

## **SN4500 Primary Navigation Display Instructions for update to software version A2.09**

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Date: NOV 4, 2022

Regarding: SN4500 software update to version A2.09

### **Introduction**

This section describes the procedure to update an SN4500 to software version A2.09

### **Compatibility**

Applies to Nighthawk Flight Systems, Inc. (“NFSI”) part number SN4500-xxx and SN4500-xxxx with MOD A marked on the data label.

(Typically, serial numbers 9-3250 and higher AND current S/W with “A” prefix.

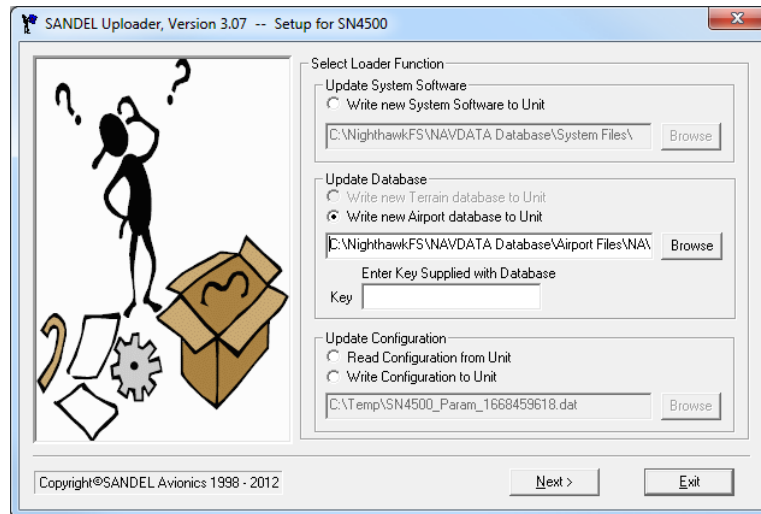
### **Hardware Requirements**

- PC with Windows XP, 7, 8.1 and 10 with available USB port
- USB to mini-USB interface cable, Sandel part number 88114 or equivalent

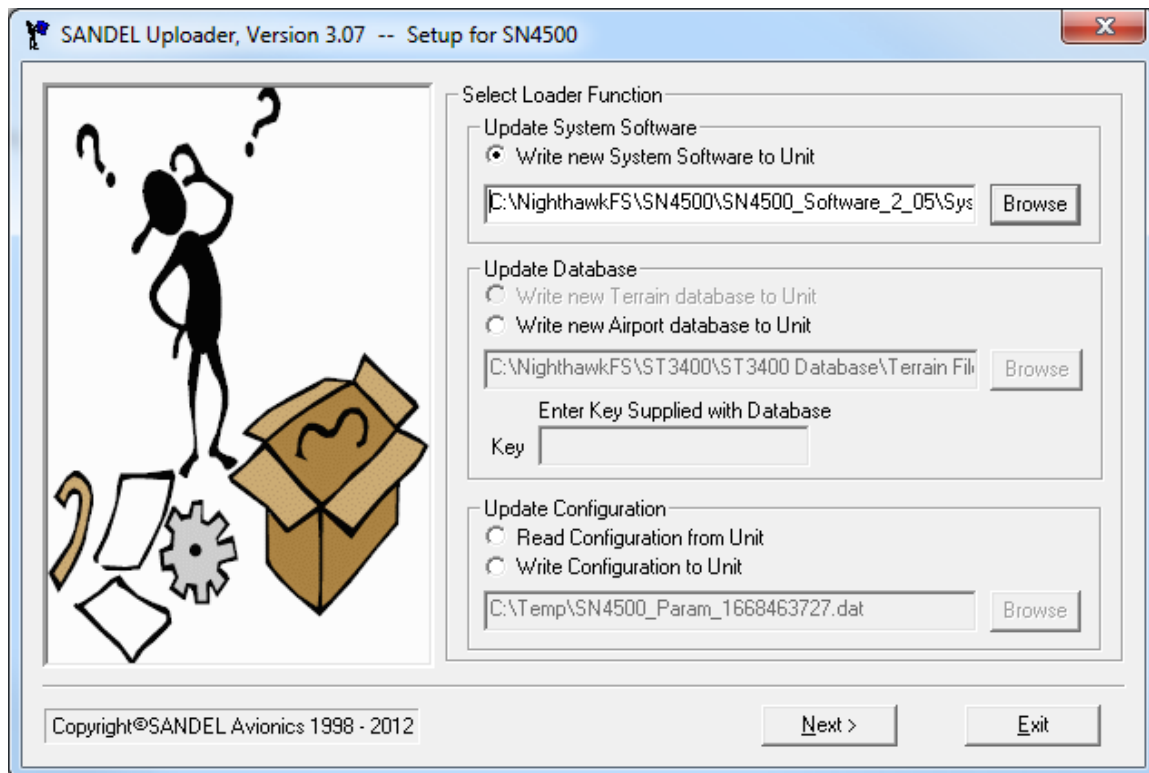
### **Upload Instructions**

1. With power removed from the SN4500, connect the SN4500 to the PC via the USB cable.
2. Power up the SN4500 in maintenance mode. This is done by holding down the AUX and MEM keys on the SN4500 while applying power. Continue to hold down the two keys until the display is visible.
3. If a message ‘Found New Hardware’ appears, follow the instructions for installing the Sandel USB driver in Appendix A of these instructions.
4. Open Windows Explorer and locate the **Sandel\_Uploader\_3.07.exe** file. The default location will be in ‘C:\NighthawkFS\SN4500\_Software\_A2\_09’. Double click on the Sandel\_Uploader\_3.07.exe file to start.

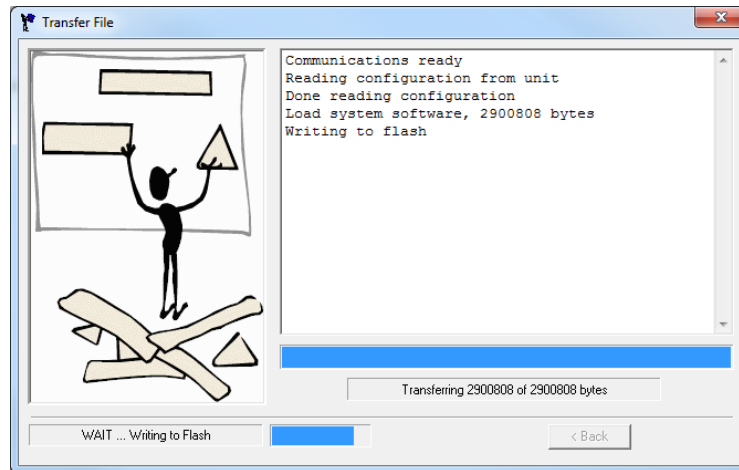
5. The Sandel Uploader Setup screen will appear. (Example below.) Select the option for **'Write new System Software to Unit'**.



