

# **Ripwave® MX Surfer Modem User Guide**

**For use with all Ripwave® MX Surfer models**



Part Number 40-00444-00R  
Revision A, Version 1.0  
August 2, 2007

## **Proprietary**

All information disclosed by this document is the proprietary property of Navini Networks, Inc. and is protected by copyright, trademark, and/or trade secret laws. All rights therein are expressly reserved.

English\_Surfer\_User\_Guide\_2007-08-02\_40-00444-00Ra(6.X)

# TABLE OF CONTENTS

<i>TABLE OF CONTENTS</i> .....	2
<i>PERMISSIONS, TRADEMARKS &amp; DISTRIBUTION</i> .....	3
<i>SAFETY</i> .....	4
<i>REGULATORY INFORMATION</i> .....	5
<b>INTRODUCTION</b> .....	<b>6</b>
<b>PACKAGE INVENTORY</b> .....	<b>6</b>
<b>SURFER MODEL</b> .....	<b>6</b>
<b>MINIMUM COMPUTING REQUIREMENTS</b> .....	<b>6</b>
<b>PHYSICAL CHARACTERISTICS &amp; OVERVIEW</b> .....	<b>7</b>
<b>SURFER FEATURES</b> .....	<b>8</b>
<b>INSTALLING SURFER</b> .....	<b>8</b>
<b>ACCESSING THE INTERNET</b> .....	<b>9</b>
<b>TROUBLESHOOTING</b> .....	<b>9</b>
<b>INSTALLING NAVINI DIAGNOSTICS (NAVDIAG)</b> .....	<b>10</b>
<b>TROUBLESHOOTING USING NAVDIAG</b> .....	<b>13</b>
THE ICONS .....	14
SIGNAL STRENGTH & SIGNAL QUALITY BARS .....	14
HOW TO INCREASE THE SIGNAL STRENGTH & QUALITY .....	15
HISTORY GRAPHS .....	15
PARAMETERS .....	16
SCREEN OPTION BUTTONS .....	16
CONFIGURATION SCREEN .....	16
TREND ANALYSIS SCREEN .....	17
STATISTICS SCREEN .....	18
ABOUT SCREEN .....	18
HELP BUTTON .....	18
<b>UNINSTALLING NAVDIAG</b> .....	<b>19</b>
<b>SURFER CARE &amp; MAINTENANCE</b> .....	<b>20</b>
<b>UPGRADING SURFER SOFTWARE</b> .....	<b>21</b>
<b>ADDENDUM 1: INSTALLING NAVDIAG ON VISTA</b> .....	<b>22</b>
<b>ADDENDUM 2: SURFER - PC TROUBLESHOOTING</b> .....	<b>25</b>
<b>ADDENDUM 3: END USER SOFTWARE LICENSE AGREEMENT</b> .....	<b>29</b>

## Permissions, Trademarks & Distribution

Copyright © 2007, Navini Networks, Inc. All information contained herein and disclosed by this document is confidential and the proprietary property of Navini Networks, Inc. and all rights therein are expressly reserved. Acceptance of this material signifies agreement by the recipient that the information contained in this document is confidential and that it will be used solely for the purposes set forth herein. Acceptance of this material signifies agreement by the recipient that it will not be used, reproduced in whole or in part, disclosed, distributed, or conveyed to others in any manner or by any means – graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems – without the express written permission of Navini Networks, Inc.

Navini Networks is a registered trademark. The Navini Networks logo, Zero-Install, Ripwave, Unwired by Navini, and Surfer are trademarks of Navini Networks, Inc. Other product and company names mentioned herein may be trademarks and/or service marks of their respective owners.

**Except for the hardware warranty, nothing herein constitutes any representation, warranty, assurance, or guaranty of any kind.**

Because of continuing developments and improvements in design, manufacturing, and deployment, material in this document is subject to change without notification and does not represent any commitment or obligation on the part of Navini Networks, Inc.

Navini Networks, Inc. shall have no liability for any error or damages resulting from the use of this document.

All Navini Networks logos and trademarks are the property of Navini Networks, Inc. Unauthorized usage is strictly prohibited without the express written permission of Navini Networks, Inc.



© 2007 Navini Networks, Inc. All rights reserved.

## Safety

To optimize safety and expedite installation and service, read this document thoroughly. Follow all warnings, cautions, and instructions marked on the equipment and included in this document.

To aid in the prevention of injury and damage to property, cautionary symbols have been placed in this document to alert the reader to known potentially hazardous situations, or hazards to equipment or procedures. The symbols are placed before the information to which they apply. However, any situation that involves heavy equipment and electricity can become hazardous, and caution and safety should be practiced at all times when installing, servicing, or operating the equipment.



Caution Symbol - Possible equipment or property damage



Warning Symbol - Could cause personal injury or otherwise be hazardous to your health

Navini Networks, Inc., expressly requires that when using Navini electronic equipment always follow the basic safety precautions to reduce the risk of electrical shock, fire, and injury to people and/or property.

1. Follow all warnings and instructions that come with the equipment.
2. Do not use the equipment while you are in a bathtub, shower, pool, or spa. Exposure of the equipment to water could cause severe electrical shock or serious damage to the equipment.
3. Do not allow any type of liquid to come in contact with the equipment. Unplug the equipment from the power source before cleaning. Use a damp cloth for cleaning. Do not use any soaps or liquid cleaners.
4. Follow all airport and FAA regulations when using the equipment on or near aircraft.
5. Only operate the equipment from the type of power source(s) indicated in this manual (110/220 VAC). Any other type of input power source may cause damage to the equipment.
6. Power the equipment using only the AC adapter cable provided, and in accordance with the instructions specified in this User Guide.
7. Do not use a frayed or damaged power cord. Do not place the power cord where it can be stepped on or tripped over.
8. Do not touch wires where the insulation is frayed or worn unless the equipment has been disconnected from its power source.
9. Do not overload wall outlets, power strips, or extension cords. This can cause serious electrical shock or fire.
10. Do not place the equipment on an unstable surface. It can fall and cause injury or damage to the equipment.
11. Do not disassemble the equipment. Removing covers exposes dangerous voltages or other risks and also voids the warranty. Incorrect reassembly can cause equipment damage or electrical shock. Only an authorized repair technician should service this product.
12. Do not expose the equipment to extreme hot or cold temperatures.
13. Do not use the equipment under the following conditions:
  - When the equipment has been exposed to water or moisture.
  - When the equipment has been damaged.
  - When the power cord is damaged or frayed.
  - When the equipment does not operate properly or shows a distinct change in performance.

Navini Networks will provide a power supply suitable for an IT distribution system intended for Norway. This power supply has not been decided.

Navini Networks will provide the user manual in German with Surfer Modems shipped to Germany.

## Regulatory Information

### FCC Notice



**CAUTION:** This device is a Radio Frequency transmitter. It is required to comply with FCC RF exposure requirements for transmitting devices. For all Surfer Modems, a minimum separation distance of 8 inches (20 cm) or more must be maintained between the antenna and all persons during device operations to ensure compliance with the FCC's rules for Radio Frequency Exposure. If this minimum distance cannot be maintained, exposure to RF levels that exceed the FCC's limits may result.

### FCC Compliance and Advisory Statement

***Tested To Comply  
With FCC Standards  
FOR HOME OR OFFICE USE***

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC rules. The 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.

If this equipment causes interference to radio or television reception, which can be determined by turning the equipment off and on, the user should try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and the receiver.
3. Connect the equipment to an outlet on a circuit that is different from the one to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for additional suggestions.

This product has been tested and found to be safe in accordance with the Australian Standard for Human Exposure to Radiation where the user or other parties are 20 cm or more from the aerial. If the antenna is closer than 20 cm from the user, Australian safety conditions are violated.

### INFORMATION TO USER

This device has been authorized as a radio frequency transmitter under the appropriate rules of the Federal Communications Commission. Any changes or modifications not expressly approved by Navini Networks, Inc. could void the user's authority to operate the equipment.

