

SA4550 Primary Attitude Display

Instructions for update to software version 1.10 or A1.10

Date: November 21, 2023

Regarding: Software update to version 1.10 or A1.10

Introduction

This section describes the procedure to update an SA4550 to software version 1.10 or A1.10. Please note the current version loaded on your SA4550! If it is A1.09, please make sure you have downloaded version A1.10. If your SA4550 is running version 1.09, please make sure you have downloaded version 1.10.

NOTE: Screen captures used in this Instruction may refer to a previous software versions.

Hardware Requirements

PC with Windows 7, Vista or XP with available USB port

USB to mini-USB interface cable, NFSI part number 88114 or equivalent

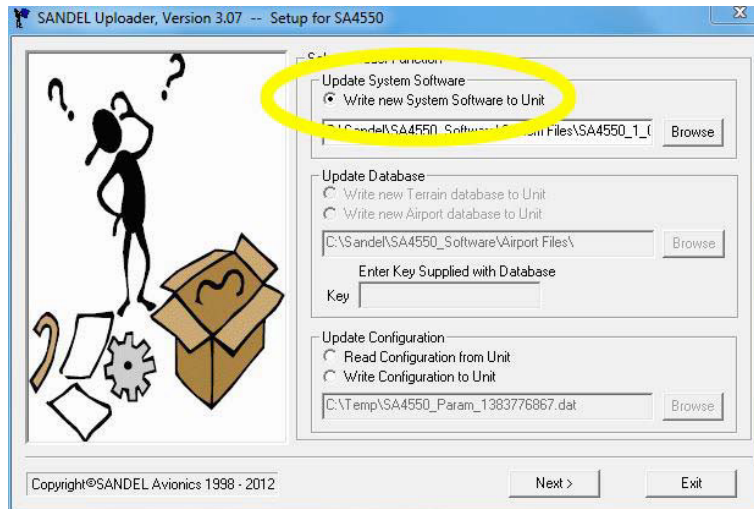
Upload Instructions

1. With power removed from the SA4550, connect the SA4550 to the PC via the USB cable.
2. Power up the SA4550 in maintenance mode. This is done by holding down the M and ATT TEST keys on the SA4550 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 loading the USB driver in Appendix A of these instructions.
4. Record the following settings for reference purposes:

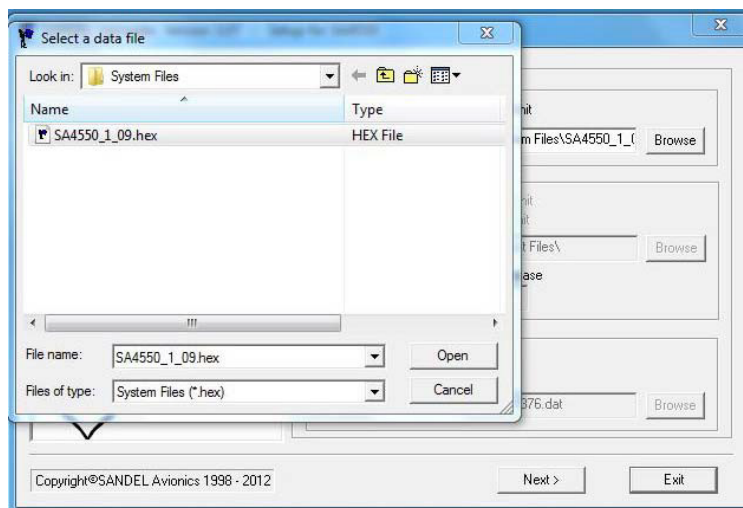
Maintenance Page 2:	PTCH CAL	_____
	BALL CAL	_____
	FD STYLE	_____
Maintenance Page 7:	CAL	_____
	RA TST	_____
	BUTTON	_____

5. Extract the contents of SA4550_Software_[version].zip to this location:
c:\nighthawkfs\.
6. Open Windows Explorer and locate the **Sandel_Uploader_3.08.exe** file. If you have followed step 5 as described, this location will be in "c:\nighthawkfs\SA4550_Software_[version]\SA4550_Software\" depending on which version you are uploading. Double click on the Sandel_Uploader_3.08.exe file to start.

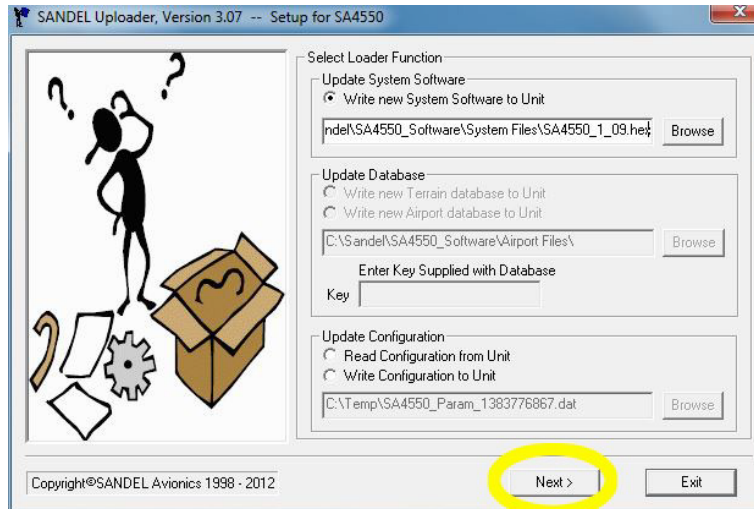
7. The Sandel Uploader Setup screen will appear. (Example below.) Select the option for **'Write new System Software to Unit'**.



