Calibration and Maintenance Schedule

The Atlas Monitor must be serviced by authorized Welch Allyn personnel or agents at 6 month intervals. Maintenance requirements are specified for 6 month and 12 month service intervals. The monthly CO_2 Reset operation can be performed by the user.

Service Interval	Maintenance Requirements
Every 6 months:	CO_2 Calibration
Every 12 months:	BP calibration, CO_2 reset, battery voltage calibration, printer adjustment,and temperature calibration. Complete functional test

Table 2-2. Tools Required for Service.

Description	Part#	Company
100cc Test Volume	T-112189	Welch Allyn
500cc Test Volume	T-112854	Welch Allyn
T-10 TORX screwdriver	XTD-10	Xcelite brand
7/16" deep socket for Temperature Port nut		Generic 1/4" drive
Squeeze Bulb and Valve	5088-01	Welch Allyn
Calibrated Manometer (0-10PSIG)	Digimano 1000	Netech
Bio-Tek (NIBP TESTER)	BP Pump	Bio-Tek
Pneumatic Tubing	5200-19	Welch Allyn
Pneumatic Tubing (coiled)	5200-19M	Welch Allyn
"Y" Fitting "Optional"	9586TPK4	Welch Allyn
"T" Fitting (3)	9858TPK4	Welch Allyn
Nonin Patient Simulator	8000S	Nonin
Nonin Cable	5200-52	Nonin
Calibrated Thermometer for 90F to 115F range	1002-3FC	ERTCO
LG, Adult Cuff/Bag	5200-02	Welch Allyn
Nellcor Patient Simulator For atlas with "MP 204/205 SpO2 PCB ONLY "	SRC-2	Nellcor
Nellcor Patient Simulator "MP 506 PCB ONLY "	SRC-MAX	Nellcor
Nellcor Sensor Cable "Purple Connectors" will work on all Atlas units with 204/205/506 SpO2 PCB	DEC-8	Nellcor
Nellcor Sensor Cable "Gray Connectors" "For Atlas units with MP 204/205 SpO2 PCB only"	EC-8	Nellcor
ECG Simulator with Impedance Respiration	214B	DNI Nevada
ECG Patient Cable (5 lead AHA)	6200-02	Welch Allyn
ECG Patient Cable (5 lead IEC)	6200-04	Welch Allyn
ECG leads, 5 Lead (IEC)	6200-08	Welch Allyn
ECG leads, 5 Lead AHA	6200-06	Welch Allyn
Certified Gas "10% CO2,10% O2, balance N2"	0304724SRBD	Scott Medical Products
ETCO2 Water Trap (package of 5)	6200-20	Welch Allyn
ETCO2 Scrubber	6200-21	Welch Allyn
ETCO2 Adult Nasal Sample Line	6200-22	Welch Allyn
Surface Sensor, Temperature	6200-15	Welch Allyn
Atlas Repair and Calibration Software	620538	Welch Allyn
Printer Paper - Case	6200-40	Welch Allyn
Digital Multimeter with 10mV accuracy on a 10V scale; 10A Range		
Adjustable DC power supply 5A @ 7V		
Battery cable assembly	620174-1	Welch Allyn
Atlas interface cable to PC	6200-60	Welch Allyn
PC with Windows 95 and above and with HyperTerminal serial port software	Part of Windows 95 & above	
1/4" Mono Phono Jack		
1000 Ohm precision resistor 1%		
1200 Ohm precision resistor 1%		
1350 Ohm precision resistor 1%		
1540 Ohm precision resistor 1%		
1870 Ohm precision resistor 1%		

Setting Date and Time

NOTE: *Check date and time before doing any calibration. Set date and time if incorrect. Set time and date as follows;*

1. Turn Atlas on.

2. Press **CLOCK** button next to power on button to check date and time. Use the far right **SELECT** button to scroll. Highlight the date or time that needs changed.

3. Press the **SET** button to adjust date and time.

4. Press **CLOCK** button to exit.

Pangea Communication Protocol

The Pangea Communication Protocol allows interaction of the Atlas with the computer through the serial interface port. A prompt is emitted at the computer screen when the instrument powers up and is ready to accept commands. The prompt is **Pangea>**. A prompt is emitted after the completion of each pangea command. Pangea commands are case sensitive. They are in English only.

B**P Calibration**

Required material.

1. 500cc vessel
2. Squeeze bulb with one-way valve
3. PC with HyperTerminal
4. Calibrated digital manometer
5. Tubing and T fittings
6. Serial cable

NOTE: *To start HyperTerminal you must have Windows*7 *95 or higher installed on your computer.*

1. From the Windows main screen follow the following sequence:
   Start ⇨Programs ⇨ Accessories ⇨ Communication ⇨ HyperTerminal

2. HyperTerminal setting are:
   9600 baud rate, 8 bit word, 1 stop bit
   no parity, no flow control
   ANSI character set

3. When you open HyperTerminal you will see a screen similar to the example in Figure 2-1. You will be prompted for a connection description. Choose any name. After you type in a name click **OK**.

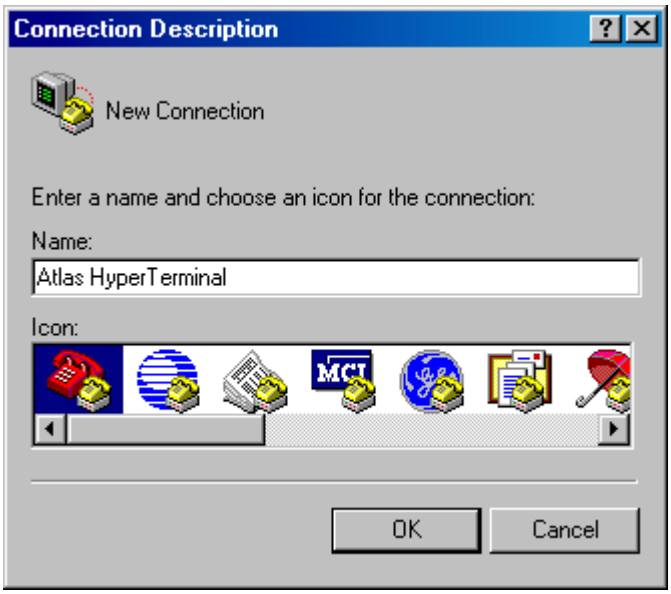

Figure 2-1. Example of a new HyperTerminal connection.

4. The next window you will see will be the window as shown in Figure 2-2. Click on **Connect using** then click on **COM1.**

Figure 2-2. Choosing COM1 in HyperTerminal.

5. Set the port settings as shown in the example in Figure 2-3. Now click **OK**.

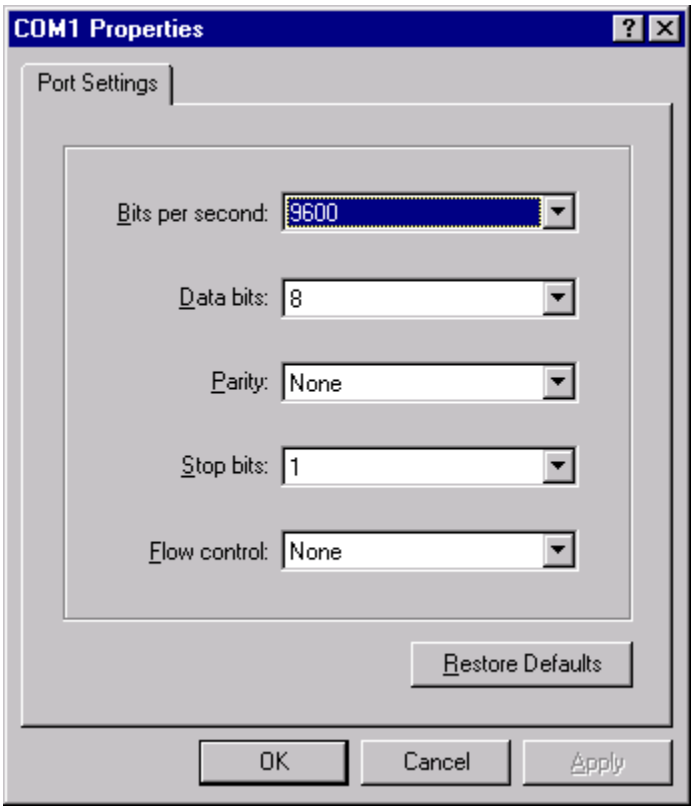

Figure 2-3. HyperTerminal Port Settings.

