EXHIBIT 5

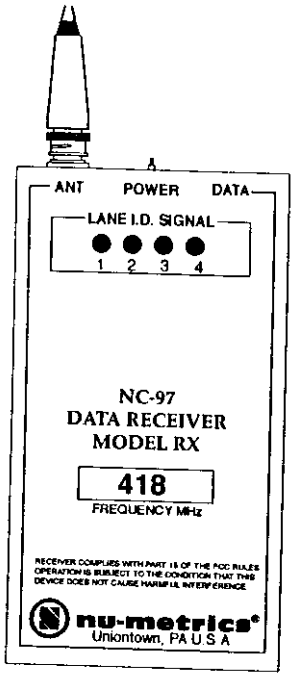
Installation and Operating Instructions

Para. 2.1033(b)(3)

nu-metrics®
An International Company

Radio Verification:
Model NC-97 Traffic Counter and RX Receivers

Operating Manual



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FCC STATEMENT:

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

OVERVIEW:

One of the major features of the new NC-97 is the wireless radio verification. The self-contained NC-97 will allow you to roadside monitor the counters complex operation as each vehicle is analyzed. This can be accomplished by simply using the pocket receiver to identify that the counter is operating or you may use a portable computer to view accumulated vehicle counts, speed, class and the time to start or end a study. Although the system is designed for verifying a counter's operation, you may likely find many other applications for short term monitoring. We at Nu-Metrics hope that you will take the time to read and understand the many features of this unique wireless traffic monitor.

RADIO VERIFICATION:

There are three major components of the verification system: the NC-97 with a built in radio transmitter, the handheld radio receiver and the software package for computer monitoring of vehicle traffic. The NC-97 Transmitter and Receiver are assembled with one of the following radio frequencies: 315.00 MHz, 418.00 MHz and 433.92 MHz. The NC-97 operating frequency is stamped on the case as the last 3-digits of the Serial Number, e.g. 7101265-**418**. The handheld Rx-Receiver operating frequency is marked on the front plate of the receiver. You should verify that both instruments have the same radio frequency. The microprocessor based Rx- Receiver is designed to monitor up to 4-lanes, or 4 NC-97 units of traffic and may be used alone or connected to a Laptop computer.

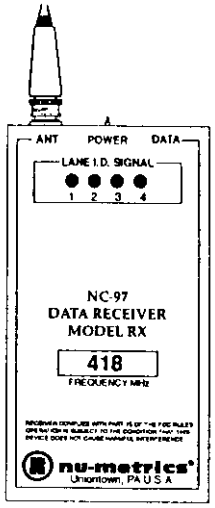

Figure 1

The Receiver operates from a single 9 Volt battery that is installed in the unit's battery compartment. For handheld use, the "rubber duck" type antenna provides a range of 30 to 50 meters depending upon traffic conditions.

Data are transmitted from the NC-97 in a 11 byte packet at 2400 baud. The packet allocation is shown in Figure 2.

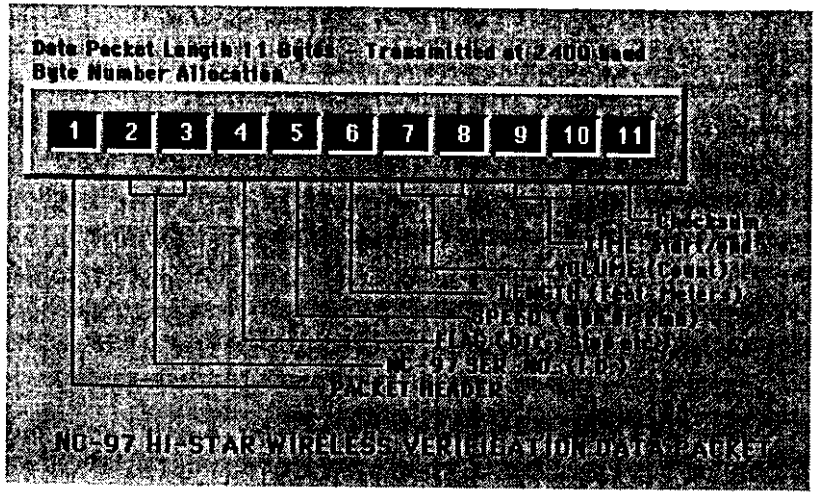

Figure 2

TRANSMITTER OPERATION:

The NC-97 employs an on-chip tiny radio transmitter that is part of the counter's electronic assembly. The RF output of the transmitter is designed to use a small disposable piece of wire as an antenna. A supply of disposable antennas (Part No. HS-00) is included with each Rx Receiver and additional quantities may be ordered as required. The antenna wire is connected to the far left external pin (Figure 3) and positioned vertically through the Protective Cover during installation (see Figure 4). To prevent damage to the pin and radio circuit, the antenna should be installed by a professional familiar with radio transmissions. **Do not use any other size antenna wire.** This will result in connector pin damage and a possible malfunction of the radio system.