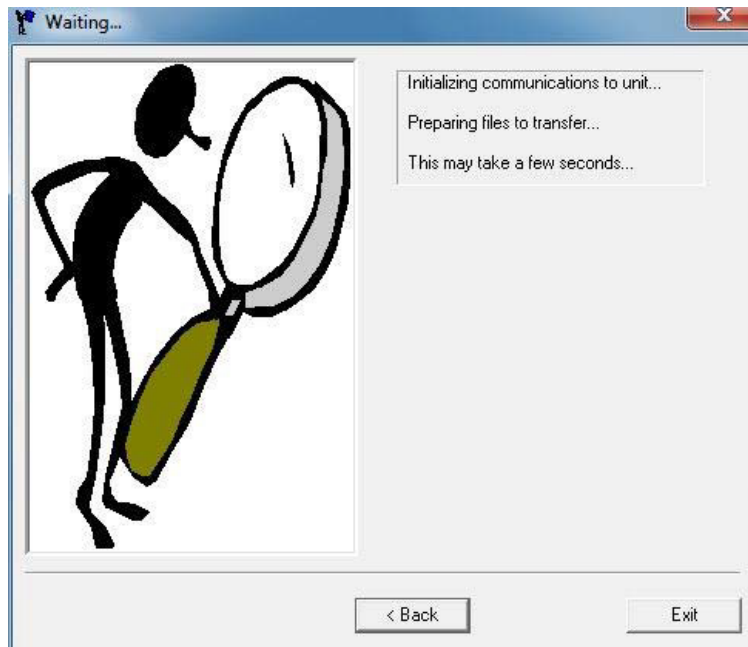
8. Click on 'Browse' and locate the "SA4550_[version].hex" file. Highlight the file and click on 'Open'. The location for this file should be 'c:\nighthawkfs\SA4550_Software_[version]\SA4550_Software\System Files'.



9. Verify that the file 'SA4550_[version].hex' is shown in the selection window and then click on 'Next'.

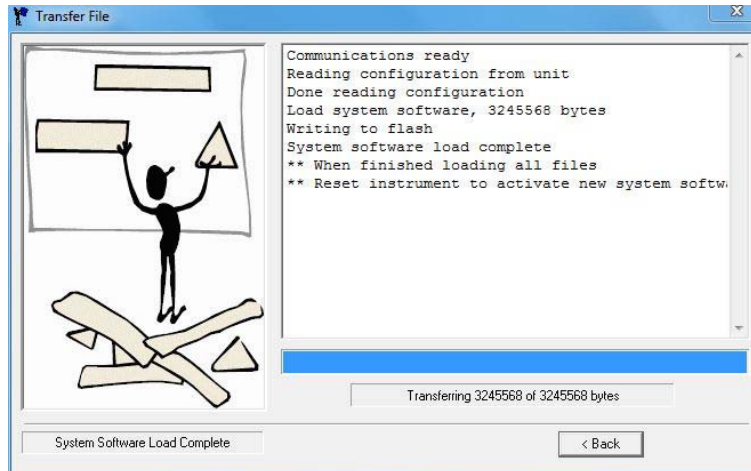


10. A message that the program is initializing communications with the unit will appear for several seconds.





11. Once communication is established, the software file will be transferred to the SA4550. Do not remove power or disconnect the cable until 'Software System Load Complete' is shown.



12. 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 SA4550 powered down.
13. Power up the SA4550 in maintenance mode.
14. On Page 4, verify that the Software Rev is 1.10, or, if you are uploading version A1.10, verify that version. On Page 11, SFTWR CRC, press the knob on the SA4550 to update the CRC codes. Verify that all fields show Pass.
15. Verify that the configuration and calibration settings on Page 2 and Page 7 are unchanged from the previous settings.

16. To enable the ARINC 429 attitude interface enter the key code provided by Nighthawk Flight Systems, Inc. ("NFSI") in the 'A429 Key' field on Page 2. Set the 'ATT SRC' field to '429' for low-speed or '429H' for high-speed data. Refer to NFSI SA4550 Installation Manual 82010-IM Rev. K or later for complete information.



17. Power down the SA4550 when done.

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

END

Appendix A

SA4550, SN3500, SN4500 and ST3400 USB Driver Installation Instructions

Introduction

This document includes instructions for installing the USB driver for the SA4550, SN3500, SN4500 and ST3400 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

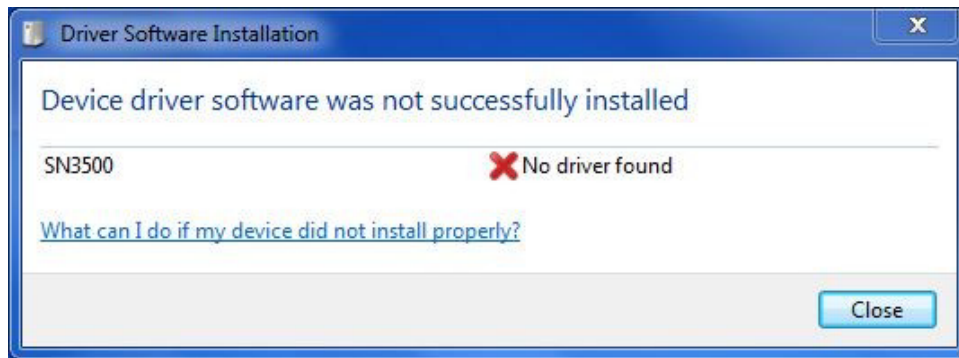
- PC with Microsoft Windows 7, Vista or XP with available USB port
- USB to mini-USB interface cable, part number 88114 or equivalent