### INFORMATION REGARDING ANTENNAS

This device has three embedded antennas: one embedded dipole with approximately 2 dBi gain and two patch antennas, one on each side of the device. Each patch antenna has approximately 6 dBi gain. The overall antenna gain is 9 dBi.

This product has been tested and met all the applicable requirement of the R&TTE directive (99/5/EC).

## Introduction

Congratulations! Your Ripwave® MX Surfer Modem is a user-friendly, easy-to-install device that helps you connect wirelessly to the Internet. It provides complete broadband Internet access to residential and small office/home office (SOHO) customers without requiring professional installation. Surfer provides portable service. A computer with Surfer can move from room-to-room, location-to-location, or even city-to-city as long as there is coverage in the area. This manual guides you through the simple process of installing the Modem and its monitoring software.

## Package Inventory

Please verify the contents of your Surfer Modem package. Your package should contain the following:

- Surfer Modem unit
- AC power adapter
- Ethernet cable (for PC-to-Modem connection)
- Installation CD that includes the following
  - User Guide
  - Navini Diagnostics monitoring software
  - PC Driver software

If you do not find all of these items in your package, notify the supplier from whom you obtained it.

## Surfer Model

The Surfer Modem model indicates the frequency in which the Modem will operate:

- Surfer 1239            2300-2390 MHz
- Surfer 1252            2496-2690 MHz
- Surfer 1343            3400-3700 MHz

## Minimum Computing Requirements

(See, also, Addendum 1)

The following table lists the minimum requirements your computer should meet before connecting to the Surfer Modem.

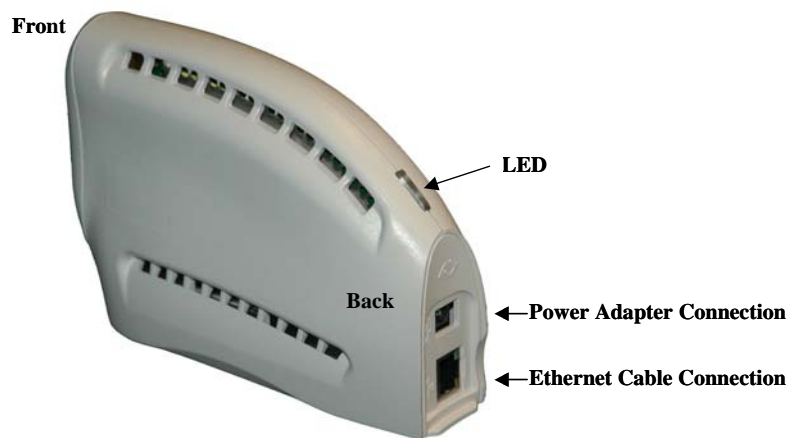
<b>Operating System<sup>1</sup>:</b>	Windows® 2000, Windows XP <sup>2</sup> , or Windows Vista. It is assumed the latest Windows service pack is installed on the Operating System. Please ensure the PC network port is enabled.
<b>CPU:</b>	Pentium level or higher
<b>RAM:</b>	32 MB or the Operating System minimum, whichever is greater
<b>Hard Drive:</b>	85 MB free disk space for the Navini Diagnostics software <sup>3</sup>
<b>Monitor:</b>	256 colors, 800 x 600 resolution

Minimum Computing Requirements, cont'd.

<sup>1</sup>**Note:** To upgrade your Operating System after loading the Navini Diagnostics monitoring software, you must first uninstall Navini Diagnostics prior to upgrading the OS. Otherwise, Navini Diagnostics will not work. See [Uninstall](#) instructions in this Guide. <sup>2</sup>**Note:** Windows XP must be Service Pack Level 1 or higher. <sup>3</sup>**Note:** Navini Diagnostics software is supported on Win2000, WinXP, WinVista-32bits or higher; Mac X (Mac10.4.5) or higher; and Linux kernel 2.4 (Redhat Open Source). Mac users must have the Snuffit extraction software. There is a known issue with installing Navini Diagnostics on Vista OS. Refer to the work-around instructions in the section “Installing Navini Diagnostics” and the note that references [Addendum 1: Installing NavDiag on Vista](#).

## Physical Characteristics & Overview

Following are the physical characteristics of the Surfer Modem.



The light (LED) on the top back of the unit gives you an indication of Surfer’s operational status. To provide you a wireless connection to the Internet, Surfer connects to Base Stations. Base Stations are the Service Provider’s wireless equipment including antennas that are placed all around the coverage area.

When the light blinks, Surfer is trying to synchronize with a Base Station. When the light is constant, Surfer has acquired synchronization with a Base Station. If the light is flashing quickly, this means Surfer is transmitting data to the Base Station.

The back of the unit is where you plug in the AC power adapter, which is connected to a power outlet, and the Ethernet cable, which is connected to your computer. There is no power button; when you plug the AC power adapter in, the unit comes on. The proper operating temperature of the Modem is 5-40° C.



**Caution!** Do not attempt to take the Modem apart. This may damage the Modem and void the Manufacturer’s warranty.

## Surfer Features

- Simple plug-and-play installation
- Light indicator to show power on, synchronization with a Base Station, and data traffic status
- Portable
- Works in Non Line of Sight (NLOS) conditions, with 3-antenna switching diversity and Smart Beamforming signals
- No external antenna required in most environments
- Automated over-the-air software upgrades



## Installing Surfer

(See, also, Addendum 1)

The following instructions explain how to install the Surfer Modem. Please read all instructions before installing it. Turn off the computer and the Modem before installing.






**Note:** Surfer should be positioned to minimize interference with other equipment when transmitting.

Step	Action	Illustration
1.	Connect the Ethernet cable to the Ethernet port on the computer.	
2.	Connect the other end of the Ethernet cable to the Modem.	



Installing Surfer,  
cont'd.

<p>3.</p> 	<p>Connect the AC power adapter to the Modem. Plug the other end of the power adapter into a 110/220 VAC 60/50 Hz outlet.</p> <p><b>CAUTION!</b> Use <i>only</i> the AC power adapter supplied. Using any other adapter can damage the Modem.</p>	
	<p>4.</p> <p>The green light (LED) on the top of Surfer should come on. If it does not turn on, there is a problem with the Modem or the AC power adapter. Check all cables for proper connection. If there is still a problem, contact the supplier from whom you obtained your Modem.</p>	
<p>5.</p>	<p>Turn the computer on; log in.</p>	

## Accessing the Internet

Now that Surfer is installed and powered on, you should be able to access the Internet (that is, assuming you have signed up with a Service Provider). To access the Internet, open the web browser that is installed on your computer.

## Troubleshooting

If you are experiencing difficulties with your Internet connection after installation, please review the [Minimum Computing Requirements](#) and [Addendum 1](#). Ensure your computer meets those requirements. Also, review the installation procedures and ensure all the steps were completed properly. If you are still experiencing difficulties, please contact your Service Provider.

# Installing Navini Diagnostics (NavDiag)

The Navini Diagnostics (NavDiag) monitoring software assists in solving connection problems. This software is provided on the Installation CD that came in your Surfer package. Please follow the steps below to install the software.