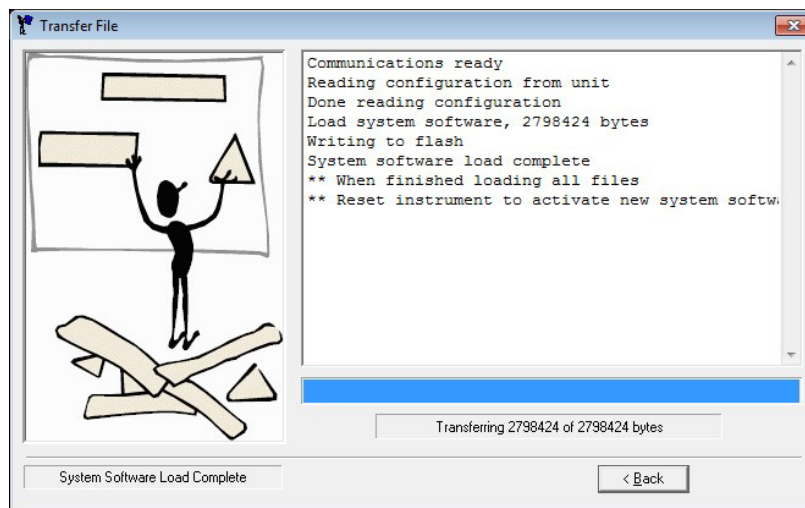
6. Click on 'Browse' and locate the file 'SN4500\_A2\_09.hex'. Highlight the file and click on 'Open'. The default location for this file is 'C:\NighthawkFS\SN4500\_Software\_A2\_09\System Files'.



7. Verify that the file 'SN4500\_A2\_09.hex' is shown in the selection window and then click on 'Next'.
8. A message that the program is initializing communications with the unit will appear for several seconds.



9. Once communication is established, the software file will be transferred to the SN4500. Do not remove power or disconnect the cable until 'Software System Load Complete' is shown.



10. Close the program by clicking on the red 'X' at the top right of the program window. The USB cable can now be removed and the SN4500 powered down.
11. Power up the SN4500 again in maintenance mode.
12. On the first power cycle following the software update, the SN4500 may show a 'CM MISSING DATA' message. If shown, press the 'SN4500 TO CM' soft

key. Press the 'YES' soft key to confirm the operation.

13. On Maintenance Page 2, verify that the Software Rev is A2.06. On Maintenance Page 17, SFTWR CRC, press the UPDATE soft key (CLR key) to update the CRC codes. Verify that all fields show Pass.

### **Troubleshooting**

Please contact NFSI Product Support if there are any questions with this procedure:

Phone: 877-726-3357 or 760-727-4900 ext. 2

Email: [support@nighthawkfs.com](mailto:support@nighthawkfs.com)

**END**

## **Appendix A**

### **NFSI SN3500, SN4500 and ST3400 USB Driver Installation Instructions**

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#### **Introduction**

This document includes instructions for installing the USB driver for the NFSI SN3500, SN4500 and ST340 which utilize a USB interface. This enables the updating of software and databases through the USB port located on the front bezel of the units.

Note: This procedure does not apply to the SN3308 EHSI as that product requires a serial interface.

#### **Hardware Requirements**

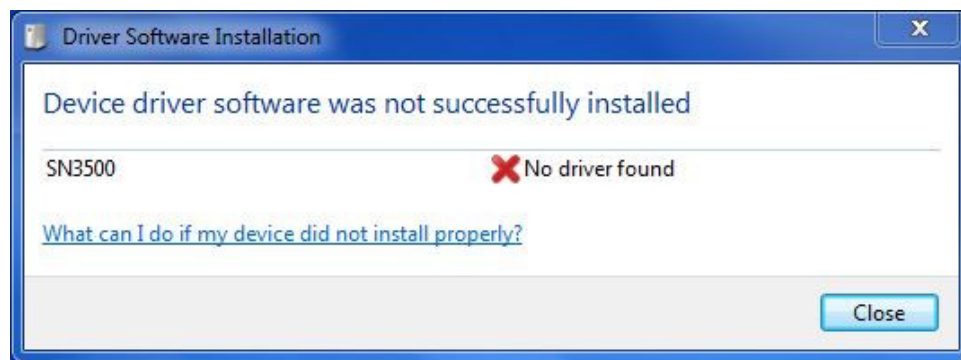
- PC with Microsoft Windows 8.1, 7, Vista or XP with available USB port
- USB to mini-USB interface cable, Sandel part number 88114 or equivalent

#### **USB Driver Installation Instructions**

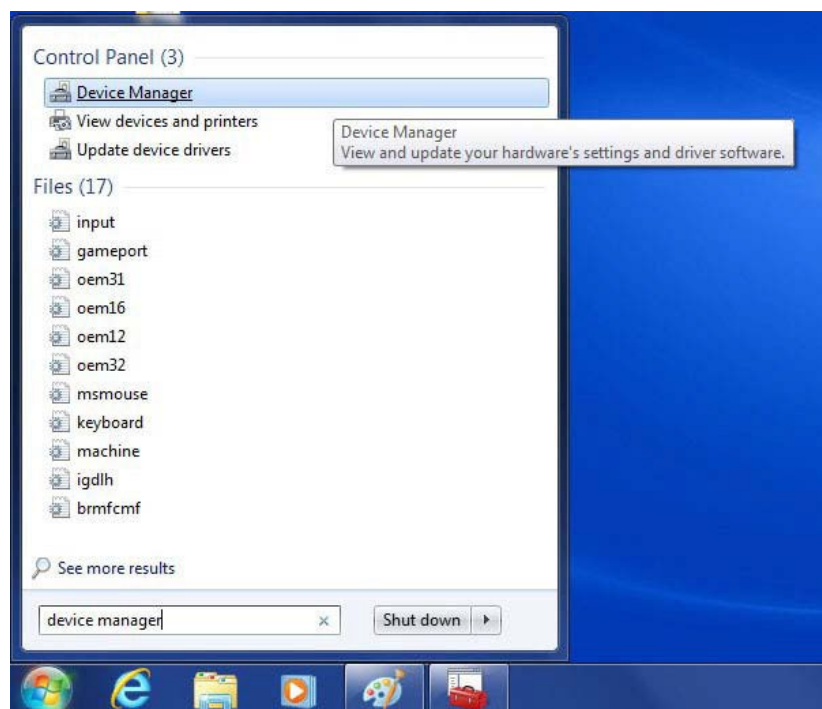
It is necessary to install a USB driver the first time an NFSI unit is connected to a PC via the USB interface. The procedures are slightly different for each version of Windows and are described separately on the following pages.