6. Connect the pressure meter, bulb, and 500cc vessel to BP port with “T” connectors as shown in photograph Figure 2-4.

7. Connect the Atlas to PC with serial cable.

8. Turn the Atlas on. Start HyperTerminal on PC. Press the <Enter> key and you should see a **Pangea>** prompt.

NOTE: *Take no more than 3 minutes for the 50mmHg calibration nor more than 3 minutes for the 250mmHg calibration as the Atlas will automatically, as a safety feature, open the blood pressure valve. If this happens you will have to turn the Atlas off then back on again and restart the calibration again.*

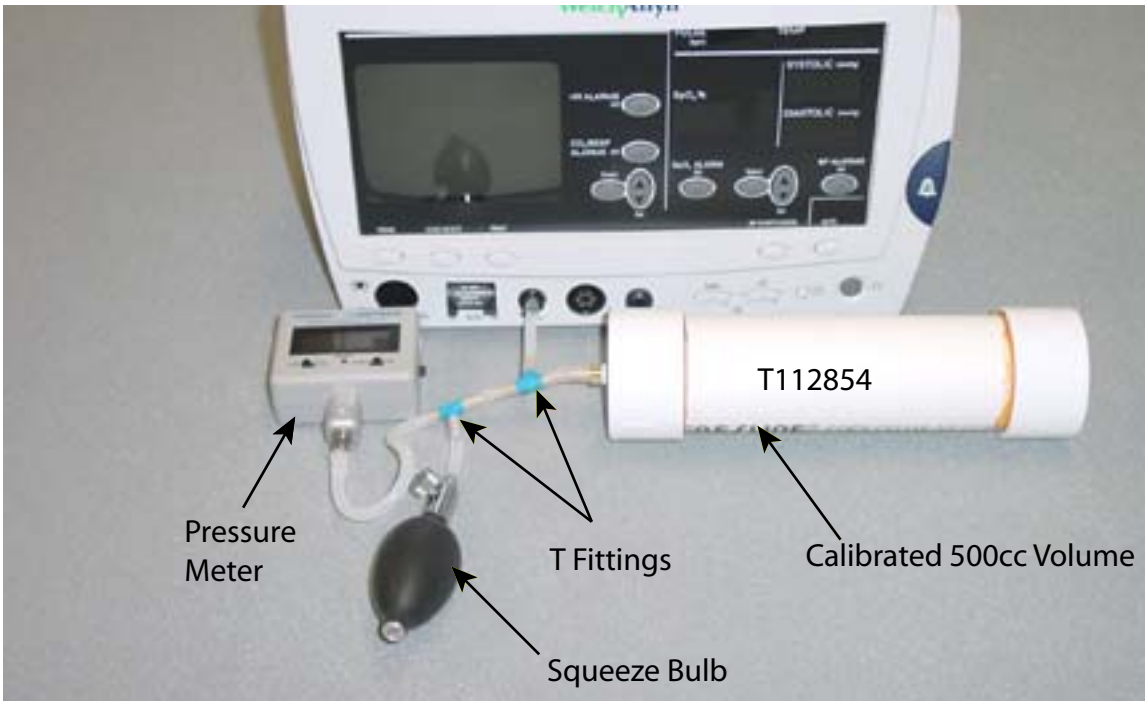

Figure 2-4. Photo of Atlas BP calibration setup.

50mmHg Calibration

1. Enter the following commands at the Pangea prompt.
   Pangea> **bp valve close** <ENTER>
   Pangea> **bp safety off** <ENTER>
   Pangea> **bp cal 5000** *Do not press <ENTER> yet!*

2. Raise the pressure with bulb to as close to 50.00mmHg as possible. Now press <ENTER>.

3. Release the pressure.

250mmHg Calibration

1. Enter the following command
   Pangea> **bp cal 25000** *Do not press <ENTER> yet!*

2. Raise the pressure with bulb as close to 250.00 mmHg as possible. Now press < **ENTER** >

3. Enter the following command to save the calibration in the Atlas.
   Pangea> **nvram write** <ENTER>

4. Release the pressure.

CO_2 Reset (623xx Models Only)

Required material. 1. Watertrap
2. Scrubber

NOTE: *The Scrubber looks similar to a watertrap, but it is filled with white granules. The scrubber is included with the 623XX models only.*

NOTE: *Make sure date and time are correct before performing the CO_2 reset.*

1. Turn Atlas on. Make sure the watertrap and scrubber are ***NOT*** attached to the Atlas.

2. Press the **DATE/TIME** button on the lower right of the monitor. The Set Date and Time and Other Options menu will be displayed.

3. Press the **CO_2/RESP ALARMS Off** button. The CO_2 Reset screen will appear.

4. You will see the following messages on the CRT.
   "**CO_2 Reset**"
   "Install CO_2 scrubber"
   "Press Trend to abort"

5. Install the watertrap to the Atlas. Install the scrubber to the watertrap.

6. You will see the following instructions on the screen.
   "**Warming up**" will be flashing on CRT.
   "**May take up to five minutes**" on CRT.
   "**Press Trend to abort**" on CRT.

7. After about 5 minutes you will see on the CRT.
   "**CO_2 Reset**"
   "**Reset complete**"
   "**Remove CO_2 scrubber**"
   "**Press the trend button to exit**"

8. Remove the CO_2 watertrap and scrubber.

9. Press **TREND** button to return to idle screen.

Replace watertrap after every six hours of use. Treat watertrap and used CO_2 sample lines as bio hazard material!

ET CO_2 Calibration

Required material:

1. Tank of approximately 10% CO_2, balance N_2 (certified) Blood Gas Mixture.
2. Tubing and T connectors.
3. Watertrap and scrubber.

1. Make sure the watertrap and scrubber are not attached to the Atlas. Turn the Atlas on.

2. Place the instrument into the Service Mode by pressing the **DATE/TIME** button. Make sure date and time are correct. Press the **LEAD SELECT** button.

3. Press **SELECT** button and scroll down to Calibrate CO_2.
   The message "**Install CO_2 Scrubber**" will appear on the right side of screen.

4. Attach the scrubber to the water trap.

5. Insert the scrubber/water trap assembly into water trap socket. The message "**Enter span gas value using Set button 10%**" will appear.

6. Press the **SET** button to change the value of span gas being used. The factory default value is 10%. Calibrate with a 8% to 12% certified CO_2 concentration known to be ±0.01%).

7. The message press "**BP Start/Cancel**" will appear at the bottom right of CRT. Press the **BP/Start/Cancel** button.

8. If you receive a "**Calibration Failed**" message at this point, check the date. If date is 2022 or above it will fail CO_2 calibration.

