ZONAR™
Systems

EVIRNET™ Base Station Owners Manual

Zonar Systems LLC

Table of Contents:

Introduction:

The Zonar EVIRNET™ base station radio is a transceiver operating at 902 to 928MHz in the ISM (Industrial Scientific and Monitoring) band of frequencies. The base station radio connects to a PC via serial port, software on the PC communicates with EVIRNET radios located in vehicles through this base station. This communication allows for short range (approximately 1500FT) transfer of Zonar Systems inspection data.

Compliance Statement (Part 15.19)

⚠️ **WARNING:**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) This device must accept any interference received, including interference that may cause undesired operation.

WARNING:

⚠️ To satisfy FCC RF exposure requirements for mobile transmitting devices, use only supplied and approved antenna's with a reverse polarity SMA type connector. Use of unauthorized antenna's or modifications could impair signal quality, void your warranty and/or result in violation of FCC regulations. The end user should also be prevented from being within 20cm of the antenna during normal use.

The preceding statement must be included as a CAUTION statement in manuals for OEM products to alert users on FCC RF Exposure compliance.

Warning (Part 15.21)

Caution: Any change or modification not expressly approved by Zonar Systems could void the user's authority to operate the equipment.

Limited Warranty

Zonar does not represent or warrant that the hardware and software are free of bugs or errors and shall not be liable for any losses (financial or non-financial) occurring as a result of such bugs or errors. No other warranty express or implied, including any warranties of merchantability or particular purpose, is provided for any hardware or software provided pursuant to this contract. Zonar shall not be liable to customer, or any third-party for any general, special, punitive, incidental, indirect or consequential damages, or any lossof profits or business, arising out of this agreement. In no event shall Zonar's liability exceed the value of one month's subscription paid by customer to Zonar, not to exceed one thousand dollars, under this agreement.

Zonar warrants that the hardware and software comprise a verified safety inspection system which, when used according to Zonar's instructions, will allow the customer the ability to verify that safety inspections have occurred. However, Zonar disclaims any liability arising as a result of operator error (whether willful, negligent, or intentional) or misuse of the hardware or software. Customer shall have no other liability and customer shall have no other remedy, except as specifically provided in this paragraph; and in no event shall Zonar be liable for any consequential damages. The terms and conditions of this agreement shall apply to any replacement hardware and software furnished.

Getting Started:

Connect the base station to a PC with a 9 pin "DB-9" serial cable (supplied), then connect the 12VDC regulated power supply (supplied) to the base station.

On the PC, install the ZonarCom 3.x software if it has not been installed yet. Right click on the ZonarCom 3.x icon and select "Settings → Configuration", this will show a dialog box similar to this:
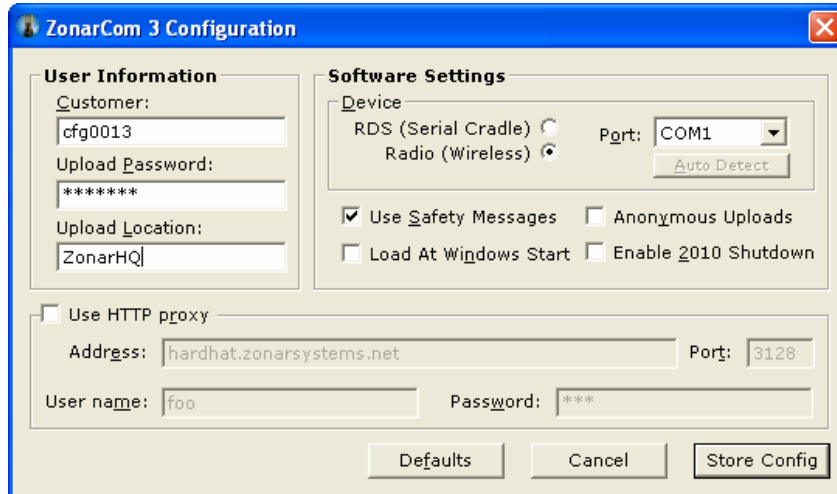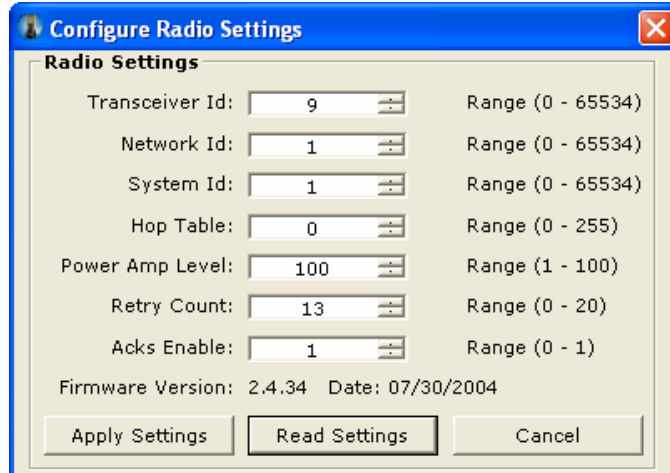

In that dialog box, select "Radio (Wireless)", and the appropriate comm port, then click "Store Config".