## Windows 7 & 8.1 64-bit USB Driver Installation

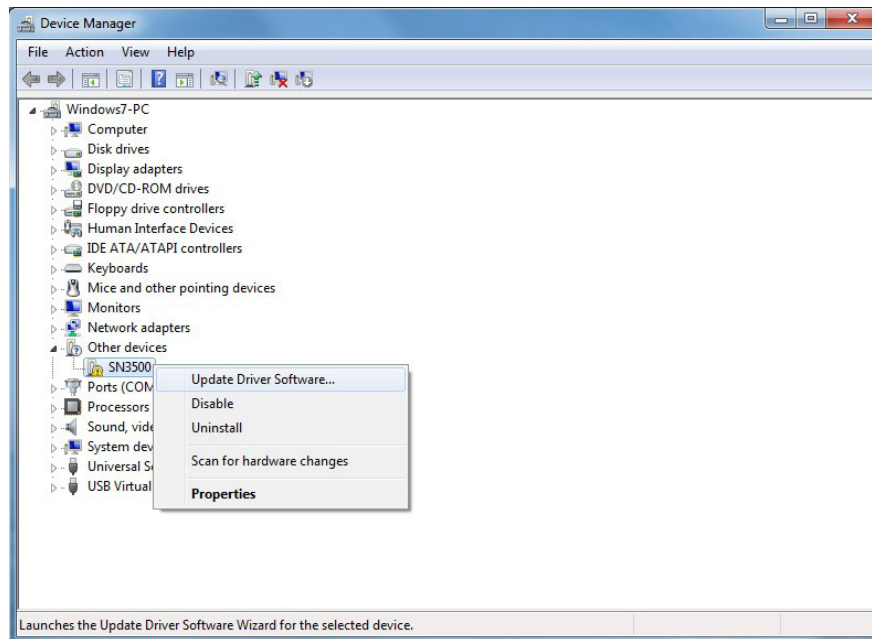
1. With power removed from the NFSI unit, connect the unit to the PC via the USB cable.
2. Power up the NFSI unit in maintenance mode. This is done by holding down the appropriate keys while applying power. Continue to hold down the keys until the display is visible.
3. The computer will attempt to automatically find and install a USB driver however it will respond with an error message as shown below. (SN3500 example used for illustration.) Close the window and proceed to the next step.



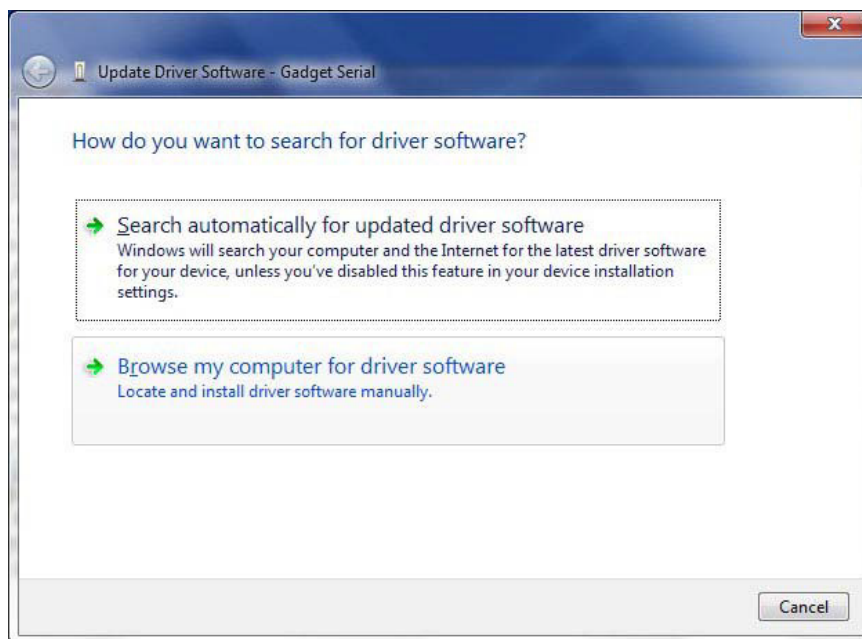
4. Click on the start icon at the lower left of the desktop and type 'device manager' in the search box. Click on the 'Device Manager' program when it appears at the top of the start window as shown below.



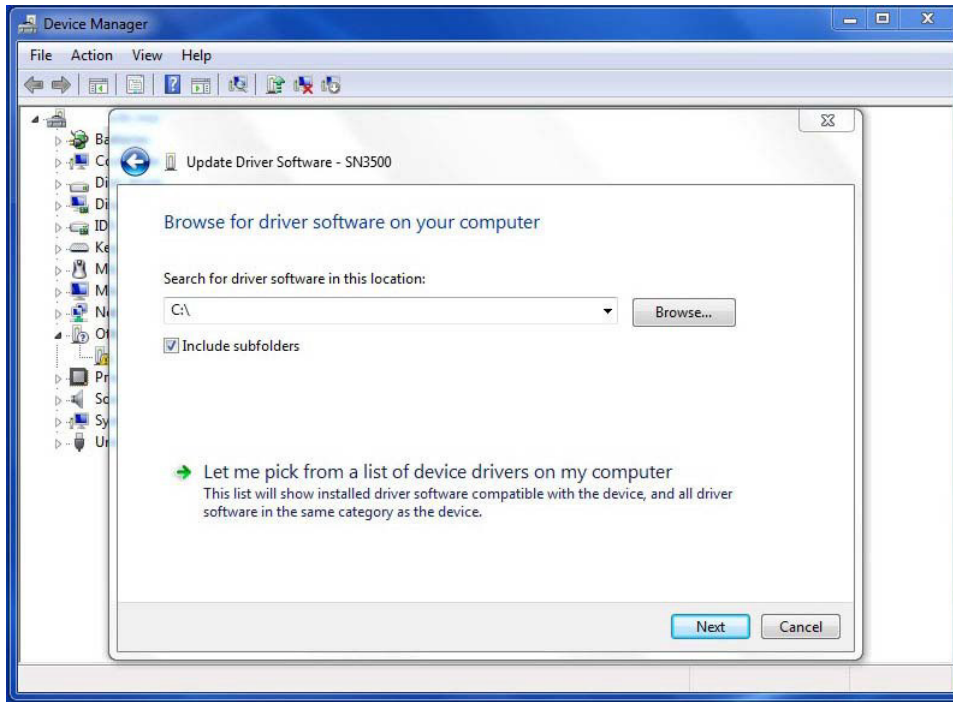
5. On the Device Manager window, double-click on 'Other devices' and then right-click on 'SN3500' (or SN4500/ST3400 as appropriate). Then click on 'Update Driver Software'.