9. Next you will see a message "**Warming up**". After the Atlas warms up you will see a message "**Attach CO_2 gas**". Remove the scrubber from the CO_2 water trap. Do not remove water trap.

10. Attach the certified source of CO_2 gas to the CO_2 side-stream sampling tube as per Figure 2-5 below.

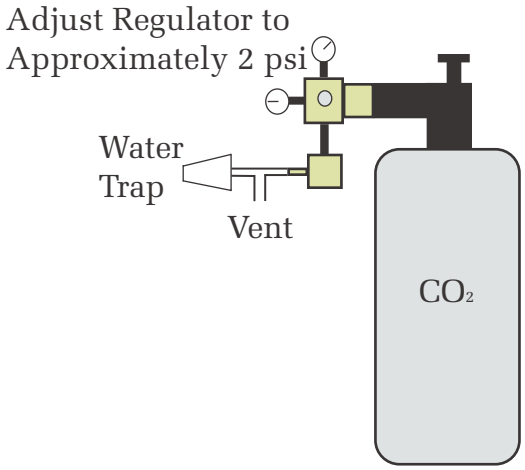

Figure 2-5. Example of CO_2 calibration setup.

CAUTION: IMPROPER USE,STORAGE OR HANDLING OF COMPRESSED GAS VESSELS CAN CAUSE DEATH OR INJURY. FOLLOW GAS MANUFACTURES SAFETY PROCEDURES!

11. Adjust the CO_2 regulator just enough to allow a small amount of gas to flow out of the vent (approximately 2 psi).

12. Press the **BP START/CANCEL** button. The message: "Sampling" will appear on CRT. "**CO_2 calibration successful**" or "**CO_2 calibration failed**" will appear on the CRT display.

13. Press the **TREND** button to exit.

No-Load Battery Voltage Calibration

NOTE: *No-Load Battery Voltage Calibration procedure is for models 622 and 623 only. If you disconnect the battery you must reset time and date after you reconnect the battery.*

Specifications: No load battery charge 6.85 VDC

Required materials: DVM

1. Remove the battery and disconnect the battery leads from the Atlas. Use the DVM to measure across the connectors, red+ and black-.

2. Adjust the voltage to 6.85 VDC by turning potentiometer R338, located behind the right battery jack. Turning clockwise will increase the no-load voltage and counter clockwise will decrease the no-load voltage.

Battery Voltage Calibration

Required materials.

1. DC power supply rated: 7 VDC at 5A
2. DMM / DVM with 10mV resolution on a 10 DC volt scale.
3. PC with HyperTerminal
4. Serial interface cable

1. Connect the serial cable to the PC and Atlas.

2. Hyper Terminal Settings are:
   9600 Baud, 8 bit word, 1 stop bit
   no parity, no flow control
   ANSI character set
   Find HyperTerminal in Windows 95 or higher
   Start ⇨Programs⇨Accessories ⇨ Communication⇨ HyperTerminal

NOTE: *Make sure the Atlas* ***IS NOT*** *plugged into AC for this calibration procedure.*

3. Remove and disconnect the battery from Atlas.

4. Set the power supply to 6.8VDC ± 200mV and connect the power supply to the battery connector on the Atlas.

5. Turn Atlas on..

6. Reduce the power supply to 6.0VDC and measure the voltage at the battery connector (at the Atlas) to the nearest 10mV.

NOTE: *Do not measure at the power supply, since cable resistance will introduce error.*

7. At the HyperTerminal prompt type:
   Pangea> **power cal XXXX** <ENTER>

NOTE: *XXXX represents the measured voltage in millivolts no decimal point. For example, if you measured 6.010VDC at the battery connector, use the command "****power cal 6010*** *<ENTER>".*

8. The Atlas will respond: raw = ZZZZ mV true = 6010 mV OK

NOTE: *ZZZZ is the raw uncalibrated reading that the instrument made.*

9. Reduce the power supply to 5.6 VDC. You should soon hear the "**low battery**" alarm.

10. Measure the voltage at the battery connector to the nearest 10mV.

11. At the HyperTerminal prompt type:
    Pangea> **power cal XXXX** <ENTER>

NOTE: *XXXX represents the measured voltage in millivolts with no decimal point. For example if you measured 5.590 volts at the battery connector, then you would enter the command "**power cal 5590**" <ENTER>.*

12. The Atlas will respond:
    raw = ZZZZmV true = 5590 OK

NOTE: *ZZZZ is the raw uncalibrated reading that the instrument made.*

13. Finish the calibration by typing:
    Pangea> **hw reset** <ENTER>

NOTE: *This will re-boot the Atlas.*

14. Turn the Atlas off and reinstall the battery.

15. Reset time and date.

Printer Print Adjustment

1. Install new paper.

2. Turn Atlas on.

3. Attach an ECG simulator to Atlas and set simulator for a heart rate of 60 bpm, normal sinus rhythm.

4. Press **PRINT** button. Evaluate the darkness of waveform and text printout.

5. If either need to be changed press **DATE/TIME** button then press **LEAD SELECT** button to access Advanced Configuration menu.

6. Press **SELECT** button and scroll down to Printer Test Pattern. Then Press **HR ALARMS OFF** button

7. Two lines will be displayed:
    1. Waveform+128
    2. Text+ 78

NOTE: *These two numbers are the factory defaults and are a good starting point if the system is printing poorly or not at all.*

8. The left **SET** button controls the waveform darkness and the right **SET** button controls the text darkness.

NOTE: *Pressing the **SET** button up will increase the number and darken the waveform while pressing the **SET** button down will decrease the number and will lighten the waveform.*

9. Make changes to the printout as needed.

10. Press **Trend** button to return to waveform screen.

Temperature Calibration

Required Material:

1. PC with Windows7 95 or higher
2. Atlas serial cable
3. 1k Ohm, 1/2 watt precision resistor
4. 1/4″ mono phono jack
5. Soldering iron and solder
6. Ohm Meter

1. Solder the 1 K Ohm resistor to 1/4” mono phono jack.

2. Measure the resistance at the tip of the phono jack. Record that resistance reading, to two decimal points.

3. Plug the phono jack into the Atlas.

NOTE: *The Atlas will show a temperature reading in the temperature display.*

4. Start HyperTerminal on PC.

5. Hyper Terminal Settings are:
   9600 Baud, 8 bit word, 1 stop bit
   no parity, no flow control
   ANSI character set
   Find HyperTerminal in Windows7 95 or higher
   Start ⇨Programs ⇨ Accessories ⇨ Communication ⇨ HyperTerminal

6. At the Pangea prompt Type: PANGEA> **temp cal XXXXXX** <ENTER>

NOTE: *XXXXXX is the resistance reading you measured and recorded in milliohms at the tip of the mono phono jack.*

Example: If you measure 1000.40 ohms at the tip of the phono jack then you would type **temp cal 100040** <Enter>.