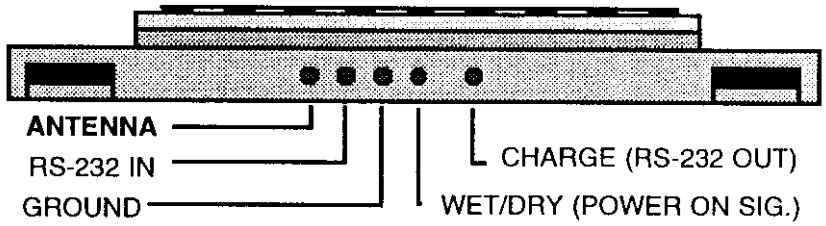

Figure 3

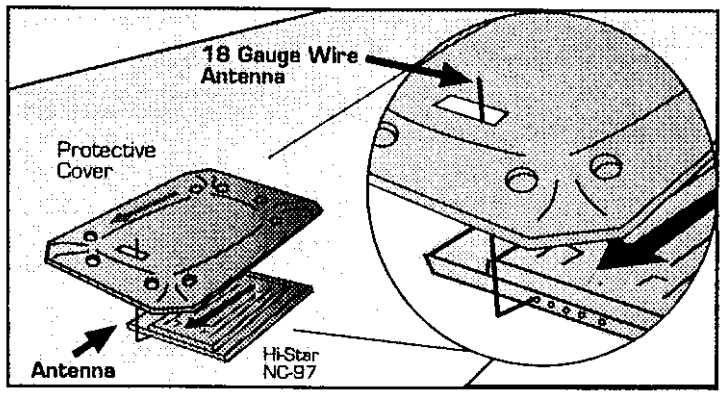

Figure 4

RECEIVER OPERATION:

The pocket size receiver, Model (RX-315, RX-418 or RX-433) employs a 8-bit microprocessor and a single chip RF receiver circuit. Four LED lights and a sound circuit announce each vehicle. The Receiver includes a momentary Power On/Off switch and a DIN RS-232 serial data port. The receiver operates from a single 9 Volt battery which is installed in the receiver's case battery compartment. For handheld monitoring, the supplied "rubber duck" antenna provides a range of 30 to 50 meters depending on traffic conditions. For greater range, the user may use an optional vehicle mounted magnetic base antenna (Part No. HS-03). This antenna can increase monitoring range up to 100 meters or greater and is normally used when recording traffic data to a laptop computer.

The momentary On/Off switch toggles the receiver's power. When first depressed, all LED's will flash in a pattern and the unit will beep twice. The first valid RF signal received from a NC-97 traffic counter will always occupy LED (1). The second valid RF signal received will occupy LED (2) and so on. For each data packet received, the beeper will sound in unison with the lighted LED. The data packet from the NC-97 is transmitted at the end of the passing vehicle plus the headway distance, which varies with a vehicle's speed. The receiver will turn off automatically in 5 minutes if no valid RF signal is received. This will be identified by a series of beeps before the unit switches off power.

COMPUTER MONITORING:

A laptop computer may be connected to the Serial Port for viewing and logging of vehicle data. The "97-WM" software must be installed on your computer - See "97-WM" Software Install instructions.

The display screen (Figure 6) will show valid data being received from any one of four NC-97 units. If the data received by the receiver is invalid, it will not be displayed. All valid data are automatically logged to memory for later retrieval and printing.