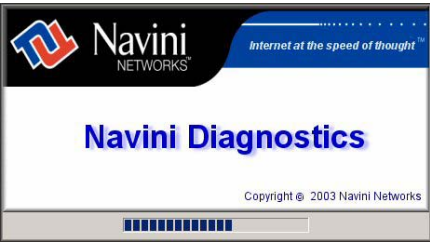
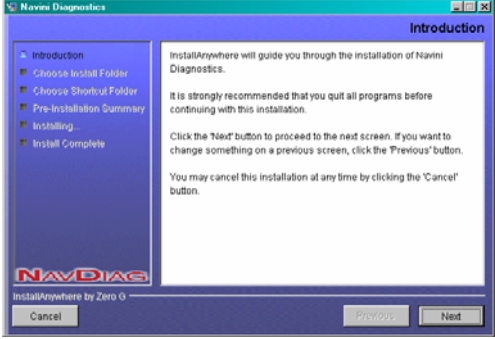
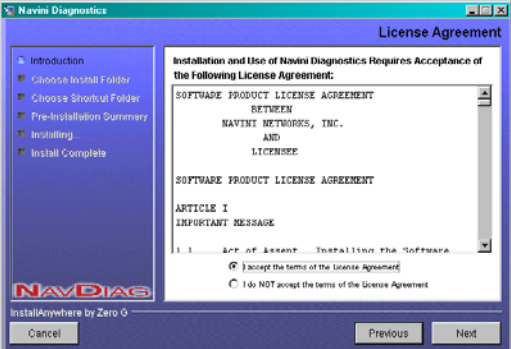


**Note 1:** To install NavDiag on a Windows 2000 Operating System, you must have administrative privileges. To check your account privileges, open your Control Panel. Double-click on the Users and Passwords symbol. You should see ‘Administrator’ under the Users tab.

**Note 2:** The screenshots shown in these instructions were taken from a laptop with Windows 2000. If you have a Windows XP or other Operating System, the screens you see may vary from the screens shown in the instructions.


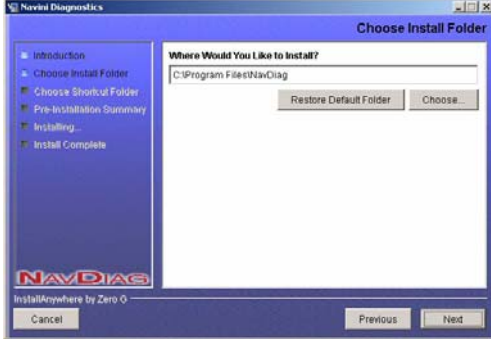

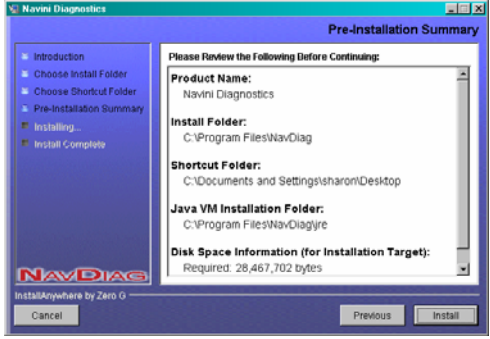
Step	Action	Illustration
1.	Before installing NavDiag shut down all programs, including anti-virus software.	
2.	Insert the CD into the computer’s CD-ROM drive.	
3.	Open the CD by clicking on the <b>My Computer</b> icon. Double-click on the folder named Navini Diagnostics.	
4.	Double-click on the icon for the file <b>navdiag_windows.exe</b> *. This will automatically start the software installation.  *If your PC is running Mac or Linux software, you will need the navdiag_mac.sit or navdiag_linux.bin file. Mac users will need the Snuffit extraction software.	<p style="text-align: center;"><i>Example:</i></p>
5.	The InstallAnywhere window appears. The progress bar indicates that InstallAnywhere has initialized.	

Installing NavDiag, cont'd.


Step	Action	Illustration
6.	The NavDiag Language screen appears. Select a language, and click <b>OK</b> to continue.	<p style="text-align: center;">Windows 2000 Screen</p> 
7.	The progress bar indicates the files being installed.	<p style="text-align: center;">Windows 2000 Screen</p> 
8.	The NavDiag Introduction screen appears. Click <b>Next</b> to continue.	<p style="text-align: center;">Windows 2000 Screen</p> 
9.	<p>The License Agreement screen appears. Read the Licensing Agreement. Select the <b>I Accept</b> option, and click <b>Next</b> to continue.</p> <p><i>Note:</i> If the License Agreement is <i>not</i> accepted, you cannot install the software.</p>	<p style="text-align: center;">Windows 2000 Screen</p> 



Installing NavDiag,  
continued

Step	Action	Illustration
<p>10.</p> 	<p>The Choose Install Folder screen appears. Enter the name of the folder where you wish to install the software. Click <b>Next</b> to continue.</p> <p><i>Note:</i> The default installation folder provided by the software is shown in the illustration.</p>	<p>Windows 2000 Screen</p> 
	<p>The Choose Shortcut Folder screen appears. Select the default, In a new Program Group, and click <b>Next</b> to continue.</p>	<p>Windows 2000 Screen</p> 
	<p>The Pre-Installation Summary screen appears. Review the contents for accuracy. Click <b>Install</b> to continue.</p> <p>For your installation and computer, this screen may have different information than what is shown in the illustration.</p>	<p>Windows 2000 Screen</p> 

Installing NavDiag,  
continued

Step	Action	Illustration
13.	The Installing screen displays as the application files are loaded.	
14.	At the Install Complete screen, click <b>Done</b> to close the window.	<p style="text-align: center;">Windows 2000 Screen</p> 

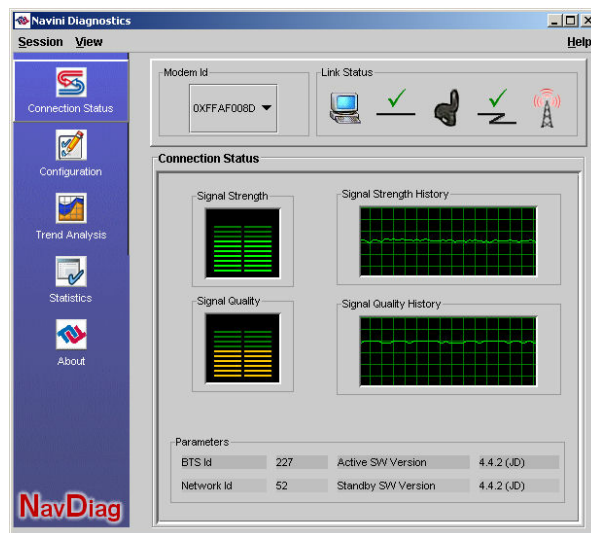
## Troubleshooting Using NavDiag

To open the Navini Diagnostics software application, double-click on the Navini Diagnostics icon on your desktop.



Navini Diagnostics.lnk

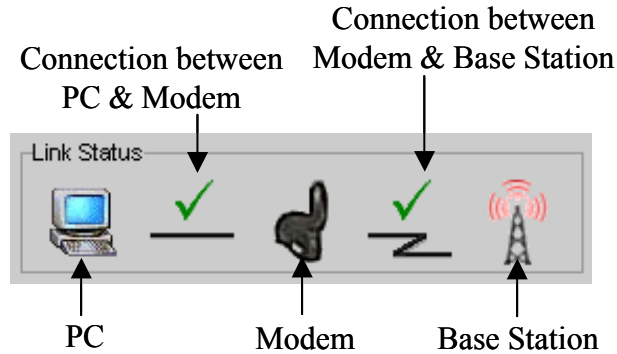
The Connection Status screen opens and displays data if the Modem is in session. The screen refreshes live data every second.



The following sections describe the various parts of the Connection Status screen.

### ***The Icons***

The icons that appear on the top right side of the screen represent the points of connection in the system - the PC connection to the Modem, and the Modem connection to the Base Station. Check marks over the connections indicate working connections.

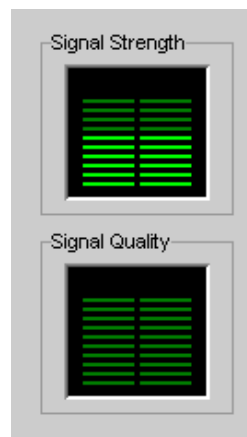


If you see an “X” instead of a check mark, this indicates a connection is interrupted. In the picture below, the Modem has lost communication with the Base Station.



### ***Signal Strength & Signal Quality Bars***

Signal Strength and Signal Quality are dynamic bar areas of NavDiag that indicate how well your Modem is receiving signals from the Base Station. It is possible to have a strong signal but lots of interference from other sources; on the other hand, it is possible to have a weaker signal but little to no interference, which means better quality service.