7. Wait four seconds then type: PANGEA> **temp state** <ENTER>. You will see a value returned at the Pangea prompt.

8. Verify that the resistance given by the above command returns a value ± 0.5 ohms.

9. Verify temperature accuracy as outlined in Chapter 3, Table 3-2.

Calibration Date Set

NOTE: *After calibrating the Atlas you must reset the calibration date. The calibration date is the date you performed the calibration. The calibration date appears in the Service Mode menu. See Figure 2-6 for an explanation of the Service screen.*

1. At the Pangea prompt type.

   Pangea> **nvram set cal_date XXXX** <ENTER>

NOTE: *XXXX is the number of days from January 1, 1998 until the present date. See APPENDIX E for that number or calculate manually.*

Explanation of an Atlas Service Screen

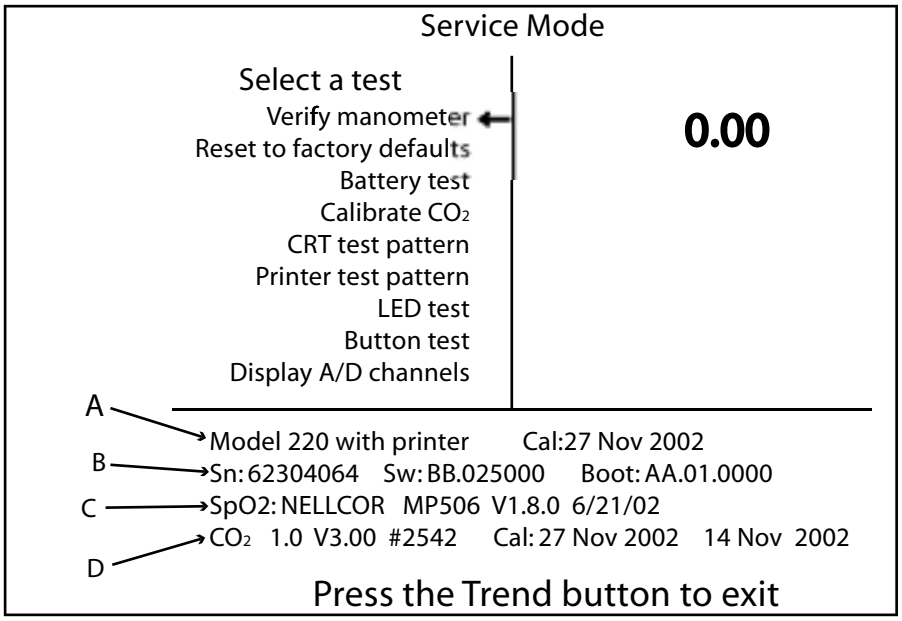

Figure 2-6. Example and Explanation of an Atlas Service Screen

Line A Indicates that the Atlas is a model 220 and that the Atlas has a printer. If the Atlas did not have a printer then the text "with printer" would be absent. The date field following indicates the date the Atlas was last calibrated.

Line B starts with a numeric sequence. The first three digits are the model number of the Atlas. The next five numbers are the Atlas serial number. The next sequence,alphanumeric, indicates what software version is currently loaded into the Atlas. The third sequence, alphanumeric, indicates what version boot software is currently loaded into the Atlas.

Line C starts with the SpO_2 OEM board used in the Atlas. There are two SpO_2 OEM boards used in the Atlas. One is Nellcor and the other is Nonin. The next sequence indicates the model of the SpO_2 board. The next sequence, that starts with a letter "V", is the version software used with the current SpO_2 board. The date following the SpO_2 software is the date the OEM loaded the software into the SpO_2 board. SpO_2 OEM software can not be upgraded. If the most current software is needed, you will need to replace the SpO_2 board.

Line D is the CO_2 information if your Atlas has CO_2 installed. *Only models 623 have CO_2 installed*. If your Atlas does not have CO_2 installed then line **D** will be absent. If your Atlas has CO_2 installed then line **D** will start with CO_2 followed by a numeric number. That numeric value is the software loaded into the CO_2 board. The next alphanumeric sequence, starting with a "V", is the version of that software. The next numeric sequence starting with a "#" is the serial number of the CO_2 board. The next sequence, a date, is the date the CO_2 was last calibrated. The last sequence, a date, is the date the CO_2 was reset. CO_2 OEM software can not be upgraded. If the current software is needed, you will have to replace the CO_2 board.

Table 2-3. Software Revision Table.

Model	Operating System	Boot loader	Nellcor	Nonin	Pryon
621S0	AA.01.4000, 9/8/99	AA.01.0000, 6/20/99		V7	
621S0	BB.02.0000, 4/4/01	AA.01.0000, 6/20/99		V7	
621S0	BB.02.2000, 6/4/02	AA.01.0000, 6/20/99		V7	
621S0	BB.02.5000, 10/14/02	AA.01.0000, 6/20/99		V7	
621N0	BB.02.5000, 10/14/02	AA.01.0000, 6/20/99	V1.8.1.0, 10/14/02		
621SP	AA.01.4000, 9/8/99	AA.01.0000, 6/20/99		V7	
621SP	BB.02.0000, 4/4/01	AA.01.0000, 6/20/99		V7	
621SP	BB.02.2000, 6/4/02	AA.01.0000, 6/20/99		V7	
621SP	BB.02.5000, 10/14/02	AA.01.0000, 6/20/99		V7	
621NP	BB.02.5000, 10/14/02	AA.01.0000, 6/20/02	V1.8.1.0, 10/14/02		
622S0	AA.01.4000, 9/8/99	AA.01.0000, 6/20/99		V7	
622S0	BB.02.0000, 4/4/01	AA.01.0000, 6/20/99		V7	
622S0	BB.02.2000, 6/4/02	AA.01.0000, 6/20/99		V7	
622S0	BB.02.2000, 6/4/02	AA.01.0000, 6/20/99		V7	
622S0	BB.02.5000, 10/14/02	AA.01.0000, 6/20/99		V7	
622SP	AA.01.4000, 9/8/99	AA.01.0000, 6/20/99		V7	
622SP	BB.02.0000, 4/4/01	AA.01.0000, 6/20/99		V7	
622SP	BB.02.2000, 6/4/02	AA.01.0000, 6/20/99		V7	
622SP	BB.02.5000, 6/14/02	AA.01.0000, 6/20/99		V7	
622N0	AA.01.4000, 9/8/99	AA.01.0000, 6/20/99	V 1.2.0.0 12/17/97		
622N0	BB.02.0000, 4/4/01	AA.01.0000, 6/20/99	V 1.2.0.0 12/17/97		
622No	BB.02.2000, 6/4/02	AA.01.0000, 6/20/99	V 1.2.0.0 12/17/97		
622N0	BB.02.5000, 10/14/02	AA.01.0000, 6/20/99	V 1.8.1.0 10/14/02		
622NP	AA.01.4000, 9/8/99	AA.01.0000, 6/20/99	V 1.2.0.0 12/17/97		
622NP	BB.02.0000, 4/4/01	AA.01.0000, 6/20/99	V 1.2.0.0 12/17/97		
622NP	BB.02.2000, 6/4/02	AA.01.0000, 6/20/99	V 1.2.0.0 10/14/02		
622NP	BB.02.5000, 10/14/02	AA.01.0000, 6/20/99	V 1.8.1.0 10/14/02		
623SP	AA.01.4000, 9/8/99	AA.01.0000, 6/20/99		V7	0.E V1.00
623SP	BB.02.0000, 4/4/01	AA.01.0000, 6/20/99		V7	0.E V1.00
623SP	BB.02.2000, 6/4/02	AA.01.0000, 6/20/99		V7	
622SP	BB.02.5000, 10/14/02	AA.01.0000, 6/20/99		V7	
623NP	AA.01.4000, 9/8/99	AA.01.0000, 6/20/99	V 1.2.0.0 12/17/97		0.E V1.00
623NP	BB.02.0000, 4/4/01	AA.01.0000, 6/20/99	V 1.2.0.0 12/17/97		0.E V1.00
623NP	BB.02.2000, 6/4/02	AA.01.0000, 6/20/99	V 1.2.0.0 12/17/97		
623NP	BB.02.5000, 10/14/02	AA.01.0000, 6/20/99	V 1.8.1.0 10/14/02		

Software Upgrade Procedure

NOTE: *The following procedures are required to upgrade the software on a fully functioning Atlas or to reload software after replacing the CPU board. The download utility "**atlas_dl.exe**" loads the following files automatically.*

1. *atlas.out.gz*
2. *nvram_common.txt*
3. *nvram_(model#).txt*
4. *nvram_(language).txt*

"Atlas_dl.exe" will also query the Atlas to determine what model number the Atlas is and what language to download.

