Equipment

Radio modem performance	Specifications
Modes	Base, Repeater, Rover
Range	Optimal: 10 km or more (6 miles), line of sight Typical: 3-5 km (2-3 miles) varies with terrain, antenna type and operating conditions. A repeater may be used to extend range.
Radio link	
Frequency range	US/Canada: 902-928 MHz Australia: 917-928 MHz New Zealand: 921-928 MHz
Networks	40 user-selectable networks
Transmit Power	Meets FCC requirements of 30dBm maximum power.
Wireless data rates	128 kps

Radio modem performance	Specifications
Antenna	Direct mount: 0 dB (Rover operation only) Whip: 0 dB, 5dB (with 5 m antenna cable)

7-pin Lemo connector

Pin	Description
1	Signal GND
2	GND
3	Serial data out (TXD1)
4	Serial data out (TXD2)
5	Serial data in (RXD2)
6	Power In (+)
7	Serial data in (RXD1)

DB26 Ethernet connector

Pin	Description
1	RS232 DTR
2	RS232 CTS
3	RS232 DSR
4	RS232 DCD
5	RS232 RI
6	GND
7	
8	
9	
10	RJ_45 termination 1
11	RS232 RTS
12	RS232 TX
13	RJ_45 termination 2
14	RJ_45 termination 3
15	GND
16	Ethernet RD-
17	Ethernet TD-
18	
19	
20	
21	RS232 RX

Pin	Description
22	RJ_45 termination 4
23	GND
24	
25	Ethernet RD+
26	Ethernet TD+