### Signal Strength & Signal Quality Bars, continued

In particular, the Signal Strength bar area graphically represents the strength of the synchronization signal your Modem is receiving from the Base Station. The strength of the signal is represented by a group of colored bars. The greater the number of bars, the stronger the signal is. The color of the bars also gives an indication of the strength of the signal:

- ▶ Green indicates an excellent signal.
- ▶ Orange indicates a good signal.
- ▶ Red indicates a weak signal.

The Signal Quality bars graphically represent the Signal-to-Noise Ratio (SNR) received by your Modem. SNR is measured in decibels. Like Signal Strength, the quality of the signal is represented by the number of bars and their color:

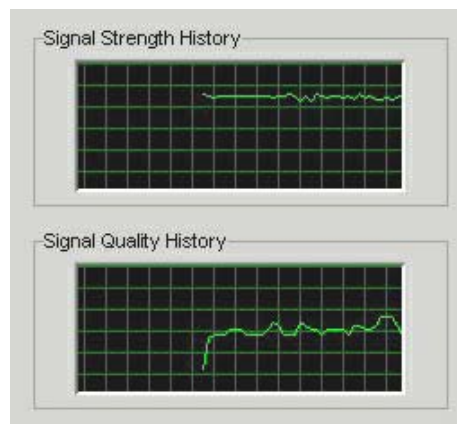
- ▶ Green indicates an excellent signal.
- ▶ Orange indicates a good signal.
- ▶ Red indicates a weak signal.

### *How to Increase the Signal Strength & Quality*

To increase the strength and quality of the signal, change the location of your Modem. Try moving it closer to a window, to a higher location, away from other wireless devices (microwave ovens, cordless phones), and away from metal objects (shelves, file cabinets). As you reposition the Modem, watch the Signal Strength and Signal Quality bars on the NavDiag screen. Place your Modem in the location where you receive the most green signal strength and quality bars.

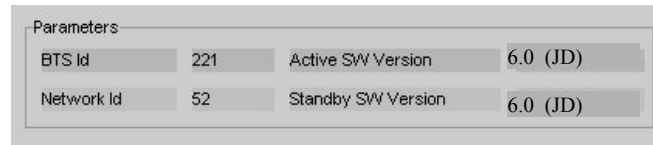
### *History Graphs*

The History graphs plot the change in signal strength and signal quality over time. The graphs cover the last minute of time and are updated every second. You read the graphs from right to left. The right side of the graph represents the most recent status of your Modem's signal history.



## Parameters

At the bottom of the Connection Status screen are four parameters. These parameters are BTS ID, Network ID, Active SW Version, and Standby SW Version.



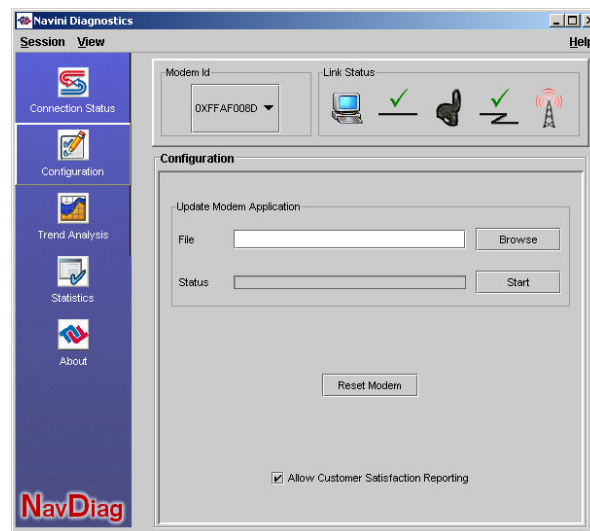
The BTS ID indicates the Base Station to which the Modem is currently synchronized. The Network ID indicates the Service Provider's network in which the Modem is operating. Active SW Version and Standby SW Version indicate the version number of the software currently loaded in the "active side" and "standby side" of the Modem's flash memory. The two letters in parenthesis following the release number indicate the type of software load: JD indicates Joint Detection, while EN indicates Enhanced Nulling.

## Screen Option Buttons

On the left-hand side of the screen, there are five screen option buttons: Connection Status, Configuration, Trend Analysis, Statistics, and About. Each of these screens provides unique capabilities, explained below.

## Configuration Screen

The Configuration screen enables you to update your Modem's software if your Service Provider directs you to do so. To access the Configuration screen, click on the Configuration icon.



If you must update your Modem's software, your Service Provider will provide you with instructions.

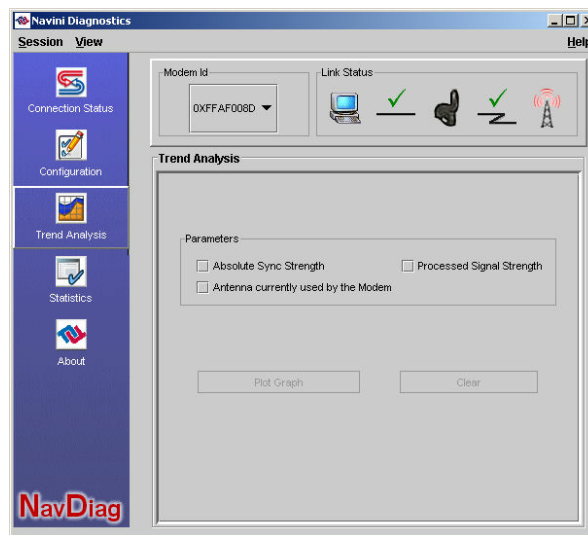


Configuration Screen,  
continued

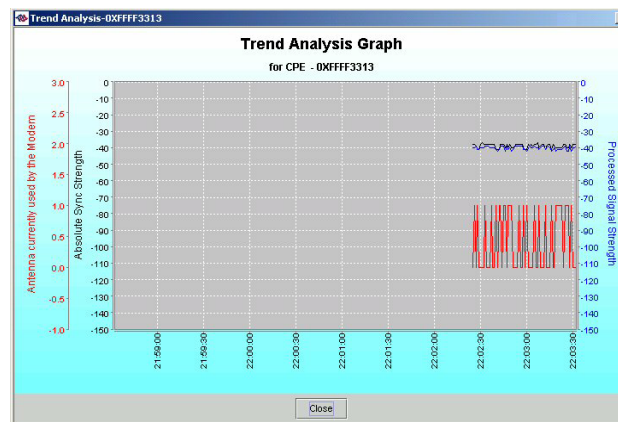
At the bottom of the screen is an ‘Allow Customer Satisfaction Reporting’ box. This box gives you control over whether your Service Provider is allowed to monitor your Modem’s performance using the remote CPE Logging function and store the log files created by the CPE Logging function on your computer. By default, this box is checked, which means the Service Provider can monitor your Modem.

## ***Trend Analysis Screen***

The Trend Analysis screen lets you view how some Modem parameters evolve over time. With this screen, you can select up to three parameters to plot. To view the Trend Analysis screen, click on the Trend Analysis icon.

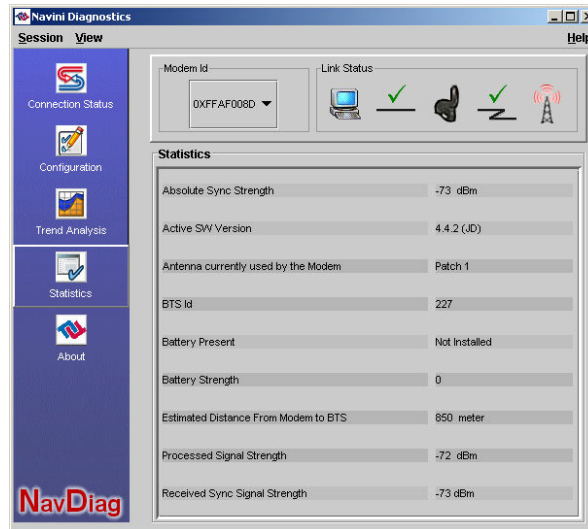


By pressing the Plot Graph button, the following screen appears. This screen displays the value of the selected parameters over the last five minutes and updates once every second. The graphic scrolls from right to left.