Equipment or supplies required:

1. PC with Windows7 95 or higher
2. Atlas serial cable
3. File: atlas_dl.exe (Included in the Atlas Repair Software listed in Table2-2.)

NOTE: *Make sure you have HyperTerminal turned off or the following utility download will not work!*

1. Run the program **atlas_dl.exe** from the CD or copy the file to your hard drive and run the program from there.

2. Connect the serial cable between the Atlas and the PC s'"COM1 port".

3. Turn your computer on and locate the "atlas_dl.exe" file.

4. Double left click on the "atlas_dl.exe" file.

5. When the file starts to download, the CRT will go blank on the Atlas.

NOTE: *Do not use the computer while the program is downloading.*

6. After down loading is complete, check all alarm settings and all user advanced configuration settings since these are ***RESET*** by this utility software download procedure.

NOTE: ***Stop here*** *if you are just upgrading software on a fully functional Atlas monitor or if you have replaced the CPU board.*

NOTE: *If you have replaced the **MAIN BOARD** then you **MUST** continue with the next procedure (**DOWNLOADING NVRAM FILES**).*

NOTE: *Perform the following NVRAM downloading procedure if you have replaced the MAIN BOARD. The NVRAM resides on Main Board.*

Down Loading NVRAM Files

Required Materials.

1. Computer with Windows7 95 or higher.
2. The latest Atlas repair software. Call your local Welch Allyn representative.

1. Once you have procured the latest Atlas Repair Software, you will be able to run the programs straight from the CD or copy the files to your hard drive.

NOTE: *Through HyperTerminal you will need to load the following files:*

1. nvram_cal_init.txt
2. nvram_common.txt
3. model# of Atlas
3.1. You will load "nvram200.txt" if your Atlas is a model 621xx.
3.2. You will load "nvram210.txt" if your Atlas is a model 622xx.
3.3 You will load "nvram220.txt" if your Atlas is a model 623xx.
4. "language.txt" Any combination of or all of the following files
4.1 "nvram_english.txt" for the English language
4.2 "nvram_french.txt" for the French language
4.3 "nvram_german.txt" for the German language
4.4 "nvram_spanish.txt" for the Spanish language
4.5 "nvram_potuguese.txt" for the Portuguese language
4.6 "nvram_italian.txt" for the Italian language
4.7 "nvram_chinese.txt" for the Chinese language
4.8 "nvram_japanese.txt" for the Japanese language
5. printer.txt (if fitted with a printer), or no_printer.txt. (if not fitted with a printer)

NOTE: *After loading the preceding files you, must then type the following commands at the Pangea prompt.*

1. "nvram set serial xxxxx" where xxxxx is the serial number of the Atlas monitor.
2. "nvram write" writes the information to memory.
3. "hw reset" performs a hardware reset.

2. Connect the serial cable between the Atlas and the PC COM1 port.

3. Open HyperTerminal program on PC.
   Hyper Terminal Settings are:
   9600 Baud, 8 bit word, 1 stop bit
   no parity, no flow control
   ANSI character set
   Find HyperTerminal in Windows7 95 or higher
   Start ⇨Programs ⇨ Accessories ⇨ Communication ⇨ HyperTerminal

4. Turn Atlas on. You should see the Pangea prompt. See example in Figure 2-7.

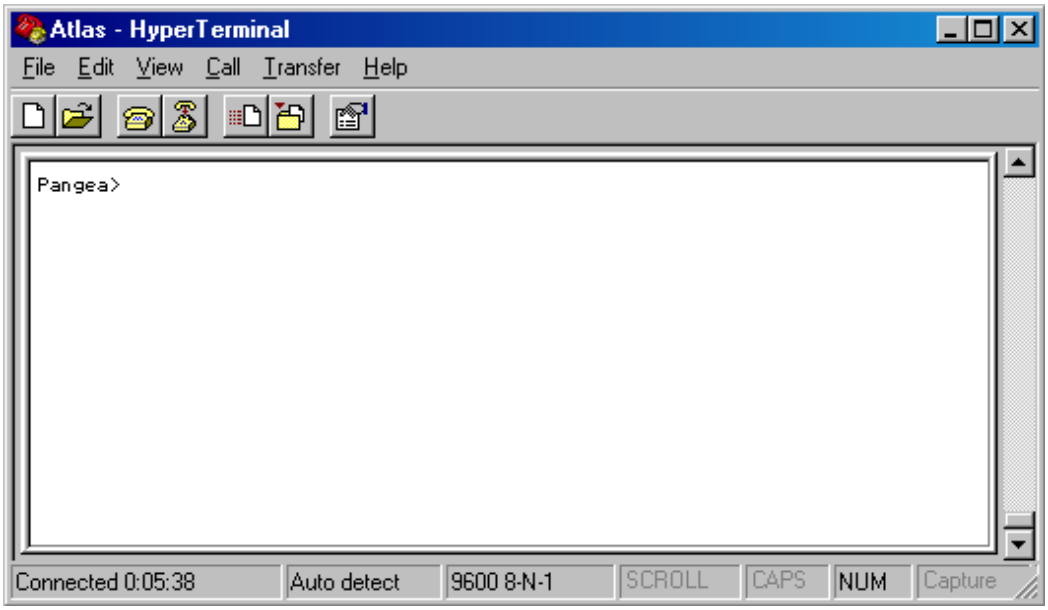

Figure 2-7. Pangea prompt in HyperTerminal.

5. Scroll over to "**Transfer**" and then scroll down and choose "**Send Text File**". See example in Figure 2-8.

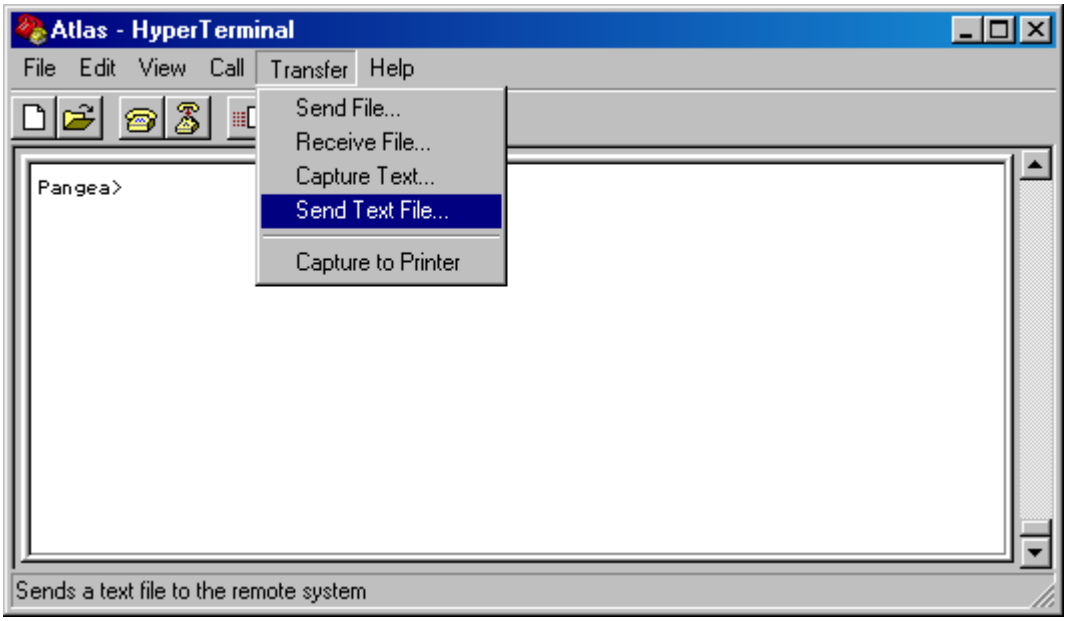

Figure 2-8. Choosing "Send Text File" in HyperTerminal.