COMPUTER MONITORING OF NC-97 OPERATION:

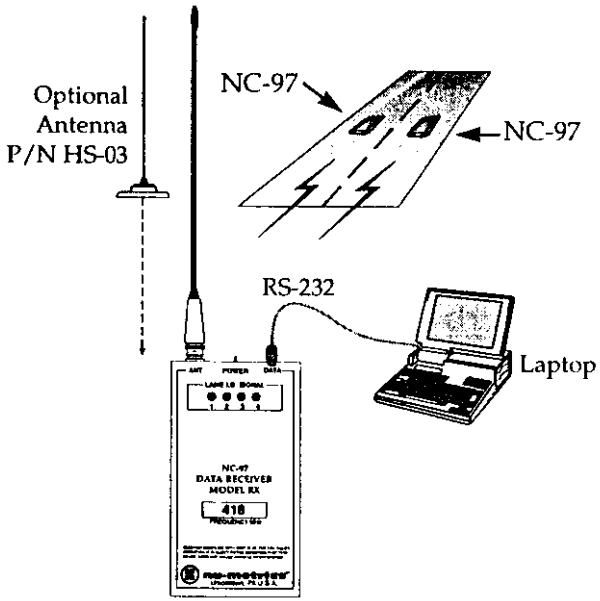

Figure 5

SCREEN PRESENTATIONS:

The screen presents four monitoring columns. The Green Dots switch to momentary Red when valid data are received from a NC-97 transmission.

The **Serial Number** window displays the last four (4) digits of the units I.D. The **Speed Bin** window displays a vehicle's speed in bins spaced at 5 mph (8 kmh). The **Class Bin** window

displays four (4) categories of vehicles (Car, Truck, Med. Truck and Large Truck) which are are defined by the user as to vehicle length. The **Recorded Count** (volume) displays the number of vehicles recorded prior to the start time, after the start time, and until the end of the study. At the programmed start time, the counter is reset to zero discarding all counts prior to the study. The count will always represent the units true recorded count even when a radio transmission is invalid. The **Time to Start** and **Time to End** displays the amount of time remaining in Hours and Minutes. The window description will automatically change from "Time to Start" to "Time to End" at the time the study is to start. The window will also change from the color red (Waiting) to the color green (Running) at the time the study begins. The **Time Stamp** window displays the time in hours, minutes and seconds when a radio signal is received from the NC-97.

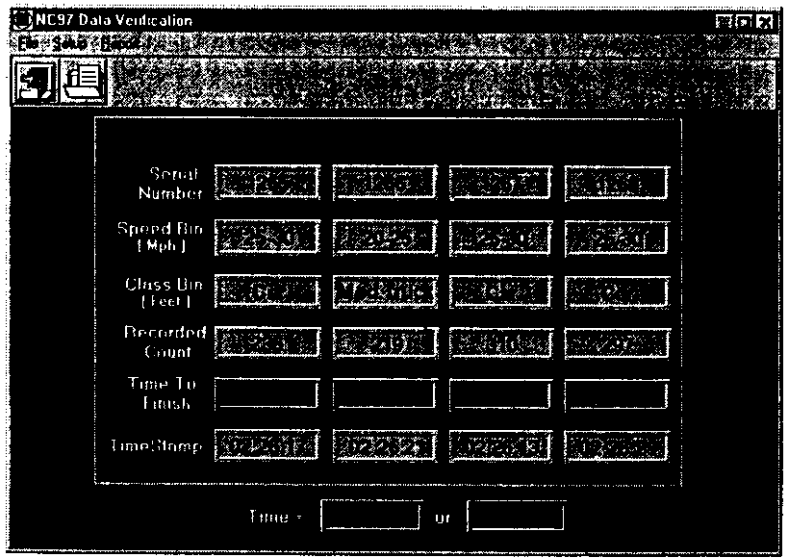

Figure 6

INTRODUCTION TO HI-STAR NC-97 DATA VERIFICATION SOFTWARE :

The Wireless 97-WM Data Verification Software has been designed to use in conjunction with a data receiver to verify the operation of the Hi-Star model NC-97 traffic analyzer. The software will record and analyze the data produced from up to four units at a time through one receiver. Using simple radio technology, each vehicle's speed and type are transmitted to the receiver, and displayed on a monitoring screen. As data is displayed, it can be recorded and reproduced in report form. By following the instructions contained in this manual, data can be monitored in a snap.

INSTALLING THE NC-97 DATA VERIFICATION SOFTWARE:

Please refer to the installation method depending on the type of media. Note: Effective January 1, 1998, all Nu-Metrics software is shipped on CD-Rom Disc. Floppy disks are only provided upon request.