USB Driver Installation Instructions

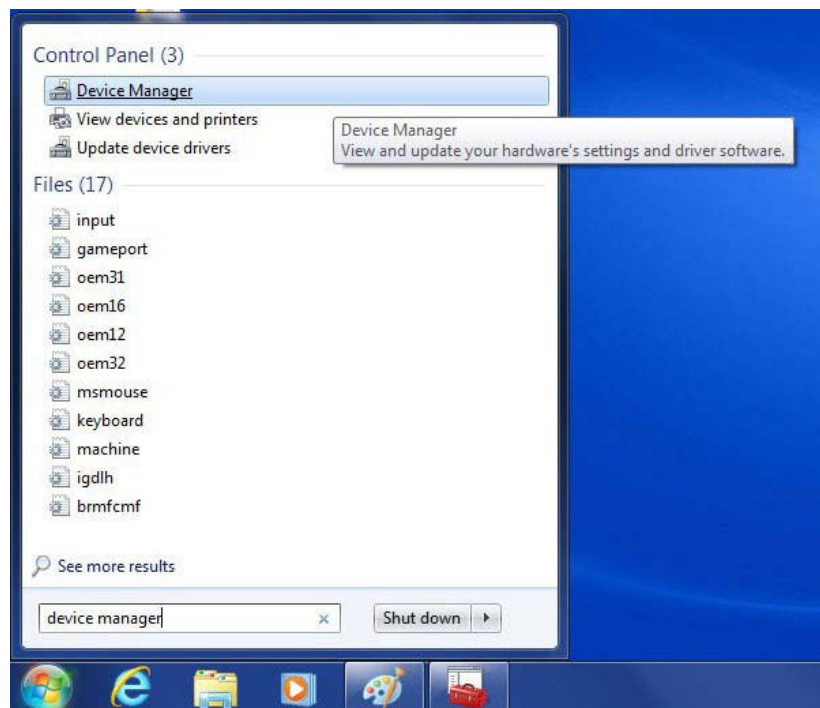
It is necessary to install a USB driver the first time a unit is connected to a PC via the USB interface. The procedures are slightly different for each version of Windows and are described separately on the following pages.

Windows 7 64-bit USB Driver Installation

1. With power removed from the unit, connect the unit to the PC via the USB cable.
2. Power up the 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 an error message as shown below. (SN3500 example used for illustration.) Close the window and proceed to the next step.

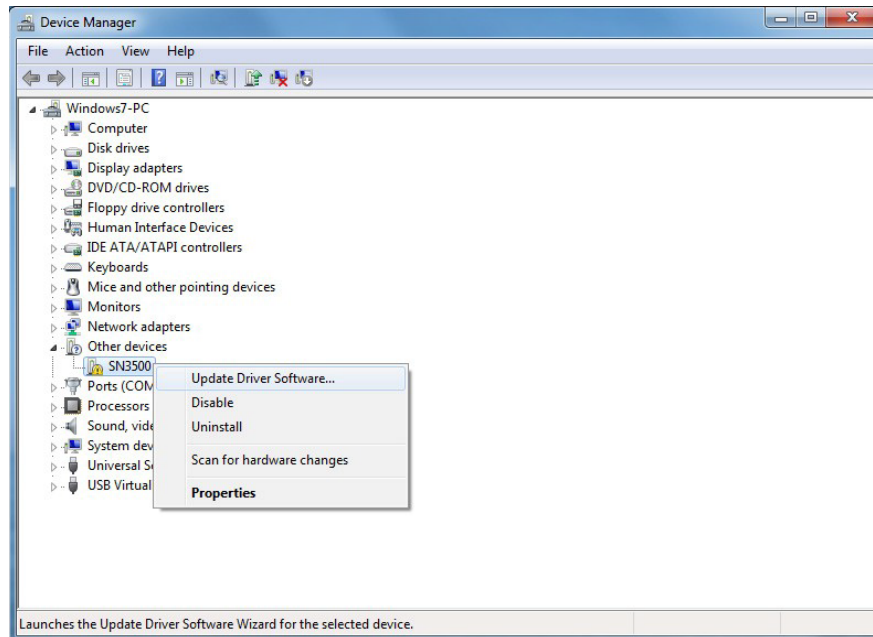


4. Click on the start icon at the lower left of the desktop and type 'device manager' in the search box. Click on the 'Device Manager' program when it appears at the top of the start window as shown below.