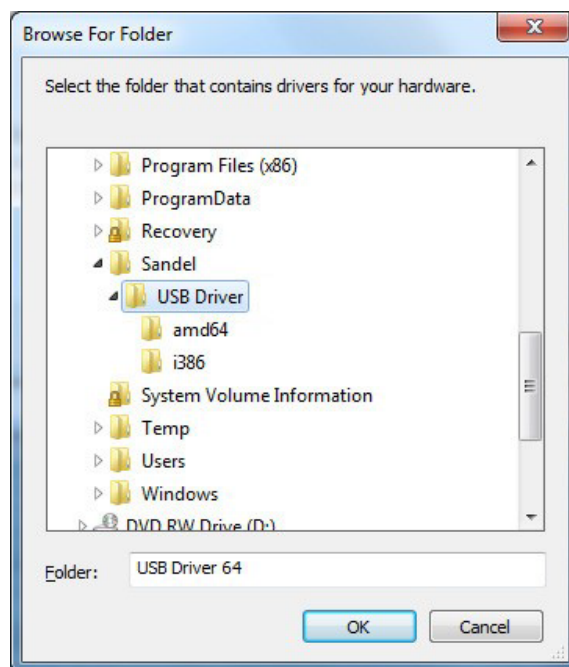
6. The Update Driver Software window will appear. Click on 'Browse my computer for driver software'.



7. 'Browse for driver software on your computer' will be shown. Click on 'Browse'.

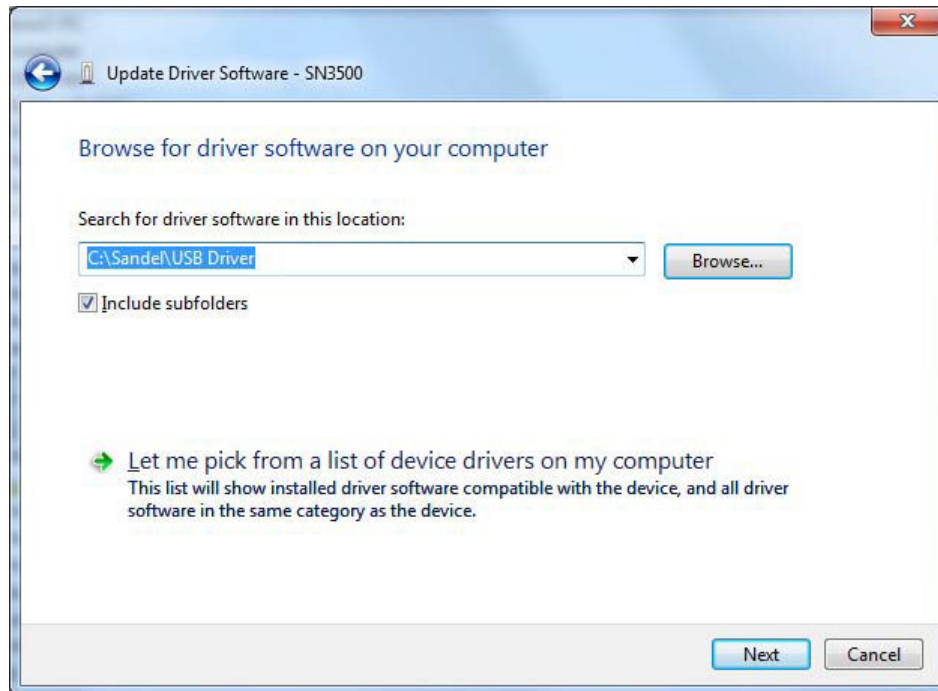


8. Select the Sandel USB Driver folder. **NOTE: The default location has changed to 'C:\NighthawkFS\USB Driver'.** Click on 'OK'.