FLOPPY DISK INSTALLATION:

1. Insert the disk labeled Disk 1.
2. Click START from the menu bar and choose RUN.
3. Type A:SETUP and press Return.
4. Follow the instructions on the screen to finish the software installation.

CD-ROM INSTALLATION:

1. Insert the CD-ROM supplied and click START from the menu bar and choose RUN.

2. Type D:SETUP and press Return D is the letter assigned to the CD-ROM drive.

3. Follow the instructions on the screen to finish the software installation.

HARDWARE INSTALLATION:

1. Using the cable supplied, connect one end to an available serial port on the computer and the other end to the plug labeled DATA on the receiver.

2. Attach either the flexible antenna supplied or the optional roof mount vehicle antenna to the receiver.

3. Make sure that each Hi-Star to be received has an antenna attached. See the Hi-Star operating manual for more information. The NC-97 radio must be activated during the LP programming.

RUNNING THE NC-97 DATA VERIFICATION SOFTWARE:

To begin using the NC-97 Data Verification software, click the START menu, and choose Programs, then choose NC-97 Data Verification. The software will begin by activating the receiver, if connected, and wait for a vehicle message. Be aware that the correct COM port must be selected before any data can be received. See the section **Selecting a COM Port** for more information.

PROGRAM OPTIONS:

This section contains important information regarding the correct operation of the NC-97 Data Verification software. Please read the following sections carefully to insure correct operation. Once the software has been started, choose Preferences under the Options menu.

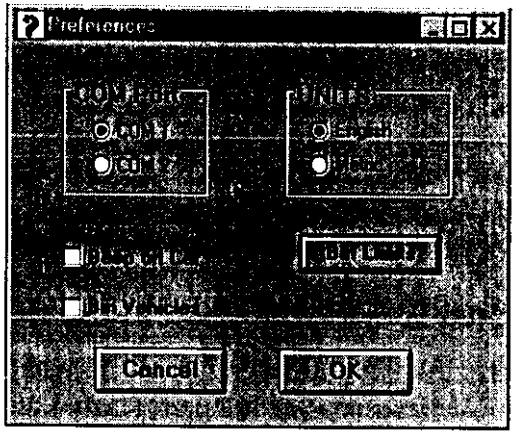

Figure 7

SELECTING A COM PORT:

Click the button corresponding to the COM port on which the receiver is connected. Click OK to store the change. If the wrong port is selected, an error will be produced, and data will not be received.

SELECTING UNITS OF MEASURE:

Click the button corresponding to the desired units of measure. Click OK to store the change.

SETTING BIN LIMITS:

Changing the Bin Limits, will affect ONLY the way that the software stores vehicles. It will not adjust the bins set up in the Hi-Star prior to programming and installing the unit. See the NC-97 Operating manual for information regarding changing the classification bins in the unit itself. Click "Bin Limits" to display the values for each type of vehicle.

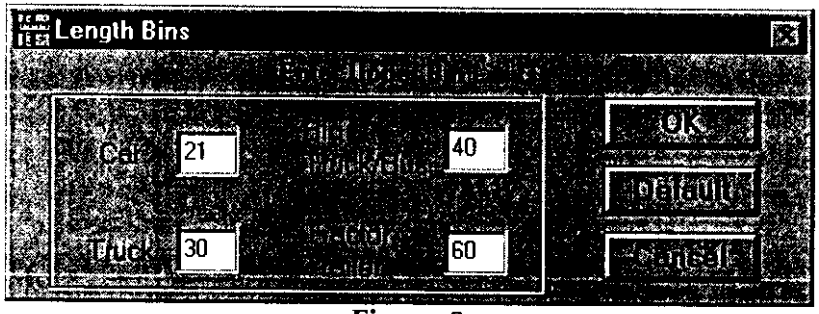

Figure 8

Once the bins have been set, click OK to store the changes, or click Default to restore the settings to factory values.

Lower Bin Limit	Upper Bin Limit	Vehicle Type
>=1'	<=21'	CAR
>21'	<=30'	TRUCK
>30'	<=50'	BIG TRUCK/BUS
>50'	<=70'	TRACTOR TRAILER

Table 1

The example shown in Table 1 is in English length measurement. Values shown will be in metric when selected. Using the default settings, vehicles will be placed into one of the predefined classes according to their measured magnetic length.