## Statistics Screen

The Statistics screen lets you view the current value of selected parameters. These values are updated as they change over time. To view the Statistics screen, click on the Statistics icon. Note: The fields may vary from release to release.



## About Screen

The About screen provides vital information such as the version of the Navini Diagnostics software currently installed on your computer. It also provides a web site address and telephone number where you can contact your Service Provider. To view the About screen, press the About button.



## Help Button

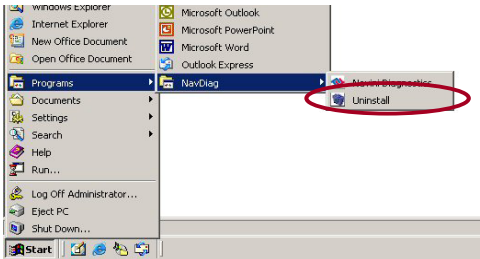


A Help button appears on the top right corner of all the NavDiag windows. The Help button gives you two options. The first option, On NavDiag, provides help text on the functionality of the NavDiag program. The second option, About NavDiag, is equivalent to clicking on the About icon.

# Uninstalling NavDiag

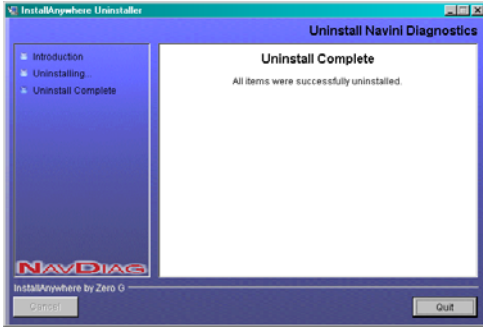
If for some reason you need to uninstall the Navini Diagnostics software, e.g., to upgrade your Operating System software, follow the procedure below.



*Note:* The screen shots shown in these instructions were taken from a laptop with Windows 2000. If you have a Windows XP or other Operating System, the screens you see may vary from the screens shown in the instructions.

Step	Action	Illustration
1.	On your computer screen lower left corner, click on <b>Start &gt; Programs &gt; NavDiag &gt; Uninstall.</b>	<p style="text-align: center;">Windows 2000 Screen</p> 
2.	The Install-Anywhere Uninstaller screen appears. Click <b>Uninstall.</b>	<p style="text-align: center;">Windows 2000 Screen</p> 
3.	The screen indicates when the application files are uninstalled.	<p style="text-align: center;">Windows 2000 Screen</p> 

## Uninstalling NavDiag, continued

Step	Action	Illustration
4.	The Uninstall Complete screen appears when finished. Click on <b>Quit</b> to close the Uninstall screen.	 <p>Windows 2000 Screen</p>
5.	Restart the PC to complete the uninstall process. This ensures the uninstall process completes successfully.	

## Surfer Care & Maintenance

Surfer is designed to give you years of trouble-free service. To ensure proper operation, read the following care and maintenance instructions.

- Keep the Modem free of dust and moisture. If the Modem gets wet, use a towel to dry it immediately.
- Handle the Modem gently. Dropping it or mishandling it can cause damage to the plastic shell or the electronic circuitry.
- Keep the Modem away from high temperatures. Heat can cause damage to the plastic shell or the electronic circuitry.
- Use only a mild detergent and a soft, damp cloth to clean the Modem. Do not use any chemicals or abrasives to clean the plastic shell.
- If there is a problem with the Modem, do not attempt to repair it yourself. Report the problem to your Service Provider.
- If you are going to upgrade your Operating System after loading the Navini Diagnostics monitoring software, you must first uninstall the monitoring software before upgrading the OS. Otherwise, the NavDiag will not work. See Uninstall instructions in this Guide.
- The Modem must be left powered ON whenever you shut down or restart any Windows platforms. If the Modem is off, a blue screen may appear on the monitor. In the event this happens you will mostly likely have to power cycle (reboot) the PC.

## Upgrading Surfer Software

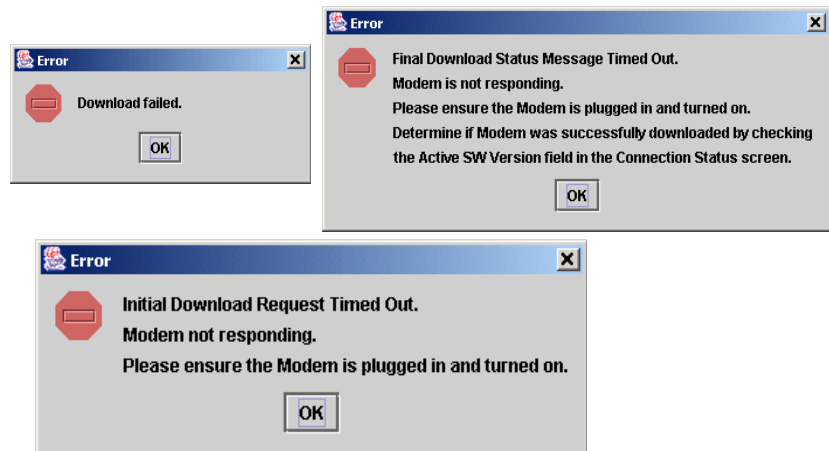
There are three different ways to upgrade the software that makes the Surfer Modem work.

- Your Service Provider may perform an over-the-air upgrade, where the new software files are transferred wirelessly from the Base Station to your Modem.
- Your Service Provider may provide a downloadable web file or CD-ROM with software to be installed on your PC to upgrade the Modem.
- Your Service Provider may instruct you to use your Navini Diagnostics software to upgrade the Modem software load.

The latter two methods are used only if the Modem was not powered on during the over-the-air upgrade process. The upgrade is normally transparent to the user; in other words, there should be no noticeable service interruption. The web or CD upgrade comes with instructions and takes a minimal amount of time to complete.



*Note:* If you use NavDiag to upgrade your Modem software load, the computer connected to your Modem must already have an IP address. If your computer does not have an IP address, contact your Service Provider. If you attempt to upgrade your Modem software through the NavDiag and the computer does not have an assigned IP address, you may see one of the following error messages:



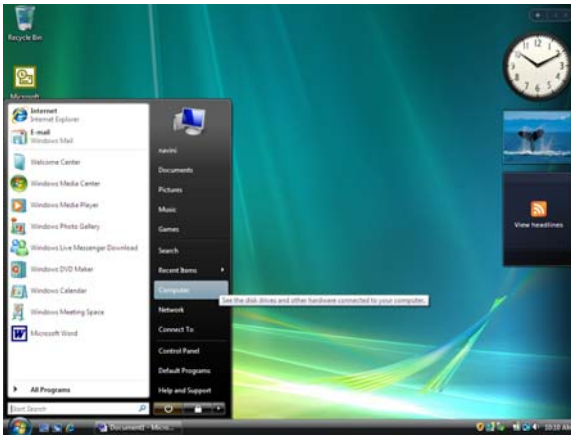
## ADDENDUM 1: Installing NavDiag on Vista

When installing NavDiag on a PC running the Vista 32-bit OS, it tries to install the application into a `/opt/NavDiag` directory instead of the usual location, which is `C:\Program Files\NavDiag`. When this happens the Run icon for NavDiag does not appear on the desktop. A work-around is to change the compatibility setting to Windows 2000 before installing NavDiag.