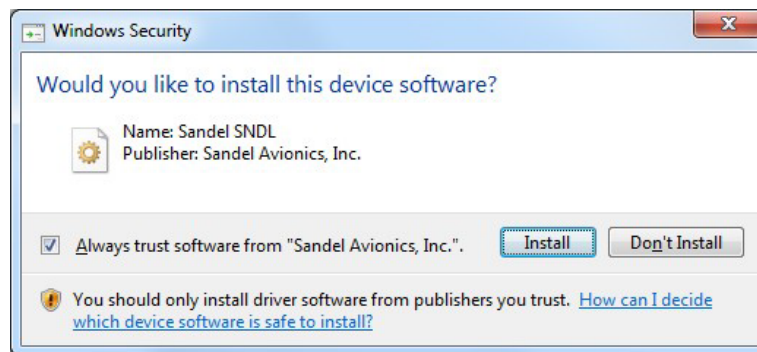




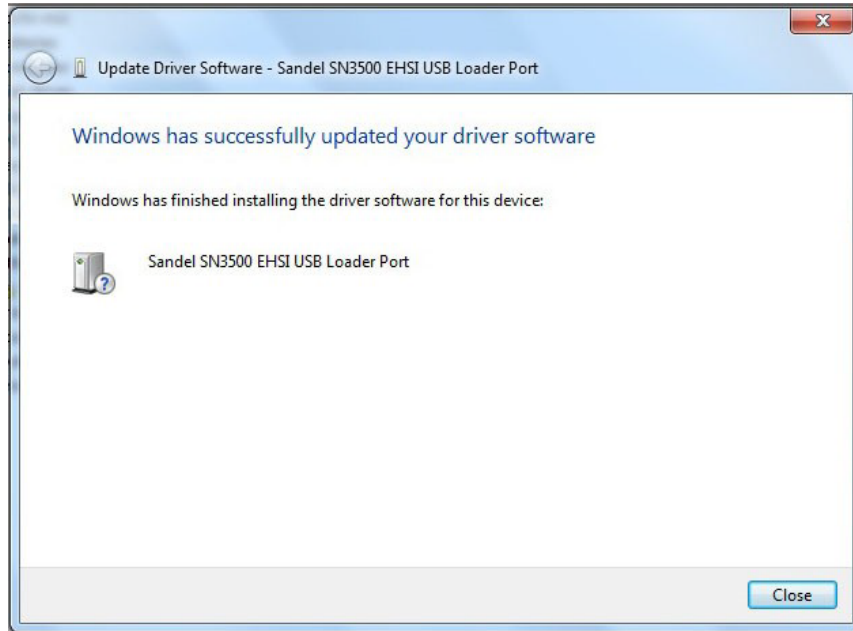
9. The USB Driver folder will be shown in the selection window. Click on 'Next'. **NOTE: The default location has changed to 'C:\NighthawkFS\USB Driver'.**



10. If a window appears asking 'Would you like to install this device software?' click on 'Install'.

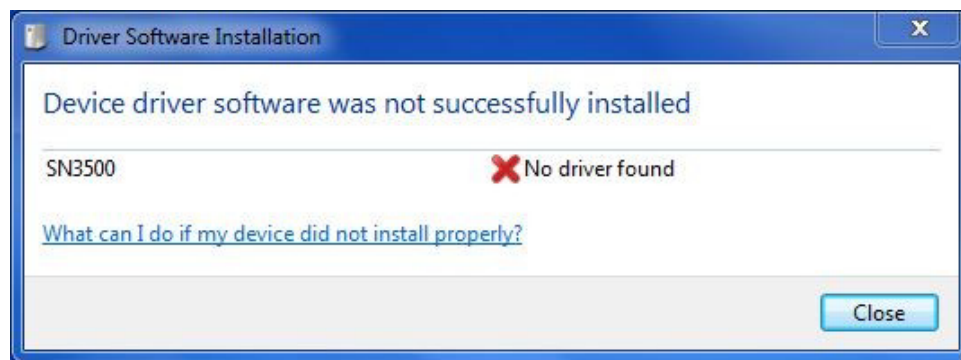


11. Windows will install the driver and display the message 'Windows has successfully updated your driver software' when complete. Click on 'Close' to complete the process.

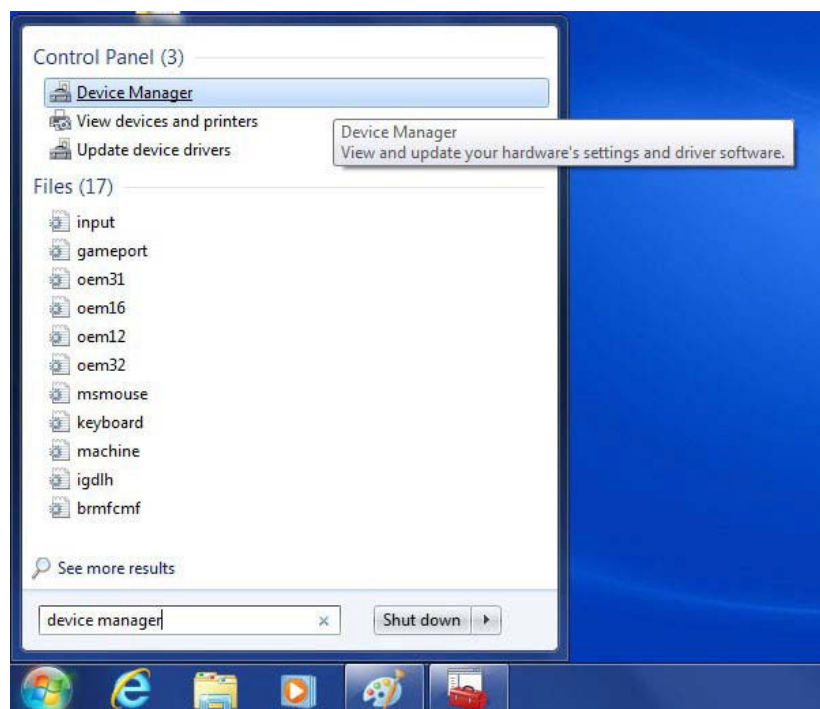


## Windows 7 & 8.1 32-bit USB Driver Installation

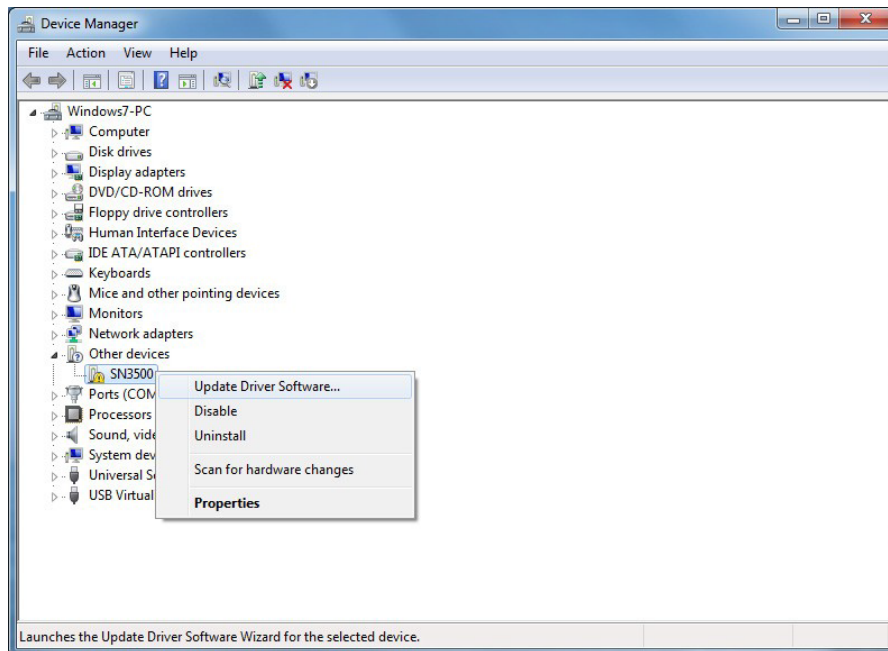
1. With power removed from the NFSI unit, connect the unit to the PC via the USB cable.
2. Power up the NFSI unit in maintenance mode. This is done by holding down the appropriate keys while applying power. Continue to hold down the keys until the display is visible.
3. The computer will attempt to automatically find and install a USB driver however it will respond with an error message as shown below. (SN3500 example used for illustration.) Close the window and proceed to the next step.