6. Another window will then appear and prompt you for the location of the files. Double left click on that folder to open that directory. You can also run these programs from the CD. See example in Figure 2-9.

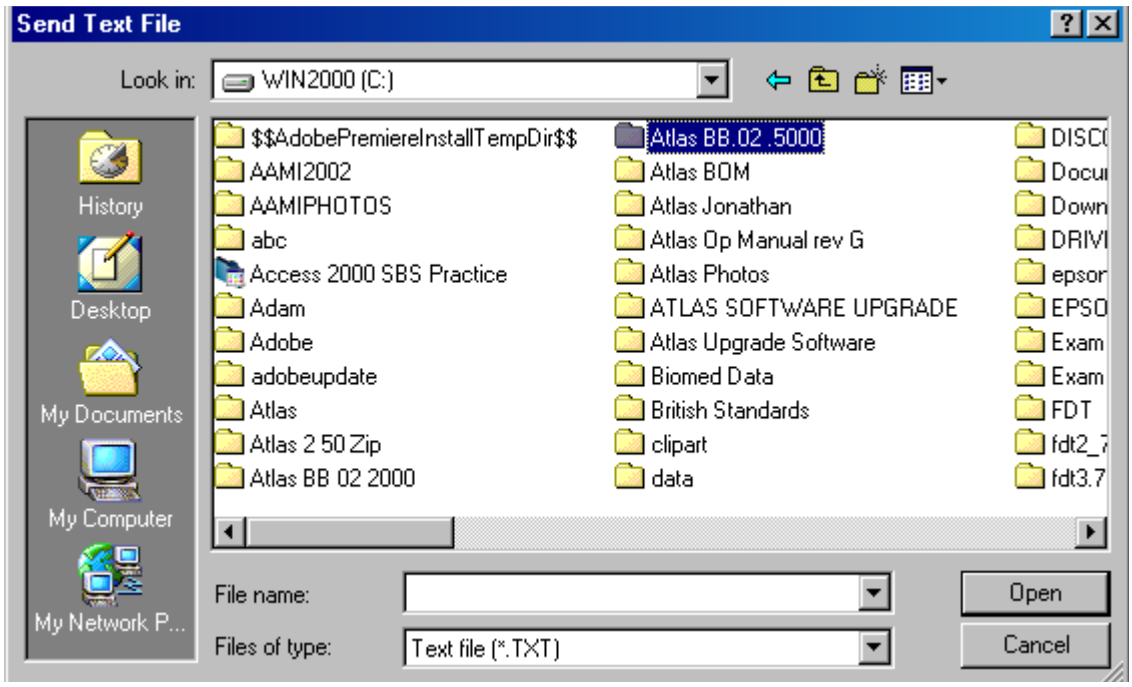

Figure 2-9. Choosing directory where NVRAM files are stored.

7. Once the folder is open, open the file "**nvram_cal_init.txt"** file by double left clicking on that file or by high lighting the file and then click on the **Open** button. See example in Figure 2-10.

*Remember that after you have download the files in this section and you **must** complete this entire "**Downloading NVRAM files**" section, that you **must** perform a complete calibration on the Atlas monitor.*

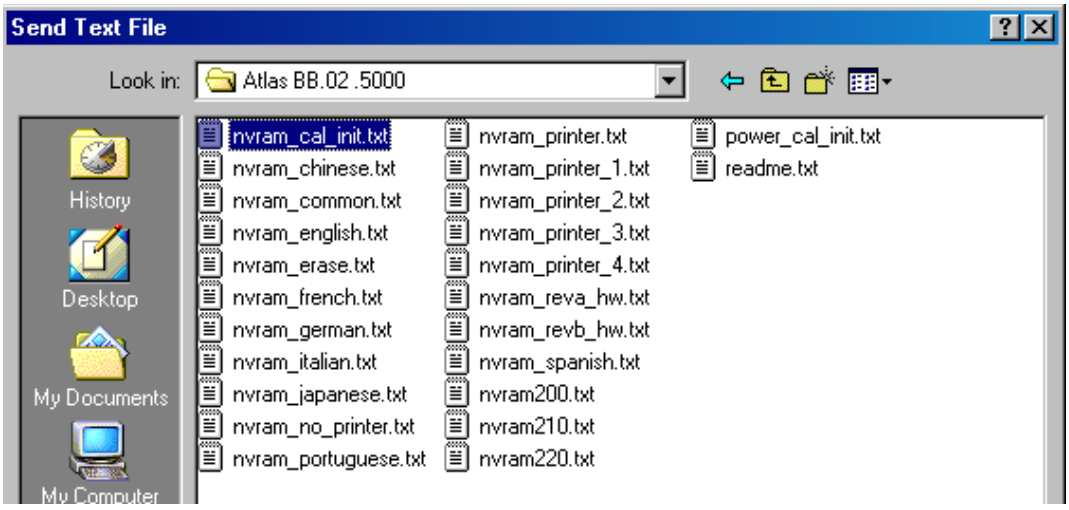

Figure 2-10. Choosing the nvram_cal_init.txt file.

NOTE: *After the* ***nvram_cal_init.txt*** *has executed you should see a Pangea screen similar to window as shown in Figure 2-11.*

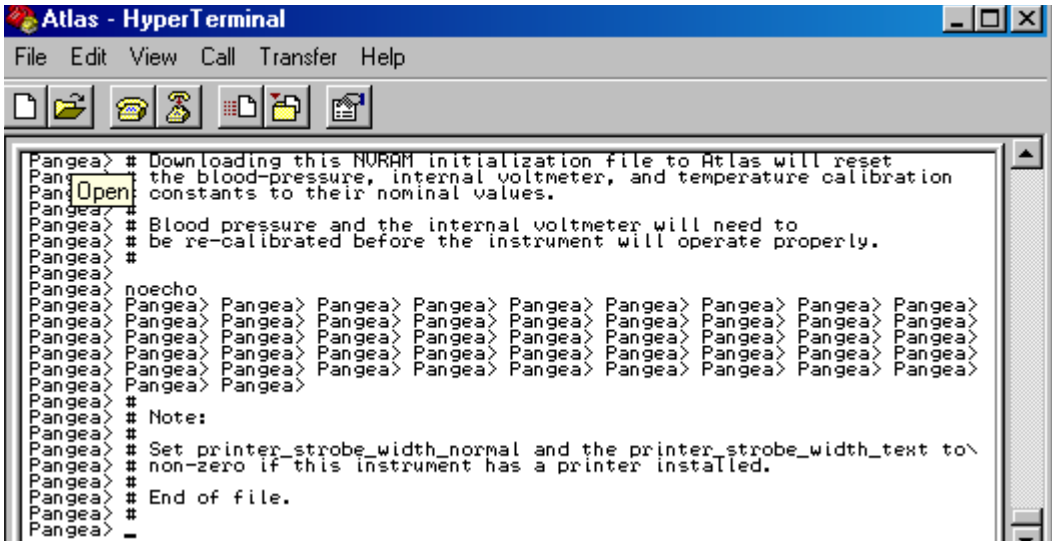

Figure 2-11. Pangea screen after opening the **nvram_cal_init.txt** file.