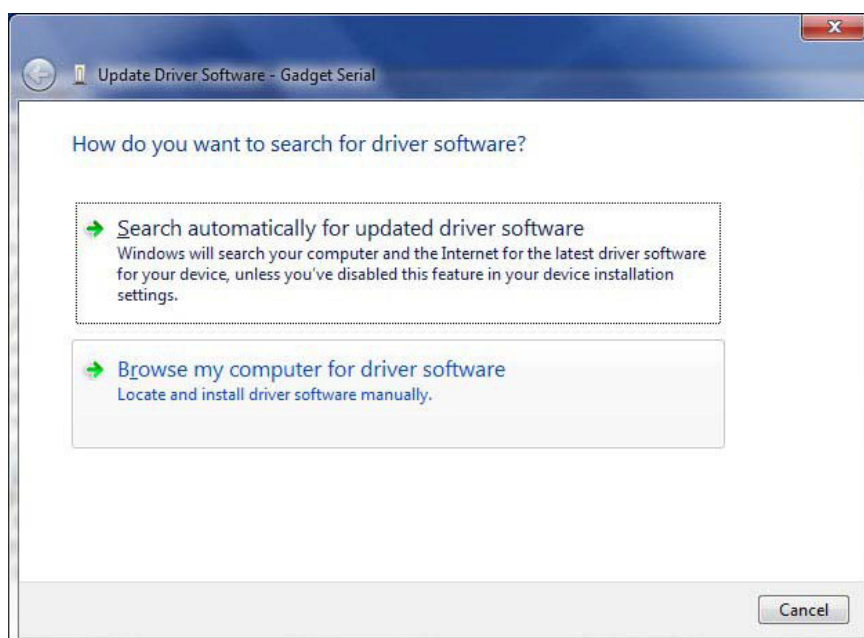




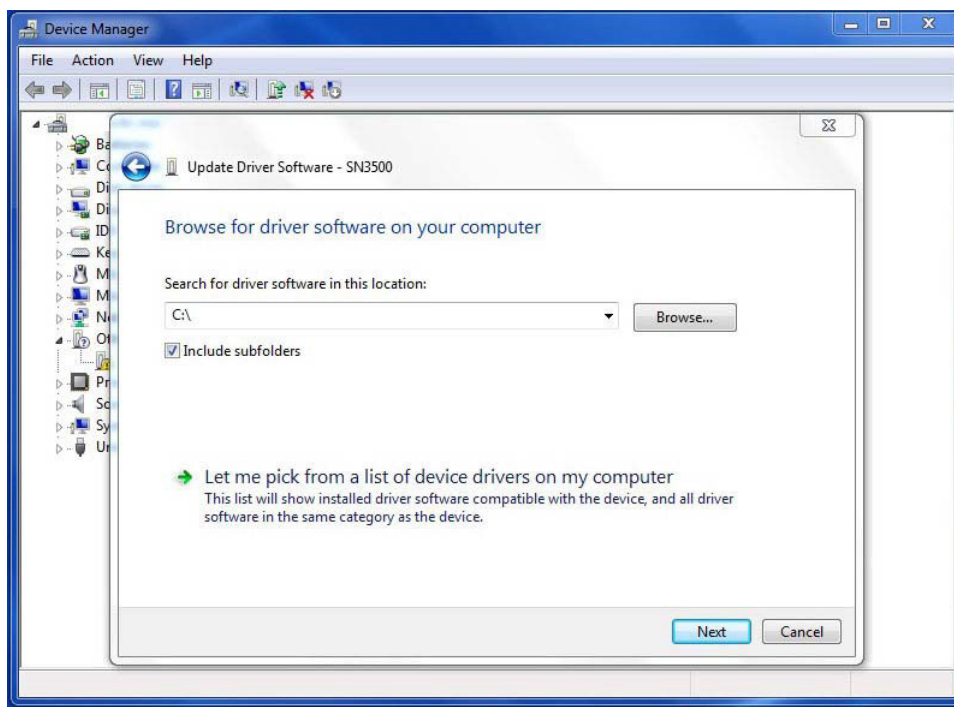
5. On the Device Manager window, double-click on 'Other devices' and then right-click on 'SN3500' (or SA4550/SN4500/ST3400 as appropriate). Then click on 'Update Driver Software'.



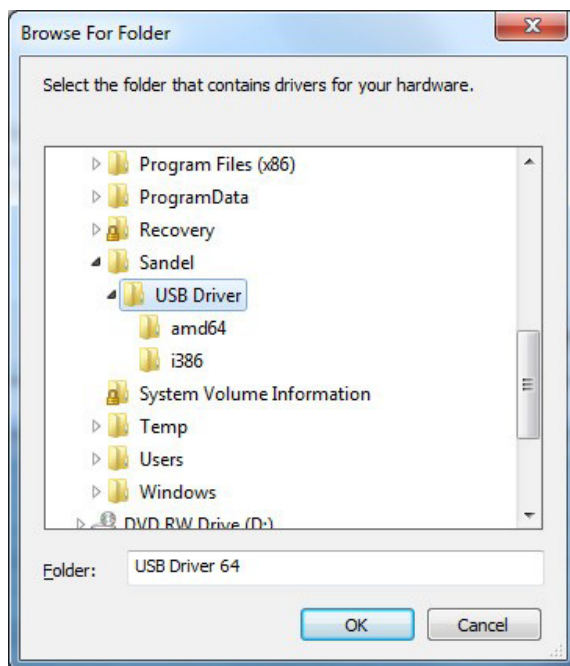
6. The Update Driver Software window will appear. Click on 'Browse my computer for driver software'.



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



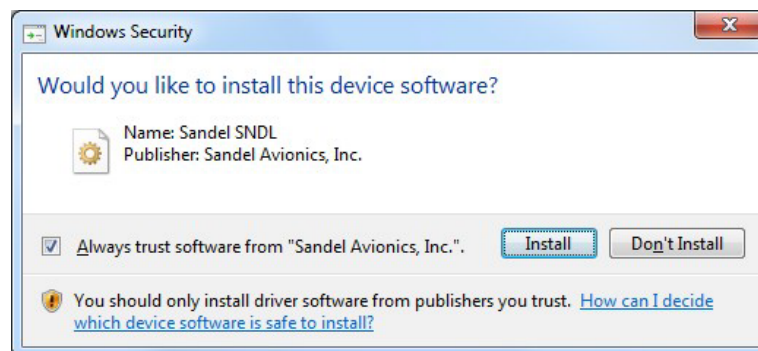
8. Select the Sandel USB Driver folder. The location should be 'c:\nighthawkfs\SA4550_Software_[version]\USB Driver'. Click on 'OK'.