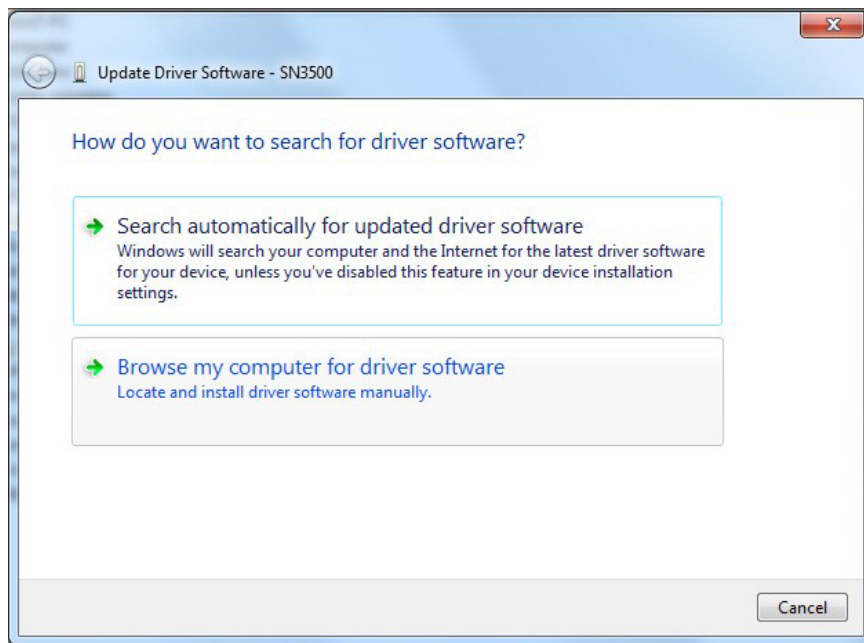
4. Click on the start icon at the lower left of the desktop and type 'device manager' in the search box. Click on the 'Device Manager' program when it appears at the top of the start window as shown below.



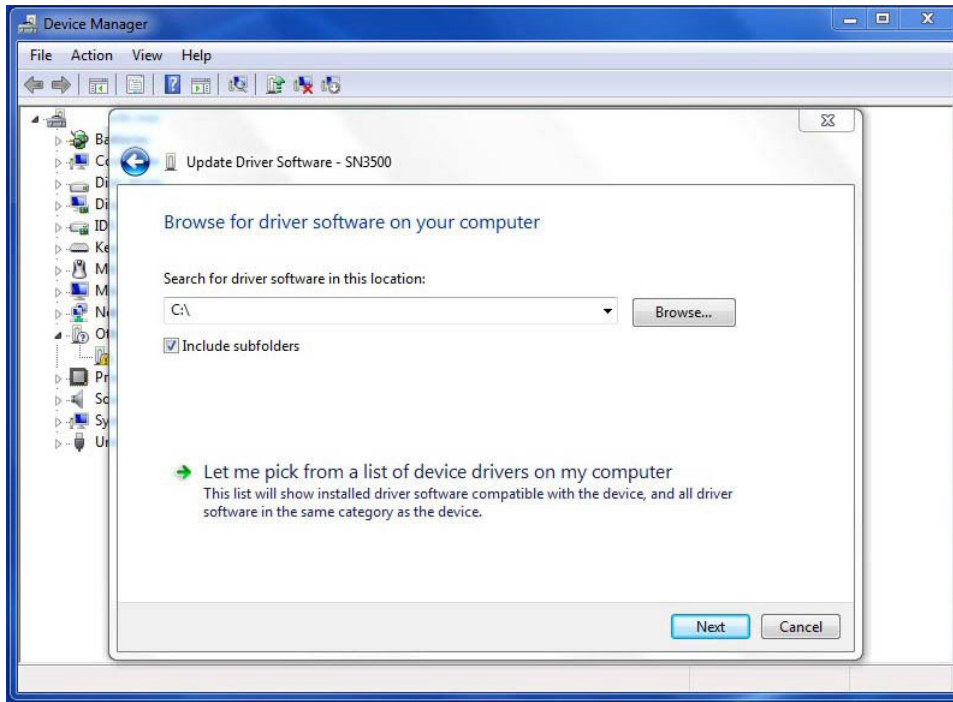
5. On the Device Manager window, double-click on ‘Other devices’ and then right-click on ‘SN3500’ (or SN4500/ST3400 as appropriate). Then click on ‘Update Driver Software’.



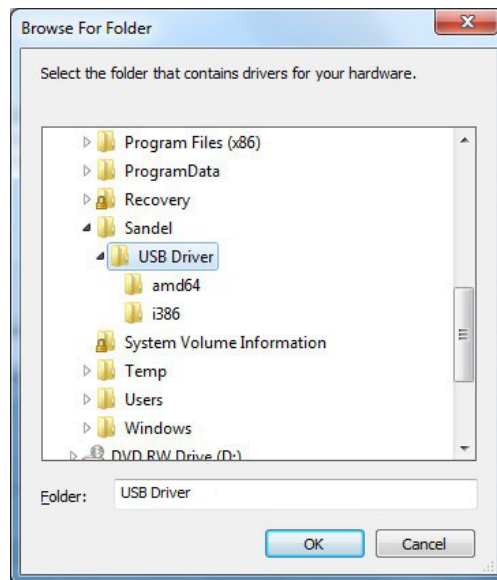
6. The Update Driver Software window will appear. Click on ‘Browse my computer for driver software’.