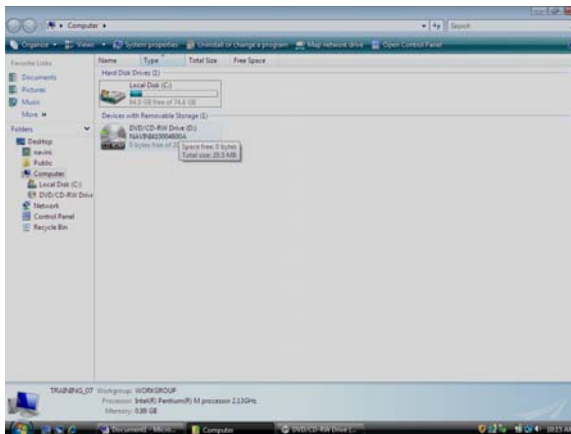
To change the compatibility setting, right-click on the NavDiag.exe file and select “Properties” > “Compatibility”. Enable compatibility for Windows 2000, and then try installing the NavDiag software. NavDiag will “think” it is installing on a Windows 2000 OS and, therefore, install correctly. Detailed steps and screen shot examples of the Change Compatibility procedure are provided below.

### Change Compatibility

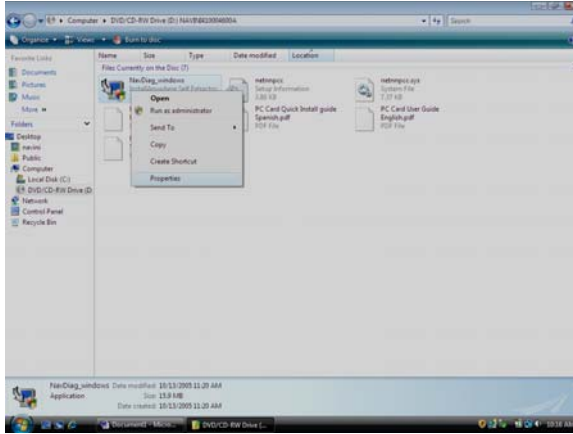
Step 1: Open an Internet browser window (Windows Explorer is shown).



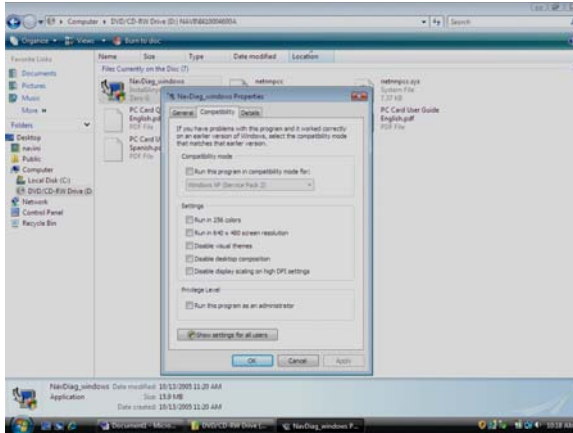
Step 2: Select the DVD/CD-ROM drive.



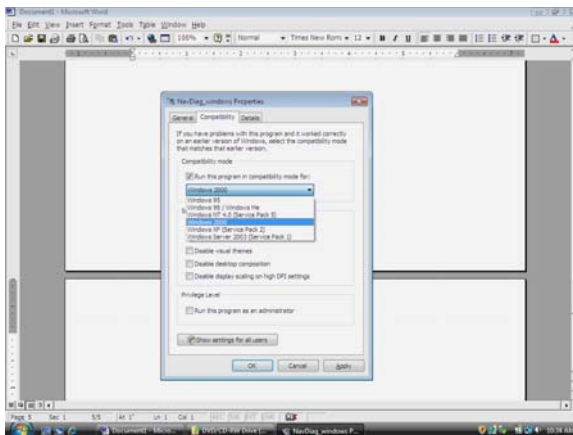
Step 3: Right-click on the NavDiag.file, and select “Properties”.



Step 4: Select the “Compatibility” tab.

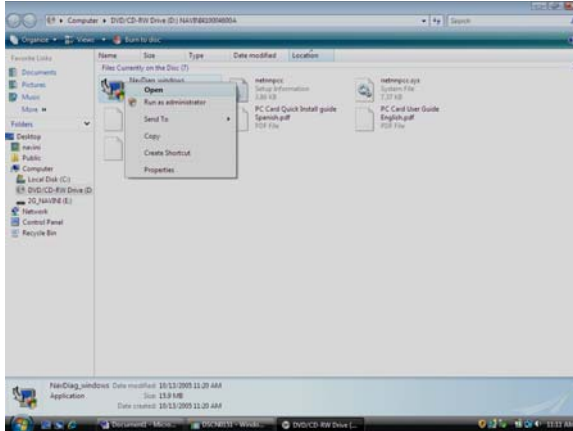


Step 5: Click on the check box next to “Run this program in compatibility mode for:”. Use the drop-down menu and select Windows 2000. Select “Apply”, then “OK”.

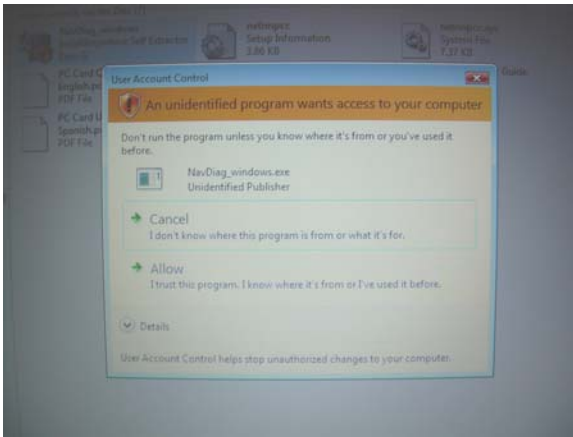




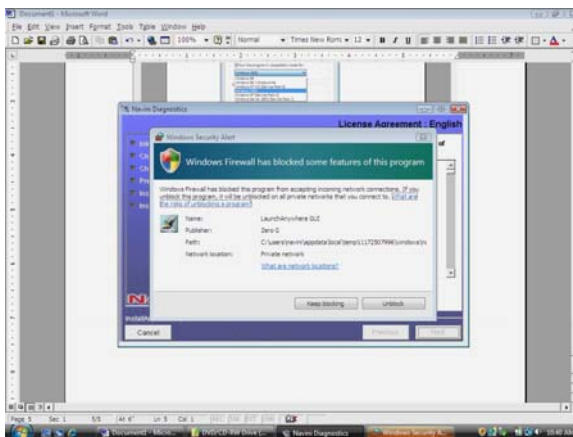
Step 6: Go back to the NavDiag file and right-click on it. Select “Open”. This starts the installation.



NOTE 1: The following screen may or may not appear, depending on your computer configuration. If it does appear, select the “Allow” option.



NOTE 2: The Windows Security Alert may or may not appear. If it does appear, select “Unblock.”



Step 7: Continue the normal NavDiag installation, per the User Guide.



## ADDENDUM 2: Surfer - PC Troubleshooting

### PC Operating Systems

Prior to installing Navini Diagnostics monitoring software, please check to insure that the PC Operating System (OS) meets the criteria given earlier in this manual (section “[Minimum Computing Requirements](#)”). If these criteria are not met, unpredictable results may occur as a result of installation. Also, check to see that you have the latest OS updates installed prior to installing NavDiag.

### Multi-PC Configurations

The Surfer Modem is connected to a PC via an Ethernet connection. It is possible to connect multiple PC devices to a single Modem using a hub. The multi-PC configuration is transparent to PC users and is analogous to a multi-PC configuration on a normal Ethernet Local Area Network (LAN). Check with your Service Provider to see if multiple IP addressing is required for your particular configuration. IP addresses can be assigned to the devices dynamically via a DHCP server, as Fixed or Static IP assignments, or Point-to-Point Protocol Over Ethernet (PPPoE).