9. The USB Driver folder will be shown in the selection window. Click on 'Next'.

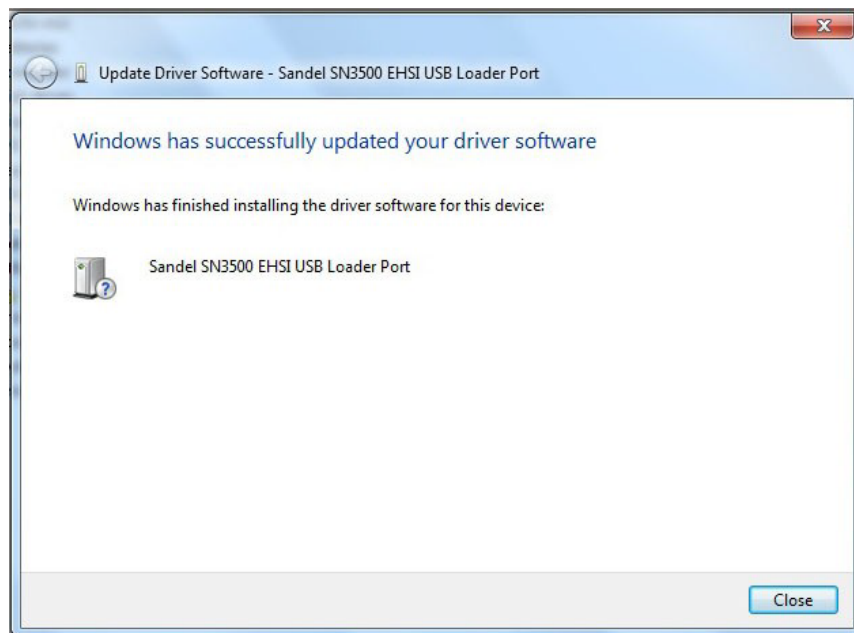


10. If a window appears asking 'Would you like to install this device software?' click on 'Install'.



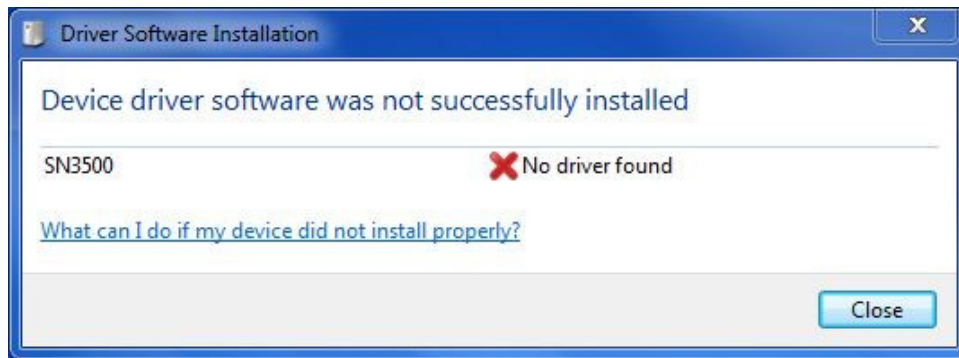


11. Windows will install the driver and display the message 'Windows has successfully updated your driver software' when complete. Click on 'Close' to complete the process.

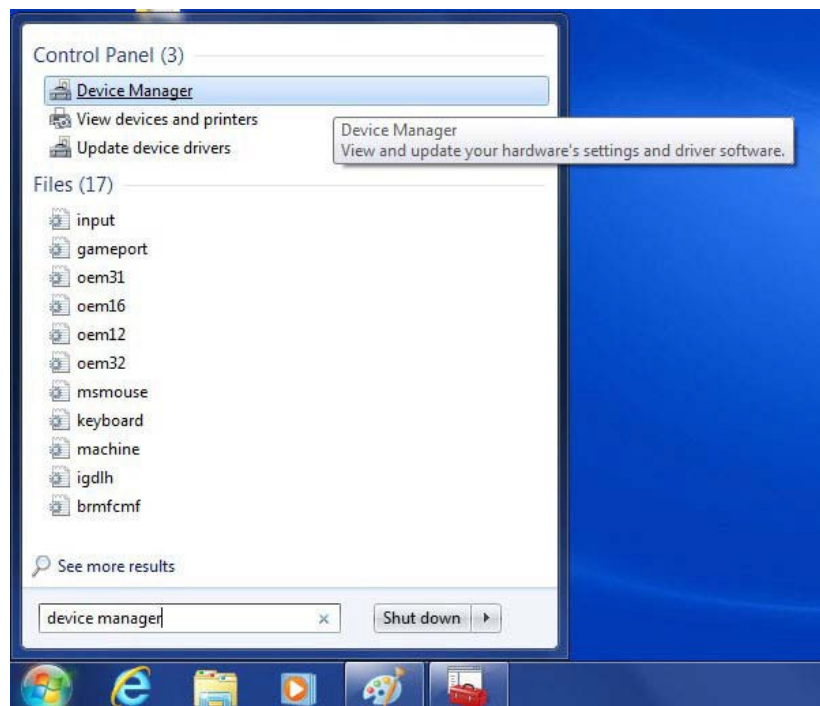


Windows 7 32-bit USB Driver Installation

1. With power removed from the unit, connect the unit to the PC via the USB cable.
2. Power up the 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 an error message as shown below. (SN3500 example used for illustration.) Close the window and proceed to the next step.

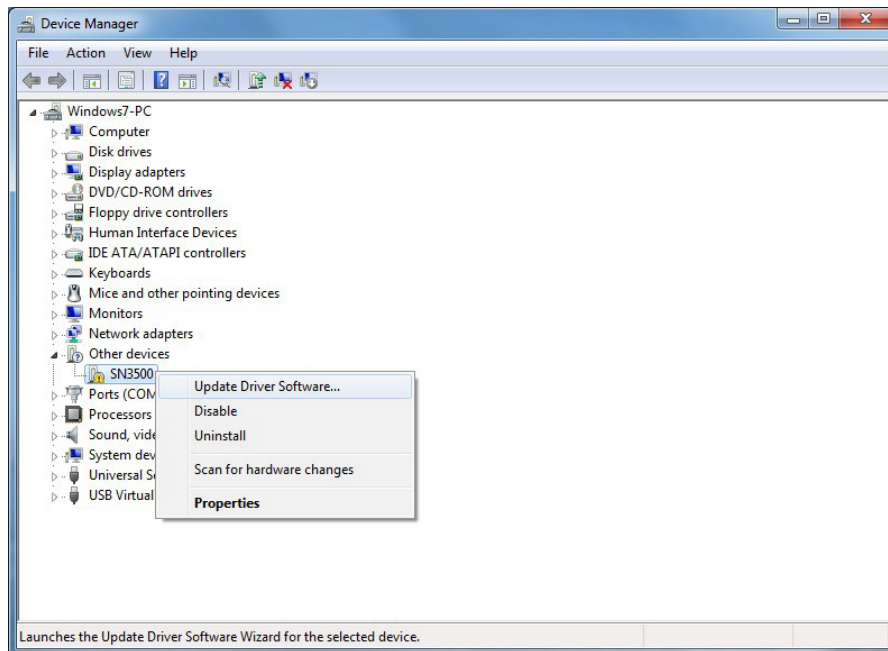


4. Click on the start icon at the lower left of the desktop and type 'device manager' in the search box. Click on the 'Device Manager' program when it appears at the top of the start window as shown below.