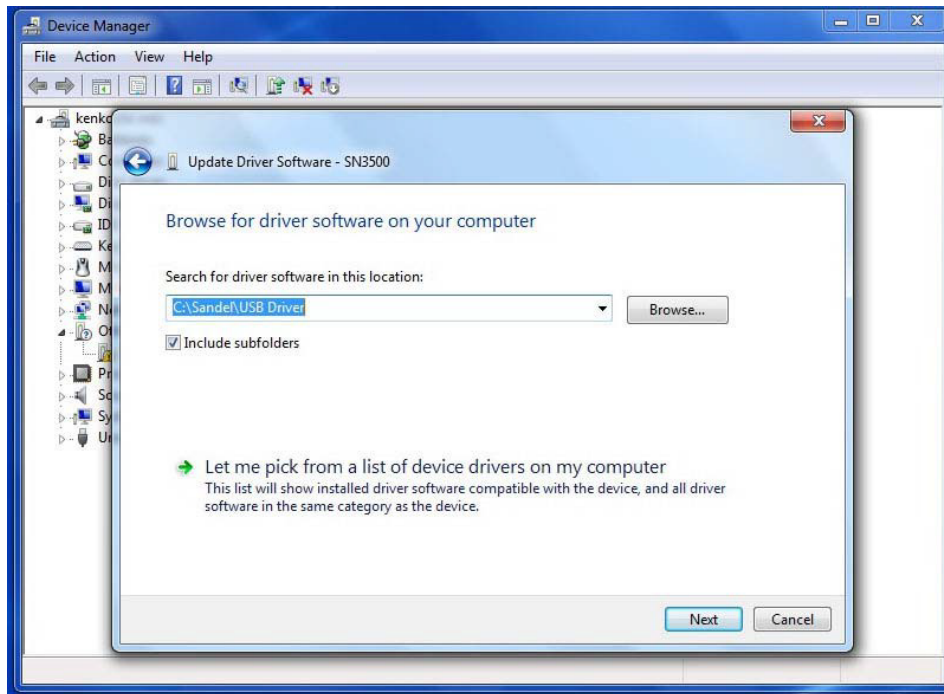
7. 'Browse for driver software on your computer' will be shown. Click on 'Browse'.



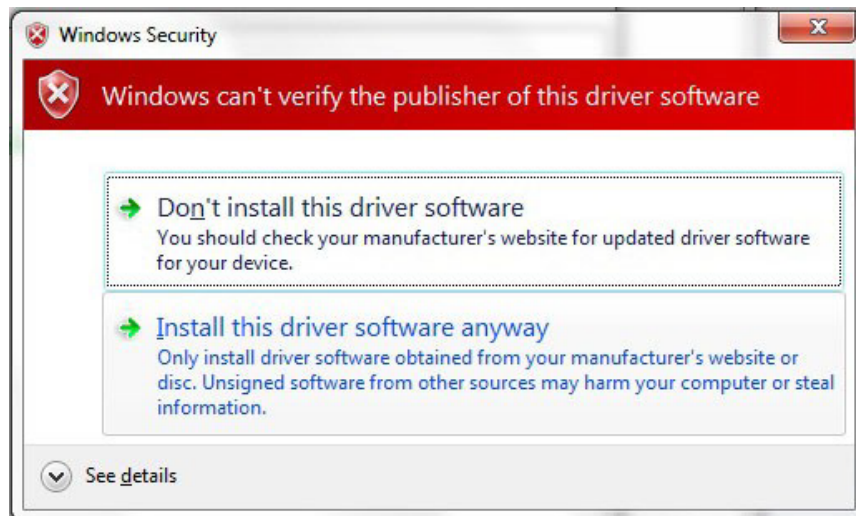
8. Select the Sandel USB Driver folder. **NOTE: The default location has changed to 'C:\NighthawkFS\USB Driver'.** Click on 'OK'.



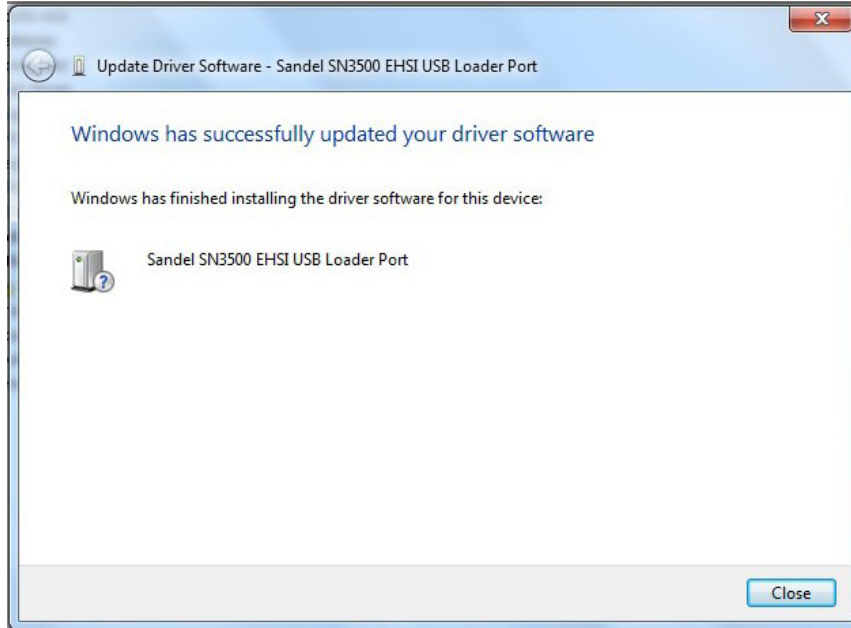
9. The USB Driver folder will be shown in the selection window. **NOTE: The default location has changed to 'C:\NighthawkFS\USB Driver'.** Click on 'Next'.



10. If a warning message appears, click on 'Install this driver software anyway'.

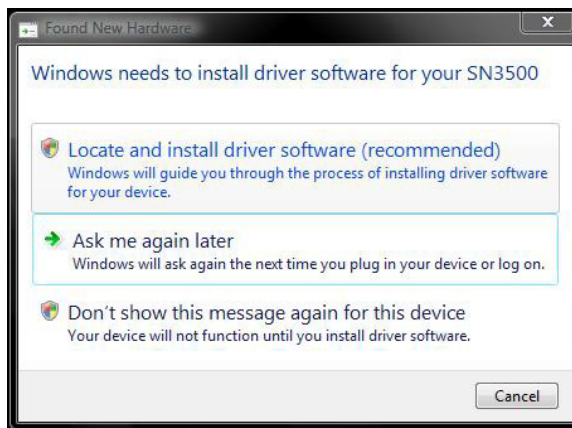


11. Windows will install the driver and display the message 'Windows has successfully updated your driver software' when complete. Click on 'Close' to complete the process.