The next step is to ensure that the base station can communicate with the PC, to do this, right click on the ZonarCom 3.x icon again and select "Settings → Radio", this will show a dialog box similar to this:
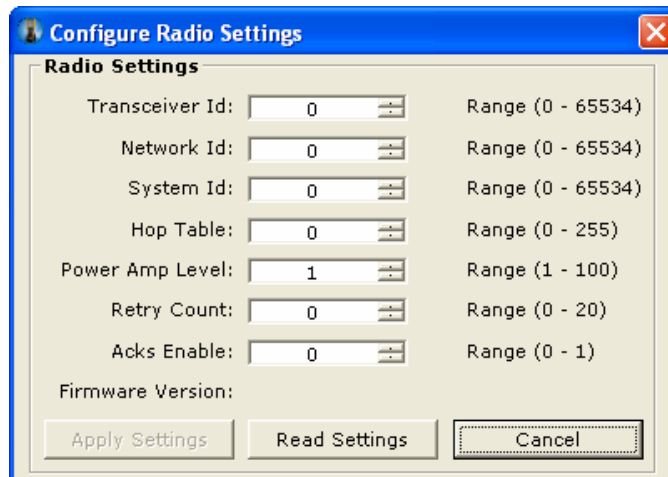
Click on the "Read Settings" box, and notice that the values update:

The updating of data from the "Read Settings" button signifies that the PC is communicating with the base station, if it is not, please contact Zonar Systems for support.

Transceiver ID:	This is ID of the transceiver
Network ID:	This typically set to "1"
System ID:	This is typically the customer code
Hop Table:	This is typically set to "0"
Power Amp Level:	This is typically set to "100", but can be lower
Retry Count:	This is typically set to "10", but can be adjusted
Acks Enable:	This is typically set to "1"
Firmware Version:	This is the version of firmware in the radio

Note: Factory Calibration ensures that a "Power Amp Level" setting of "100" = 500mW RF power.

Now that ZonarCom 3.x has been setup, you may close this dialog box, and begin use of the radio. The software on the PC will retrieve the transceiver ID's from the Zonar web application (customer database), and begin to poll each radio ID in sequence.

To see the radio access the remote transceivers located in vehicles, right click on the ZonarCom 3.x icon, then select "Status → Radio", this will show a dialog box similar to:
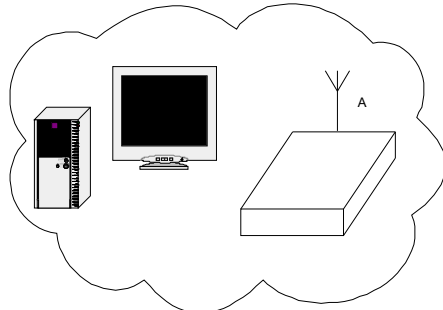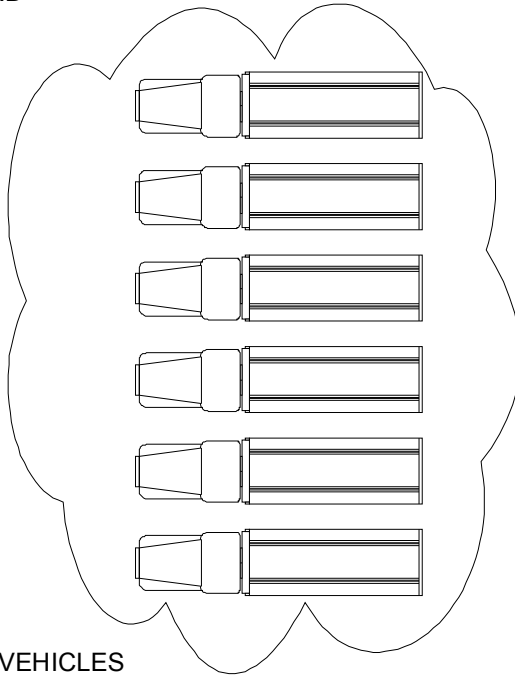
System Components:

1. **12VDC Power Supply**
2. **EVIRNET™ Base Station (shown with 1/2Wave antenna)**
3. **Serial Data Cable.**

System Overview:

The basic system is comprised of a base station connected to a PC, and from one to several hundred remote transceivers located typically in a vehicle.

BASE STATION AND
COMPUTER

REMOTE VEHICLES
WITH EVIRNET RADIOS

System Specifications:

- Frequency Hopping Spread Spectrum Radio
- 902 MHz to 928 MHz
- 500mW transmit power
- -103 dBm Sensitivity
- 53 Hopping Channels
- Operating Temp -20C to +70C
- Range 1500FT Obstructed, 4000FT+ Unobstructed

Approved Antennas:

Nearson Model   S467AH-915S (1/2 Wave Whip)