8. From your pangea window choose **Transfer** then choose **Send Text File**.

9. Open the directory where the file **nvram_common.txt** is located or open from the CD.

10. Double left click on **nvram_comm.txt** file or highlight the file and then choose **Open**.

NOTE: *After opening the* ***nvram_common.txt*** *file you should see a screen similar to the window shown in Figure 2-12.*

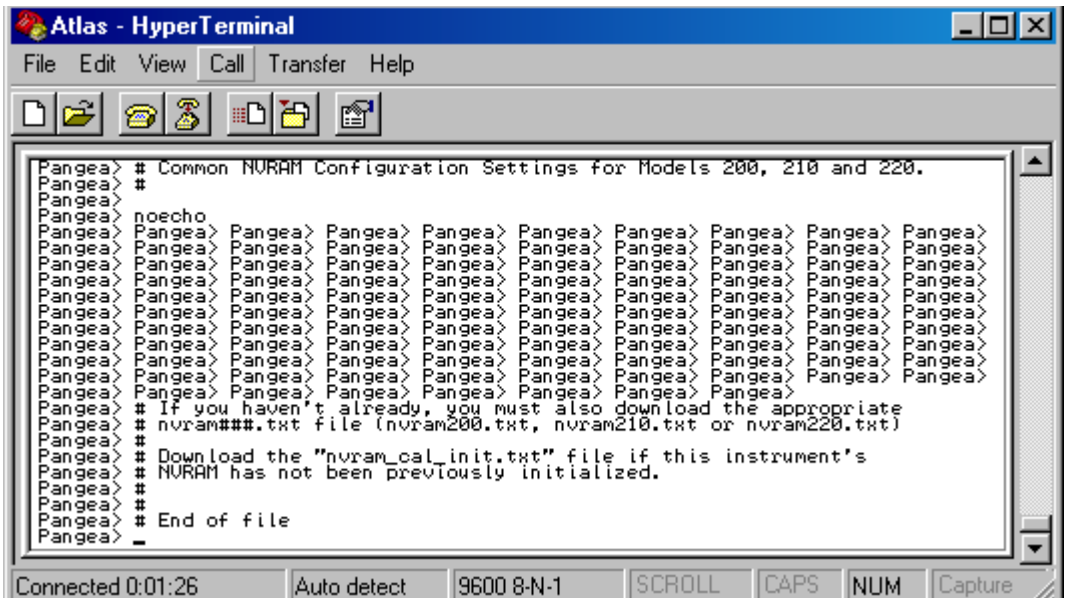

Figure 2-12. Pangea screen after opening the nvram_common.txt file.

NOTE: *Next you will download the model# of the Atlas by choosing* ***only*** *one of the three following files.*

1. *If you have an Atlas model 621 then you will* ***only*** *download the file* ***nvram200.txt.***
2. *If you have an Atlas model 622 then you will* ***only*** *download the file* ***nvram210.txt.***
3. *If you have an Atlas model 623 then you will* ***only*** *download the file* ***nvram220.txt.***

11. Open the directory where the model number files are located or open from CD.

12. Open the file by double left clicking on the file that represents the model number of the Atlas you are working on or highlight that file then choosing **Open**.

NOTE: *After opening the Atlas model# file you should see a Pangea screen similar to the window as shown in Figure 2-13.*

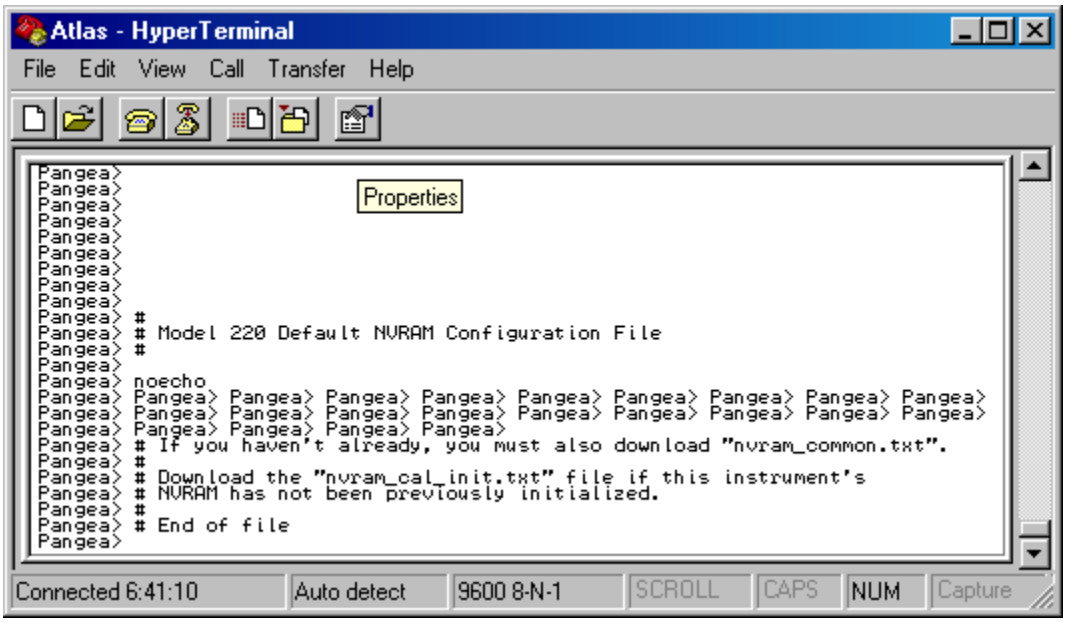

Figure 2-13. Pangea prompt after opening the model# file.

NOTE: *Next you will download the language(s) that you want the Atlas to store in it's Advanced Configuration menu for languages. You can have one or all the languages loaded in the Atlas. Listed in Table 2-4 are the language(s) choices and the files you will need to download to have the language(s) loaded in the Atlas. Each language you want loaded in the Atlas will require that the file associated with that language be loaded.*

Table 2-4. Files needed to download language(s).

Language	File needed to download
English	nvram_english.txt
French	nvram_french,txt
Spanish	nvram_spanish.txt
German	nvram_german.txt
Portuguese	nvram_portuguese.txt
Italian	nvram_italian.txt
Chinese	nvram_chinese.txt
Japanese	nvram_japanese.txt

13. Open the directory where the language files are located or open from CD.

14. Double left click on language.txt file or highlight the file and then choose **Open**.

NOTE: *After you download a language.txt file you should see a Pangea screen similar to Figure 2-14.*