REMEMBER! Plastic has no magnetic properties. Vehicles with large plastic bumpers may appear slightly shorter.

BEEP ON CAR:

Check this option to receive an audible beep by the computer each time data from a vehicle is received.

Click OK to store the change.

DATA INFORMATION WINDOW:

The window in Figure 6 is designed to display data from up to four units at a time. Each column represents data from a particular unit. The data transmitted from the first unit will occupy the first column, while each succeeding unit will occupy the next available column until all 4 columns are occupied. Each time data from a displayed unit is received, that column will be updated accordingly. Once four units have been received, all other units sending data will be ignored by both the Receiver and the Data Verification software. The lights on the Data Receiver will be lit in the same manner. A time stamp is also added to each newly displayed message for reference and data storage. The following section gives more information on storing collected data.

STORING COLLECTED DATA:

Once data has been received by the computer, there is an option of permanently storing this data in a file for later examination and reporting. To do so, choose **Save Data** under the File menu, or click the icon in the main toolbar. This will open a dialog box prompting the user to enter a file name

under which the data will be stored. If a duplicate file name is entered, the data will be appended to the end of the already existing file. The only supported file type is .MDB (Microsoft DataBase). See the **Exporting Reported Data** section if a different format is desired.

Once the desired amount of data has been stored, choose **Save Data** under the File menu to halt data storage. This will not stop received data from being displayed.

REPORTING SELECTED DATA:

To view or print a copy of the data that was collected, click the desired type of report, then choose the desired unit. The unit number corresponds to the column in which the data was displayed for the collected survey.

SELECTING A SURVEY TO REPORT:

To specify a particular data file, click the button and select the desired file in the dialog box. Click OK to accept the choice. A data file must be specified before a report can be generated.

NARROWING THE REPORTED DATA:

Once the Data Reporting Options window is displayed, a **Begin Time** and **End Time** can be selected to further narrow the time for which data are displayed. If data for the entire day is to be shown, the Begin and End Times should be set to midnight.

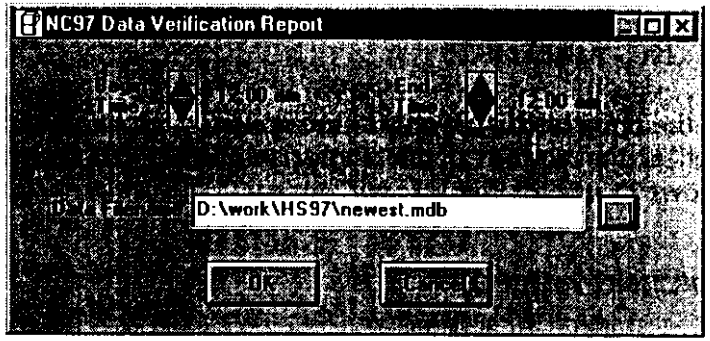

Figure 9

DISPLAYING A REPORT:

Once all of the reporting parameters have been set, click **Continue** to proceed. The report will be displayed on the screen, where the option to either **Print** the report, or **Export** it into a particular file type for further analysis in a spreadsheet type application, or document. See the **Exporting Reported Data** section for more information. If data for the selected times does not exist, the software will produce an error and the report will be canceled.

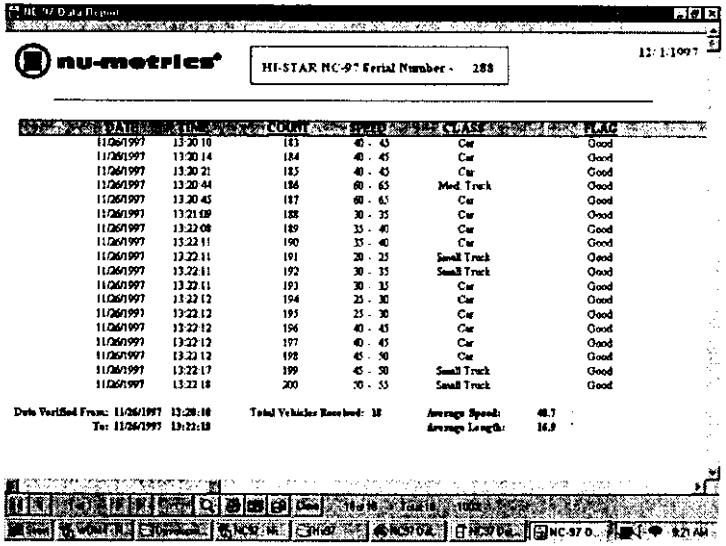

Figure 10

PRINTING A REPORT:

Once the report is displayed on the screen, click the  icon located at the bottom of the Report window. The standard Windows Printer dialog box will appear.