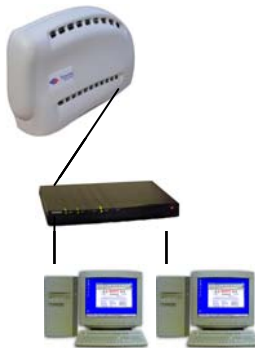
When a PC that is connected to a Surfer Modem also has a wireless network card built in, it is best to disable it when using Surfer. If the built-in wireless card is required for local networking and Surfer is used for Internet connections, change the interface metric configuration for Surfer so that the default gateway is used. (See your Operating System’s User Guide for instructions.)

You may not use a router with the Surfer Modem or Navini Diagnostics software. They will not work going through a router. Please refer to the figure below for acceptable multi-PC configurations.

Modem connected directly to a PC via Ethernet cable



Modem connected to a hub, which is connected to more than one PC



Modem connected to a PC, which is connected to a hub serving more than one PC



## Results of Correct Navini Diagnostics Installation

Experienced PC users can check the results of the Navini Diagnostics installation by looking at the log file that is created during the installation process. The log file is located under c:\Program Files\Navini Diagnostics and named "Navini\_Diagnostics\_InstallLog.log."

```

-----
Install Begin: Tue Jul 20 12:15:22 CDT 2004
Install End:   Tue Jul 20 12:15:30 CDT 2004

Created with Zero G's InstallAnywhere 4.5.3 Enterprise Build 1394

Summary
-----

Installation: Successful with warnings.

2 SUCCESSES
1 WARNINGS
0 NONFATAL ERRORS
0 FATAL ERRORS

Action Notes:
None.
Install Log Detail:
Check Disk Space:      C:\Program Files\NavDiag
                       Status: SUCCESSFUL
                       Additional Notes: NOTE - Required Disk Space: 29,363,315; Free
Disk Space: 30,806,179,840

Install Directory:     C:\Program Files\NavDiag\
                       Status: SUCCESSFUL

Get Registry Entry:   Key: HKEY_LOCAL_MACHINE\SOFTWARE\Navini Networks\NavDiag,
ValueName: InstallDirectory
                       Status: WARNING
                       Additional Notes: WARNING - Win32Exception

Make Registry Entry:  Key: HKEY_LOCAL_MACHINE\SOFTWARE\Navini Networks, Value Name: ,
Value Data:
                       Status: SUCCESSFUL

Make Registry Entry:  Key: HKEY_LOCAL_MACHINE\SOFTWARE\Navini Networks\NavDiag, Value
Name: , Value Data:
                       Status: SUCCESSFUL

Make Registry Entry:  Key: HKEY_LOCAL_MACHINE\SOFTWARE\Navini Networks\NavDiag, Value
Name: InstallDirectory, Value Data: C:\Program Files\NavDiag
                       Status: SUCCESSFUL

Install Directory:    C:\Program Files\NavDiag\Uninstall\
                       Status: SUCCESSFUL

Install Uninstaller:  Navini Diagnostics (Install All Uninstaller Components)
                       Status: SUCCESSFUL

Install Directory:    C:\Program Files\NavDiag\jre
                       Status: SUCCESSFUL

Install File:         C:\Program Files\NavDiag\Uninstall\Uninstall NavDiag.exe
                       Status: SUCCESSFUL

Install File:         C:\Program Files\NavDiag\Uninstall\Uninstall NavDiag.lax
                       Status: SUCCESSFUL

Install Directory:    C:\Program Files\NavDiag\Uninstall\resource\
                       Status: SUCCESSFUL

```

```

Install File:          C:\Program Files\NavDiag\Uninstall\resource\iawin32.dll
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\Uninstall\resource\remove.exe
                      Status: SUCCESSFUL

Make Registry Entry:  Key:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\Navini Diagnostics,
Value Name: DisplayName, Value Data: Navini Diagnostics
                      Status: SUCCESSFUL

Make Registry Entry:  Key:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\Navini Diagnostics,
Value Name: UninstallString, Value Data: "C:\Program Files\NavDiag\Uninstall\Uninstall
NavDiag.exe"
                      Status: SUCCESSFUL

Install Uninstaller:   Navini Diagnostics (Install All Uninstaller Components)
                      Status: SUCCESSFUL
Create LaunchAnywhere: Navini Diagnostics.exe (Install All LaunchAnywhere Java
Executable Components)
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\Navini Diagnostics.exe
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\Navini Diagnostics.lax
                      Status: SUCCESSFUL
Create LaunchAnywhere: Navini Diagnostics.exe (Install All LaunchAnywhere Java
Executable Components)
                      Status: SUCCESSFUL
Install Directory:     C:\Program Files\NavDiag\data\
                      Status: SUCCESSFUL
Install Directory:     C:\Program Files\NavDiag\data\images\
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\images\billboard.gif
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\images\splash.gif
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\images\buttonbar.gif
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\images\about2.gif
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\images\about1.gif
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\images\about.gif
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\images\uninstall.gif
                      Status: SUCCESSFUL
Install Directory:     C:\Program Files\NavDiag\data\log\
                      Status: SUCCESSFUL
Install Directory:     C:\Program Files\NavDiag\data\lib\
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\lib\ctl.jar
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\lib\navDiag.jar
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\lib\jfreechart-0.9.13.jar
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\lib\jcommon-0.8.8.jar
                      Status: SUCCESSFUL
Install File:          C:\Program Files\NavDiag\data\lib\log4j.jar
                      Status: SUCCESSFUL

```

```
Install Directory:      C:\Program Files\NavDiag\data\doc\  
                        Status: SUCCESSFUL  
Install Directory:    C:\Program Files\NavDiag\config\  
                        Status: SUCCESSFUL  
Install File:         C:\Program Files\NavDiag\config\NavDiag.lcf  
                        Status: SUCCESSFUL  
Install Directory:    C:\Documents and Settings\luis\Start Menu\Programs\NavDiag\  
                        Status: SUCCESSFUL  
Create Shortcut:      C:\Documents and Settings\luis\Start  
Menu\Programs\NavDiag\Navini Diagnostics.lnk  
                        Status: SUCCESSFUL  
Create Shortcut:      C:\Documents and Settings\luis\Start  
Menu\Programs\NavDiag\Uninstall.lnk  
                        Status: SUCCESSFUL  
Install Directory:    C:\Documents and Settings\luis\Desktop\  
                        Status: SUCCESSFUL  
                        Additional Notes: NOTE - Directory already existed  
Create Shortcut:      C:\Documents and Settings\luis\Desktop\Navini Diagnostics.lnk  
                        Status: SUCCESSFUL
```

## **ADDENDUM 3: End User Software License Agreement**

**between  
Navini Networks, Inc.  
and  
Buyer**

### **ARTICLE 1 IMPORTANT MESSAGE**

- 1.1 Act of Assent. Installing the Software indicates that you have read, understand and accept this License Agreement.

### **ARTICLE 2 LICENSES**

- 2.1 Grant of License. The Software and related Documentation, are the intellectual property of Navini Networks, Inc. and are protected by law. Navini Networks, Inc. grants to Buyer a personal, nonexclusive, nontransferable worldwide license, for revocable use (as permitted herein) of the Software based on the terms and conditions of this License Agreement and the Master Supply Agreement to which it is attached. Buyer is permitted to install and use the Software on its server, but only in conjunction with the Navini Hardware. Buyer is not permitted to rent, sell or otherwise transfer the Software to any third parties.
- 2.2 Ownership Rights. Under this Agreement, Buyer does not acquire any rights of ownership in the Software and related Documentation and subsequent releases and versions licensed by Navini Networks, Inc. to Buyer pursuant to this License Agreement, whether in printed or machine-readable format. Buyer acquires only the right to use the Software and related Documentation subject to the terms and conditions of this Agreement. Buyer promises to keep the Software in confidence for the benefit of Navini Networks, Inc. and agrees to destroy or return the Software and all copies at such time as Buyer chooses to cease using the Software or upon termination or cancellation of this License Agreement for any reason.
- 2.3 Backup Copies. Buyer may copy the Software for safekeeping (archival) or backup purposes, provided that all such copies of the Software are subject to the provisions of this License Agreement, and also provided that each copy shall include in readable format any and all confidential, proprietary, and copyright notices or markings contained in the original.
- 2.4 Assignment. The rights granted in this License Agreement are restricted for use solely by Buyer and may not be assigned, transferred, or sublicensed, however Buyer may grant access to its server to End-Users. Each Buyer shall be authorized to make use of the Software in the form in which it is provided to Buyer solely for Buyer's own computer server location. Buyer represents that it will not use the Software for any purpose that is not expressly delineated in this Agreement. Further Buyer represents that it will comply with all export, re-export, and other laws in its use of the Software.