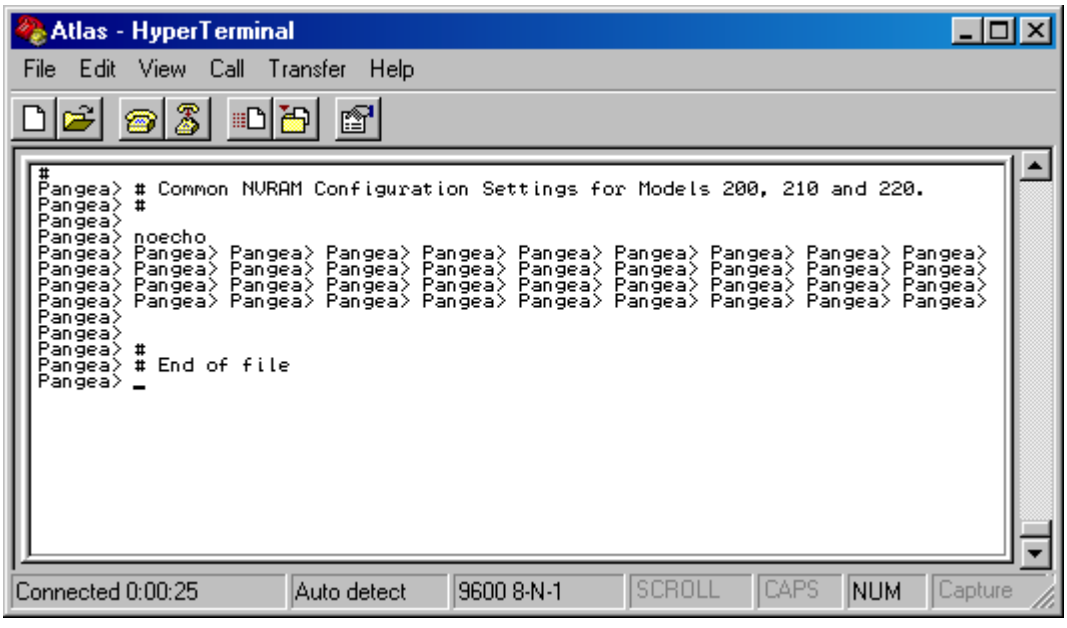

Figure 2-14. Pangea screen after loading a language file.

NOTE: *Next you tell the Atlas if it does or does not have a printer.*

1. *If the Atlas has a printer you will download the file* ***nvram_printer.txt****.*
2. *If the Atlas does not have a printer then you will download the file* ***nvram_no_printer.txt****.*

15. Open the directory where the printer.txt files are located or open from CD.

16. Double left click on the printer file or the no_printer file or highlight the printer file or the no_printer file and then choose **Open**.

NOTE: *After you have downloaded the printer or no_printer file you should see a Pangea screen similar to the window as shown in Figure 2-15.*

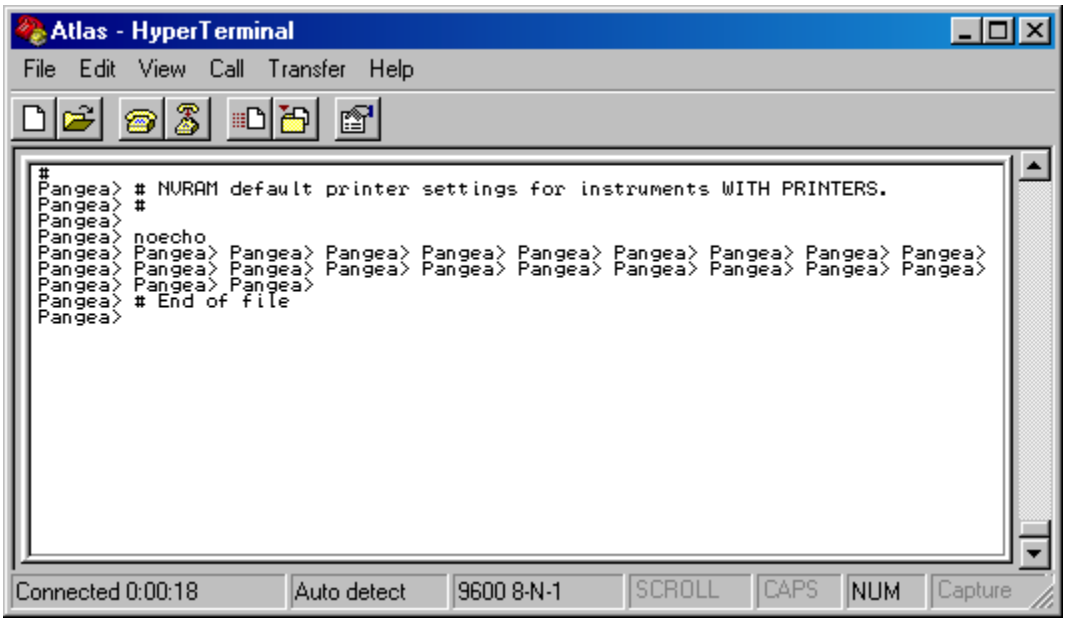

Figure 2-15. Pangea screen after downloading the nvram_printer.txt file.

NOTE: *The next three commands will require that you actually type the command at the Pangea prompt.*

NOTE: *XXXXX on line 17 is the Atlas 5 digit serial number. The serial number is located on the bottom of the Atlas. Make sure that you have a space between the command* ***serial*** *and the five numbers you are entering.*

17. At the Pangea prompt type the following command **"nvram set serial XXXXX"**<ENTER>

NOTE: *After you have typed the* ***nvram set serial XXXXX*** *command and hit* ***ENTER*** *you should see a Pangea screen similar to the example in Figure 2-16.*

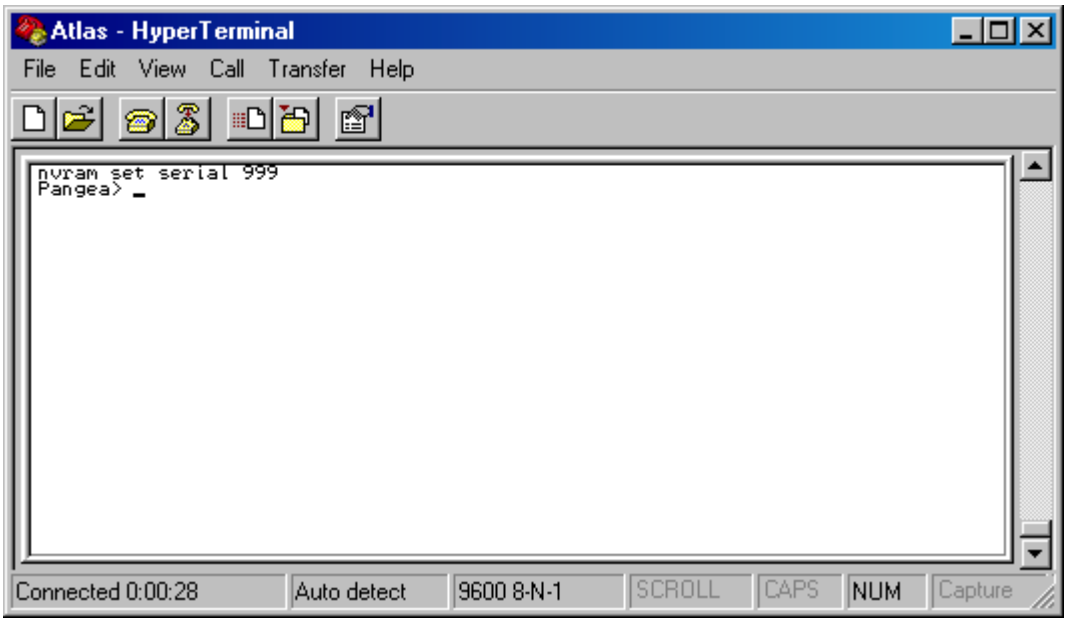

Figure 2-16. Pangea screen after you have downloaded the nvram set serial command.

NOTE: *To finish downloading the NVRAM files, type the next two commands at the Pangea prompt.*

18. At the Pangea prompt type the command **nvram write** <ENTER>.

19. At the Pangea prompt type the command **hw reset** <ENTER>.

NOTE: *The **hw reset** command will reboot the Atlas.*

*Remember that after you have download the files in this section and you **must** complete this entire "**Downloading NVRAM files**" section, that you **must** perform a complete calibration on the Atlas monitor.*

NOTE: *The firmware is not up grade able on the OEM boards (SpO_2 and CO_2) boards. If a higher version software is needed, then you will need to replace the OEM board.*