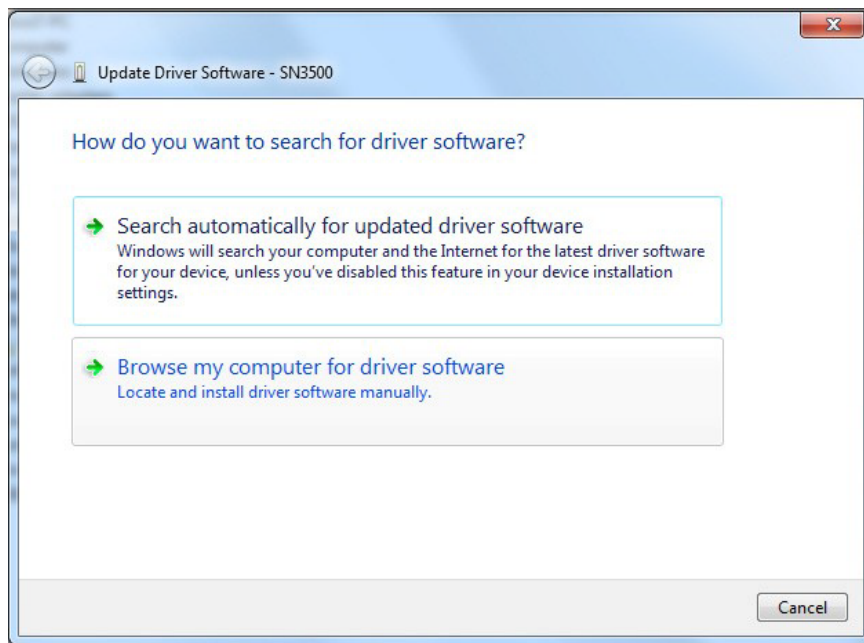




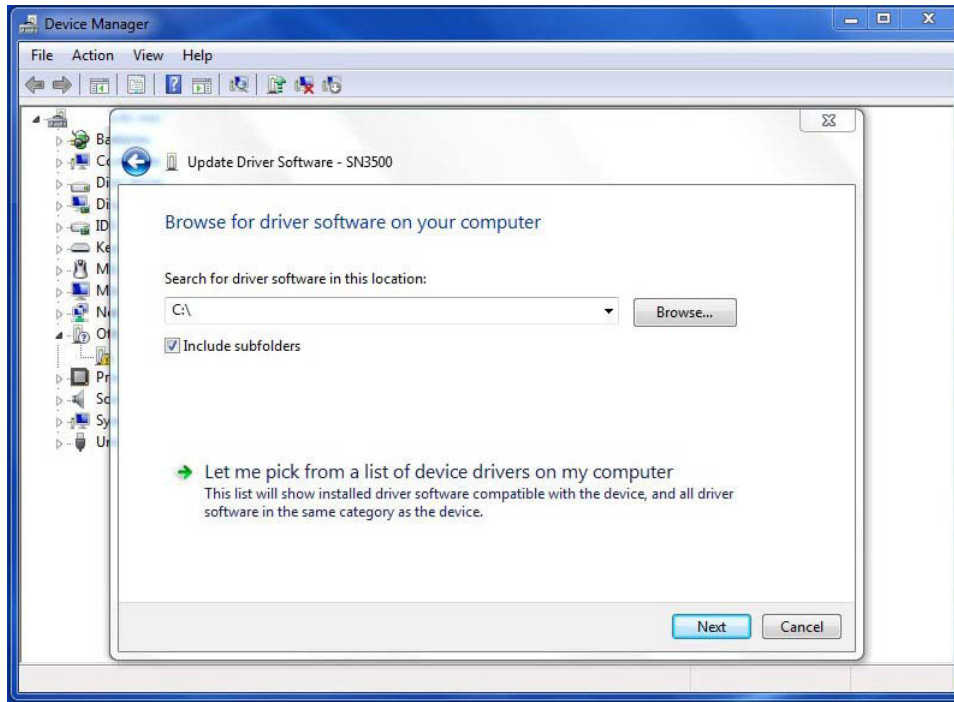
5. On the Device Manager window, double-click on 'Other devices' and then right-click on 'SN3500' (or SA4550/SN4500/ST3400 as appropriate). Then click on 'Update Driver Software'.



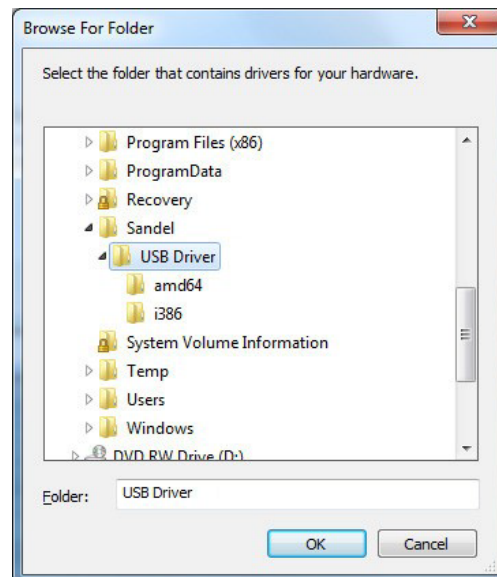
6. The Update Driver Software window will appear. Click on "Browse my computer for driver software".