- 2.5 Suitability.
- a. Buyer alone is responsible for determining which software best suits Buyer's needs, for installing and operating the Software, and for the results obtained. Accordingly, each Buyer should determine its needs, and evaluate the Software's capabilities before making a final decision about licensing the software.
  - b. Navini Networks, Inc. makes no representation that the Software conforms to or satisfies any federal, state, or local laws. Buyer is encouraged to engage professional assistance from attorneys and engineers to evaluate the suitability of the Software for Buyer's use.
  - c. Navini Networks, Inc. makes no claims that the Software is suitable for Buyer's intended purposes.
- 2.6 Remote Digital Access. Navini Networks, Inc. reserves the right, but is not obligated to digitally access the Software for the purposes of upgrading and maintaining the Software.
- 2.7 U.S. GOVERNMENT RESTRICTED RIGHTS. All Software provided to the U.S. Government pursuant to solicitations issued on or after December 1, 1995 is provided with the commercial license rights and restrictions described elsewhere herein. All Software provided to the U.S. Government pursuant to solicitations issued prior to December 1, 1995 is provided with "Restricted Rights" as provided for in FAR, 48 CFR 52.227-14 (June 1987) or DFAR, 48 CFR 252.227-7013 (Oct 1988), as applicable

### **ARTICLE 3**

#### **TRADE SECRETS**

- 3.1 Trade Secret. Navini Networks, Inc. considers the licensed Software covered by this License Agreement to be a trade secret. Navini Networks, Inc. does not disclose any information to Navini Networks, Inc. competitors or potential competitors. Buyer shall not disclose any design, code, or technological know-how gained by access to the Software to Licensor's competitors. Buyer shall not use design, code, or documentation gained by access to the Software to develop a similar technology or a competing software product. To attempt to or to do so, the Parties acknowledge, understand and agree, constitute a material breach of this License Agreement.
- 3.2 Third Party Intellectual Property. Buyer acknowledges, understands and agrees that the licensed Software covered by this License Agreement may contain Intellectual Property owned by Third Parties and duly licensed to Navini Networks, Inc. Copyright, Patent and other laws protect Third Party Intellectual Property manufactured with, marketed with, or otherwise bundled with the licensed Software. Buyer promises to keep such Third Party Intellectual Property in confidence to the benefit of the Third Party, agrees not to reverse engineer or otherwise decompile Third Party Intellectual Property, and agrees to stop using, destroy and/or return such Third Party owned Intellectual Property under the same terms and conditions as the licensed Software as set forth in this License Agreement.

#### **ARTICLE 4** INDEMNIFICATIONS AND WARRANTY

- 4.1 Intellectual Property Indemnification; Entire Liability. ARTICLE 15 OF THE SUPPLY AGREEMENT TO WHICH THIS AGREEMENT IS ATTACHED STATES THE ENTIRE LIABILITY OF NAVINI NETWORKS, INC. WITH RESPECT TO INFRINGEMENT OF COPYRIGHTS, TRADE SECRETS, TRADEMARKS, PATENTS, AND OTHER INTELLECTUAL PROPERTY RIGHTS BY THE LICENSED SOFTWARE, DOCUMENTATION, OR ANY PARTS THEREOF, AND NAVINI NETWORKS, INC. SHALL HAVE NO ADDITIONAL LIABILITY WITH RESPECT TO ANY ALLEGED OR PROVEN INFRINGEMENT.
- 4.2 Warranty. EXCEPT AS GRANTED IN THE BODY OF THE SUPPLY AGREEMENT TO WHICH THIS LICENSE AGREEMENT IS ATTACHED, THE LICENSED SOFTWARE IS PROVIDED BY NAVINI NETWORKS, INC. "AS IS" AND WITHOUT WARRANTY OF ANY KIND OR NATURE, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THIS LIMITATION OF WARRANTIES WAS A MATERIAL FACTOR IN THE ESTABLISHMENT OF THE LICENSE FEE CHARGED FOR EACH SPECIFIC ITEM OF SOFTWARE LICENSED.

#### **ARTICLE 5** LIMITATION OF LIABILITY

- 5.1 Consequential Damages. TO THE MAXIMUM EXTENT PERMITTED BY THE APPLICABLE LAW, IN NO EVENT SHALL NAVINI NETWORKS, INC. OR ANY THIRD PARTY INVOLVED IN THE CREATION, PRODUCTION, DELIVERY, OR LICENSING OF THE SOFTWARE BE LIABLE FOR ANY LOST REVENUES, PROFITS OR DATA OR OTHER SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THEORY OF LIABILITY, EVEN IF NAVINI NETWORKS, INC. HAS, OR SHOULD HAVE HAD ANY KNOWLEDGE, ACTUAL OR CONSTRUCTIVE, OF THE POSSIBILITY OF SUCH DAMAGES.
- 5.2 License-Fee Limitation. Except for the indemnification provisions of Article 15, Navini Networks, Inc.'s maximum liability for damages is limited to the license fees paid by Buyer under this Agreement for the particular licensed Software that caused the damages.
- 5.3 Loss of Data. Software error can cause a significant loss of data. Navini Networks, Inc. shall not be responsible for any loss of data. Navini Networks, Inc.'s responsibility is to correct the Software error as provided in this License Agreement or the Supply Agreement to which it is attached. It is Licensee's responsibility to have adequate backup procedures to protect Buyer from significant loss of valid data.

**ARTICLE 6**  
**OBJECT CODE ONLY-NO MODIFICATIONS**

- 6.1 Modifications. In order to maintain the “trade secret” status of the information contained in the Licensed Software, Navini Networks, Inc. provides the Software in object-code form only. Buyer shall not modify, enhance, adapt, disassemble, translate, decompile or otherwise decode any portion of the object code of the Software module. Buyer shall not use the Software without a license to the Software object code. The object code contains the license number, date of license, and other license information. This information is placed in the object-code portions to prevent unauthorized and unlicensed distributions of the Software. Buyer shall not subvert or change any of this information. Further Buyer shall not make, full or partial, copies of any documentation whether printed or machine- readable media supplied with the Licensed Software unless expressly granted prior written permission by Navini Networks, Inc.
- 6.2 Responsibility for Damages. Buyer is subject to the provisions of the Supply Agreement with respect to the Software (including Section 16). Buyer is fully liable and responsible for any damages, indirect or direct, and costs that Navini Networks, Inc. may incur if Buyer appoints a subcontractor who accesses the Software without Navini’s prior written consent. Buyer shall defend, indemnify, and hold Navini Networks, Inc., its directors, officers, employees, agents, Authorized Partners, and other representatives harmless accordingly for all costs and direct and indirect damages sustained by Navini Networks, Inc. However, if the subcontractor is pre-approved by Navini in writing for access to the Software, then this Section shall not apply.
- 6.3 Copyright Notices. Buyer shall not remove any copyright or proprietary rights notice or identification that indicates Navini Networks, Inc. ownership from any part of the licensed Software, it being expressly understood and agreed that the existence of such copyright notice should not be construed as an admission or presumption that publication of the licensed Software has occurred.

END OF AGREEMENT

Copyright © 2001-2007 Navini Networks, Inc.

All rights reserved. Printed in the USA.

Navini Networks is a registered trademark. Zero-Install, Ripwave, and Unwired by Navini are trademarks of Navini Networks, Inc. Other product and company names mentioned herein may be trademarks and/or service marks of their respective owners.