EXPORTING A REPORT:

Once the report is displayed on the screen, click the  icon located at the bottom of the Report window. This will open a box to define the type and name of the data file. Once these parameters have been set, click **Continue** to proceed. Various file types are supported.

EXITING THE SOFTWARE:

To exit the NC-97 Data Verification software, click the  icon, or choose Exit under the File menu. Once the software has been exited, data storage will cease, however, if the receiver is still powered up, it will continue to light the corresponding LED and produce an audible beep each time a new message is received.

RADIO TRANSMITTER SPECIFICATIONS:

Operating Radio Frequency:	315.00 MHz, 418.00 MHz, 433.92 MHz
Carrier Frequency:	SAW (surface acoustic wave) stabilized
Modulation:	OOK (on-off keying), processor controlled
Serial Data Transmission:	RS-232 format packet at 2400 baud
Data Packet:	11 Bytes length at 2400
RF Output Power:	< 0 dBm (50,000 µ volt/meter at 3 meters)
Operating Voltage/Current:	3.3 volt D.C. @ 7.0 milliamp
Operating Temperature:	-40c to +85c
Antenna:	50 ohm Untuned Wire 1/4 wavelength
FCC Certified:	FCC part 15.247 compliance. License Free to User

RADIO RECEIVER SPECIFICATIONS:

Operating Radio Frequency:	315.00 MHz, 418.00 MHz, 433.92 MHz
Oscillator Frequency:	SAW (surface acoustic wave) stabilized
Sensitivity:	-104 dBm
Demodulation:	Serial data on/off.
Microprocessor:	8-bit 68HC11-E9
Serial Data Output:	RS-232 @ 9600 baud
Display:	LED 4-channel traffic lanes
Operating Voltage/Current:	9.6 volt D.C. Battery @ 12 to 30 milliamp
Operating Temperature:	-25c to +70c
Antenna (supplied)	50 ohm tuned 0 dBm Whip
Case Size:	4.6x1.0x2.75 inch (117x25x70 mm)

LIMITED INSTRUMENT WARRANTY:

General Coverage: This Nu-Metrics traffic counting Instrument (but not computer products covered by other manufacturers warranty) is warranted to the owner for a period of one year from date of original purchase against defects in manufacture. This limited warranty is given by Nu-Metrics Incorporated and not by the distributor or representative from whom the Instrument was purchased.

What Nu-Metrics will do: If this instrument develops a defect in manufacture within the one year period, it will be repaired or replaced at our option, providing you supply proof of purchase, date of purchase and cover all cost of shipping. Nu-Metrics return policy is 25% restocking fee if returned within 30 days in original condition and original shipping containers.

The Limited Warranty Does Not Cover: Nu-Metrics will not repair defects related to servicing not performed by Nu-Metrics Inc. or a Nu-Metrics authorized Service Center. Nu-Metrics will not provide any warranty if your instrument shows evidence that it has been disassembled, tampered with, damaged, misused, abused, or altered. Nu-Metrics will not provide any warranty and is not responsible for damages or personal loss due to improper installation or operation.

Limitation Of Liability: In no event will Nu-Metrics or its developers, directors, officers, employees or affiliates be liable to you for any consequential, incidental or indirect damages (including damages for loss of business profits, business interruption, loss of business information, and the like) arising out of the use of or inability to use the software, or hardware or accompanying written materials, even if Nu-Metrics or an authorized Nu-Metrics representative has been advised of the possibility of such damages. Because some states do not allow the exclusion or limitation of incidental or consequential damages, the above limitations may not apply to you.

SERVICE OF YOUR EQUIPMENT:

If your Instrument should ever need servicing, we require that you contact our sales and service department to acquire an RMA (Return Merchandise Acceptance) number to be included with your shipment. ***Please** include a description of failure or discrepancy, your name and phone number, complete return address, and desired method of return shipment with any items returned.* Send it, freight prepaid, to an authorized Nu-Metrics Service Center or to:

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