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

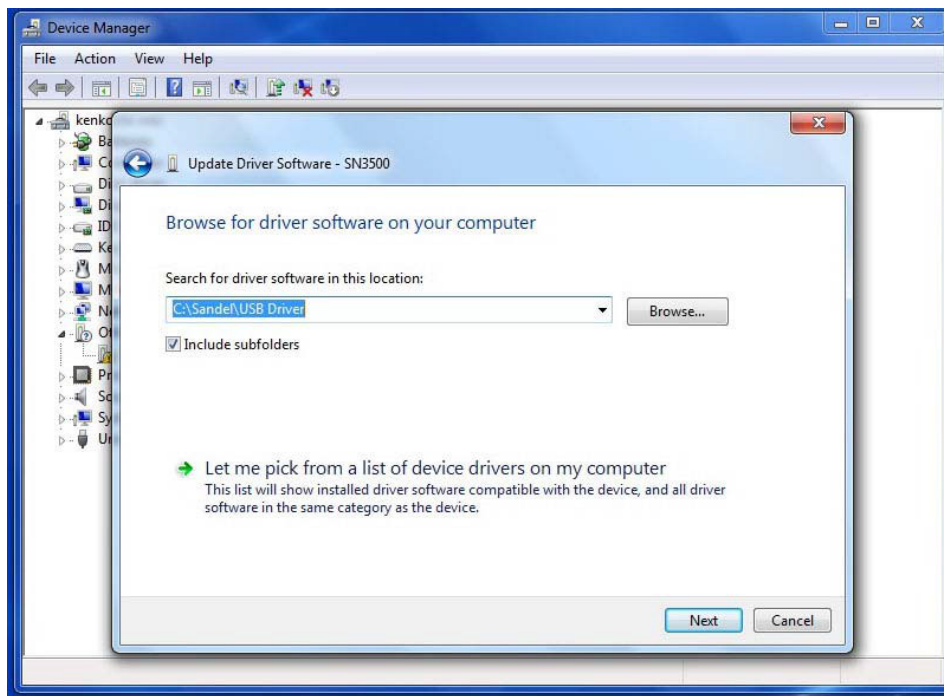


8. Select the Sandel USB Driver folder. The default location is 'c:\nighthawkfs\SA4550_Software_[version]\USB Driver'. Click on 'OK'.

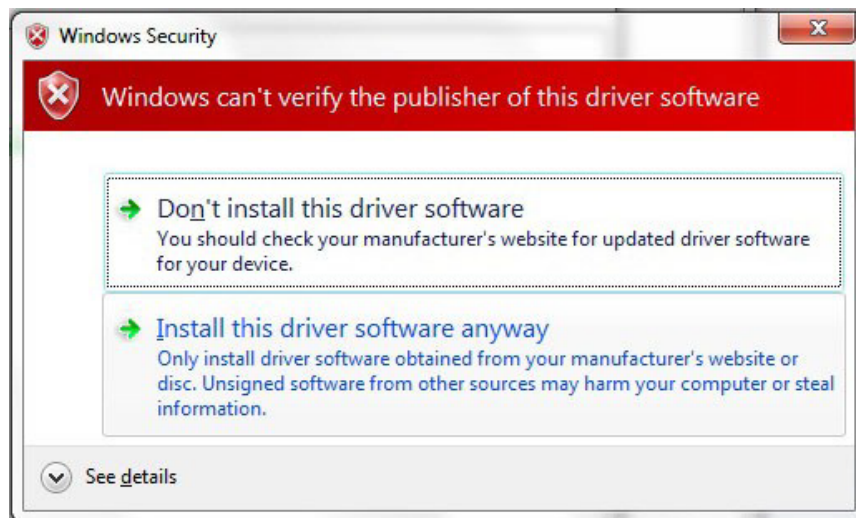




9. The USB Driver folder will be shown in the selection window. Click on 'Next'.

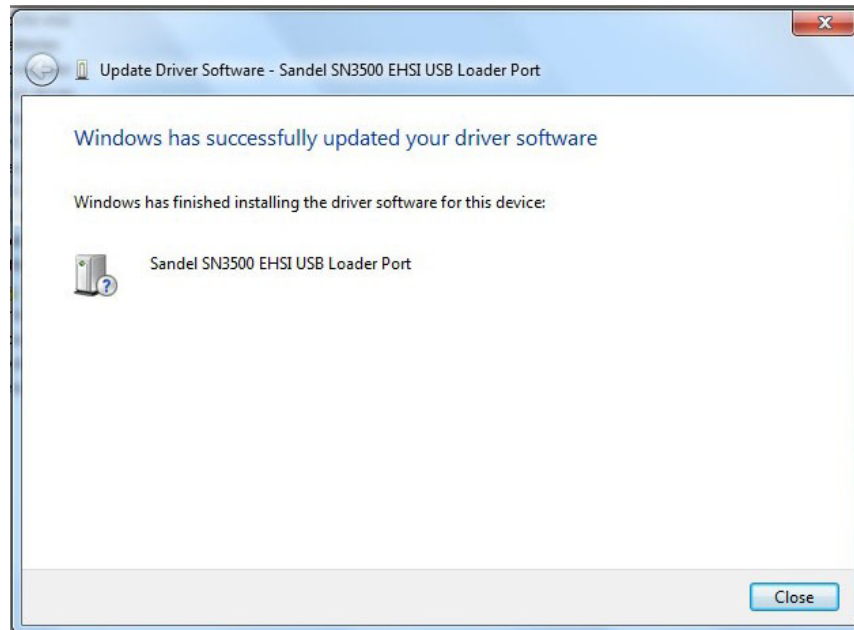


10. If a warning message appears, click on 'Install this driver software anyway'.





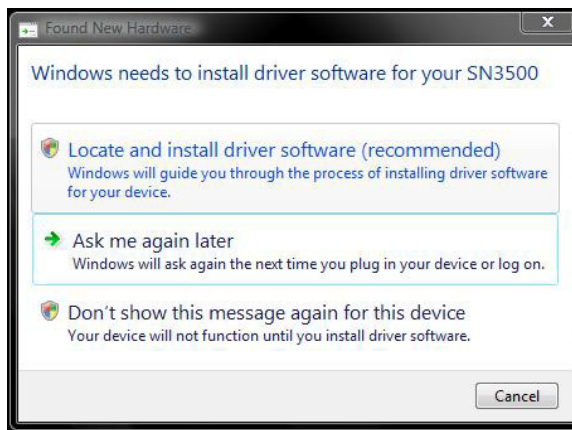
11. Windows will install the driver and display the message 'Windows has successfully updated your driver software' when complete. Click on 'Close' to complete the process.



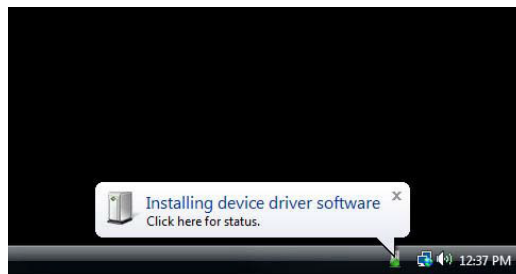


Windows Vista USB Driver Installation

1. With power removed from the unit, connect the unit to the PC via the USB cable.
2. Power up the 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'.