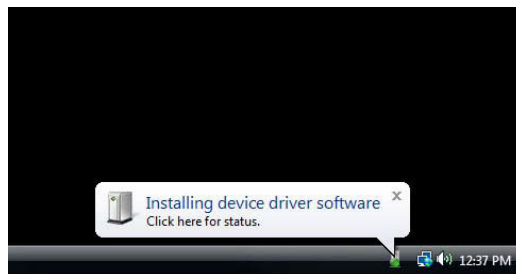


## Windows Vista USB Driver Installation

1. With power removed from the NFSI unit, connect the unit to the PC via the USB cable.
2. Power up the NFSI unit in maintenance mode. This is done by holding down the appropriate keys on the unit while applying power. Continue to hold down the keys until the display is visible.
3. A message 'Windows needs to install driver software' will appear. (Example using the SN3500 is shown below.) Click on 'Locate and install driver software'.

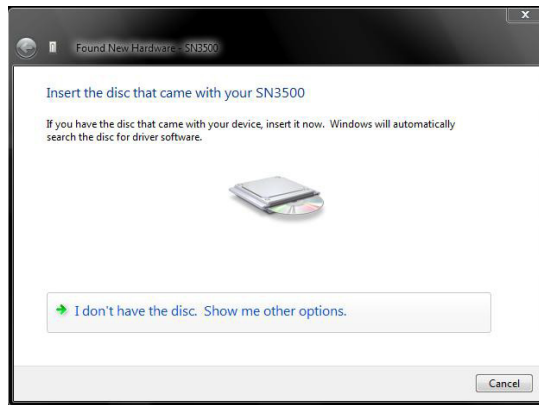


4. A message 'Windows needs your permission to continue' will appear. Click on 'Continue'.
5. A message 'Installing device driver software' will appear at the lower right. No action is necessary.

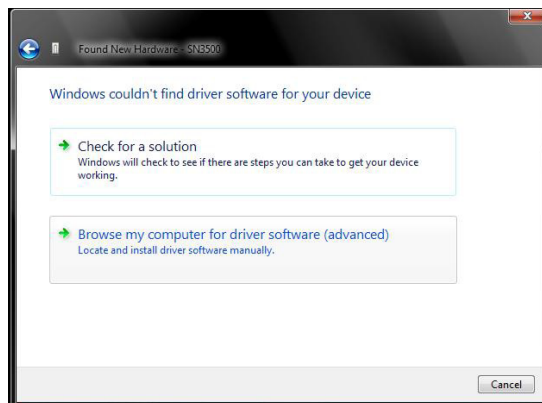




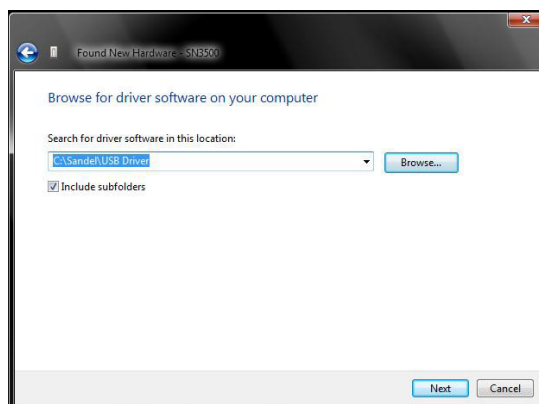
6. After several seconds, Windows will prompt to 'Insert the disc'. Click on 'I don't have the disc. Show me other options.'



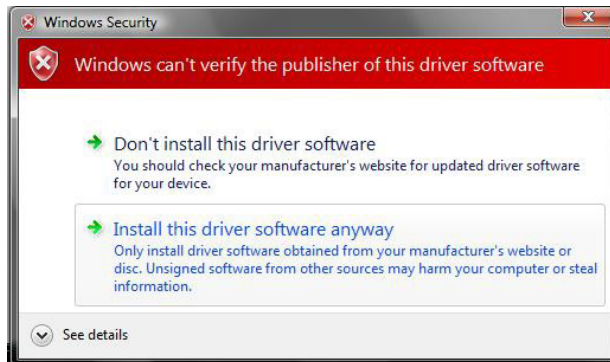
7. A message 'Windows couldn't find driver software for your device' will appear. Click on 'Browse my computer for driver software'.



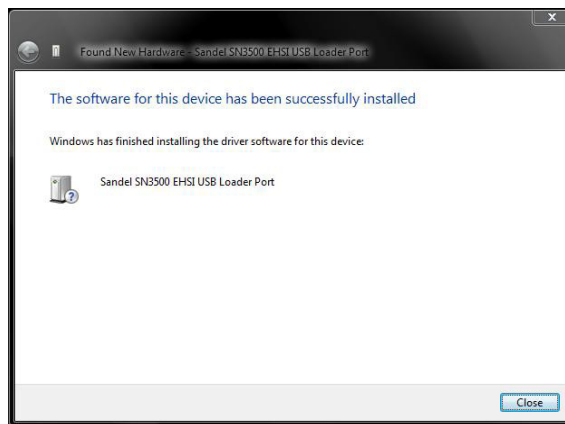
8. Windows will ask for the location of the driver. Click on 'Browse' to select the folder which contains the file 'ST3400.inf'. **NOTE: The default location has changed to 'C:\NighthawkFS\USB Driver'.** Click on 'Next'. (Note: ST3400.inf is used for all SN3500, SN4500 and ST3400 models.)



9. A warning message 'Windows can't verify the publisher of this driver software' will appear. Click on 'Install this driver software anyway'.



10. Windows will install the driver. This will take several seconds. After successful installation of the driver click on 'Close' to complete the process.



## Windows XP USB Driver Installation

1. With power removed from the Sandel unit, connect the unit to the PC via the USB cable.
2. Power up the NFSI unit in maintenance mode. This is done by holding down the appropriate keys on the unit while applying power. Continue to hold down the keys until the display is visible.
3. A message 'Found New Hardware' will appear. (Example below.)



4. The Found New Hardware Wizard will start. Select the option 'No, not this time' and click on 'Next'.



5. Windows will ask if it should install the software automatically or install from a list or specific location. Select the option 'Install from a list or specific location (Advanced)' and click on 'Next'.



- Windows will ask for the location of the driver. Select the option 'Search for the best driver in these locations' and check the box 'Include this location in search:'. Click on 'Browse' and select the folder that contains the file 'ST3400.inf'. **NOTE: The default location has changed to 'C:\NighthawkFS\USB Driver'**. Click on 'Next'. (Note: ST3400.inf is used for all SN3500, SN4500 and ST3400 models.)



- Windows will locate and install the necessary driver.



- The driver has been installed. Click on 'Finish' when complete.



## END OF USB DRIVER INSTALLATION INSTRUCTIONS