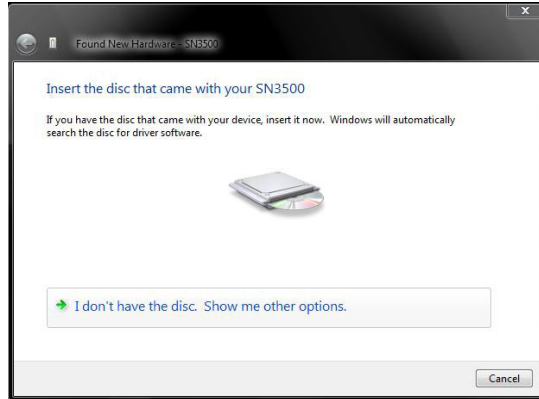


4. A message 'Windows needs your permission to continue' will appear. Click on 'Continue'.
5. A message 'Installing device driver software' will appear at the lower right. No action is necessary.

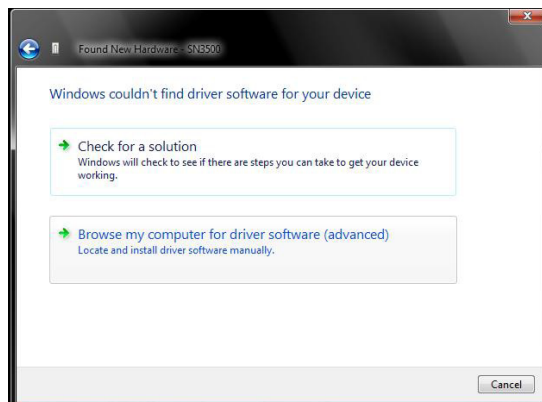




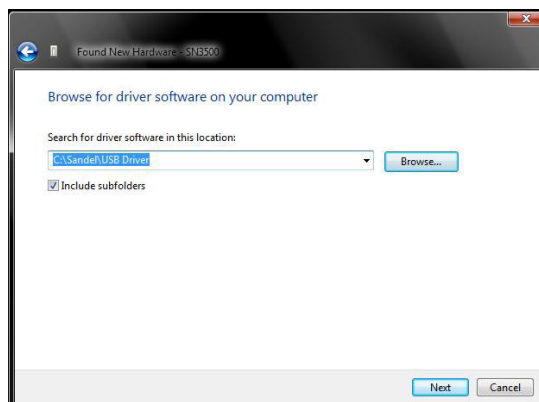
6. After several seconds, Windows will prompt to 'Insert the disc'. If the software or database was distributed on a CD-ROM, insert the CD and go to Step 9. Otherwise click on 'I don't have the disc. Show me other options.'



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

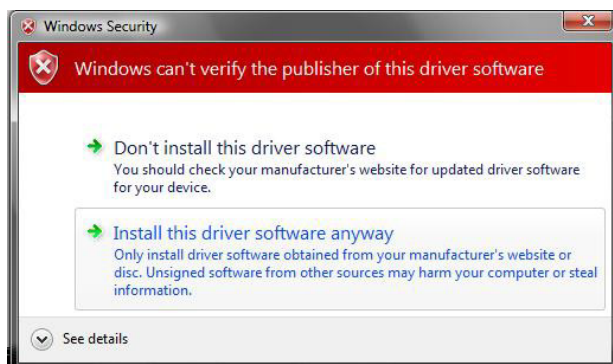


8. Windows will ask for the location of the driver. Click on 'Browse' to select the folder which contains the file 'ST3400.inf'. The default location is 'c:\nighthawkfs\SA4550_Software_[version]\USB Driver'. Click on 'Next'. (Note: ST3400.inf is used for all models.)

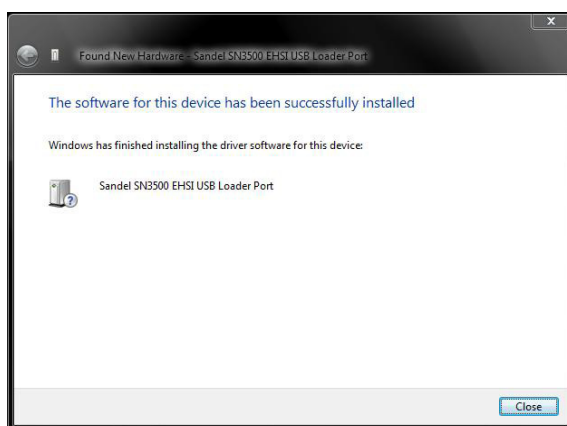




9. A warning message 'Windows can't verify the publisher of this driver software' will appear. Click on 'Install this driver software anyway'.



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 unit, connect the unit to the PC via the USB cable.
2. Power up the 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.)



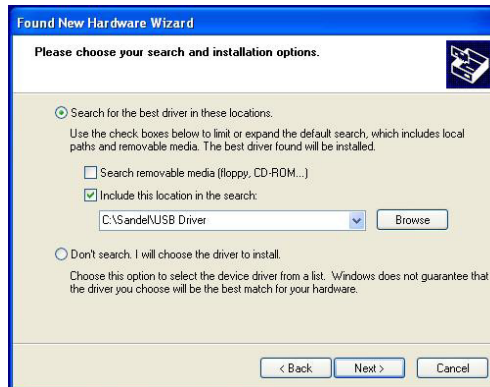
4. The Found New Hardware Wizard will start. Select the option 'No, not this time' and click on 'Next'.



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'.



6. 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'. The default location is 'c:\nighthawkfs\SA4550_Software_[version]\USB Driver'. If installing from a CD-ROM, the file will be located in the 'c:\nighthawkfs\SA4550_Software_[version]\USB Driver' folder. Click on 'Next'. (Note: ST3400.inf is used for all models.)



7. Windows will locate and install the necessary driver.



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



END OF USB DRIVER INSTALLATION INSTRUCTIONS