

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:

- 5. Extract the contents of SA4550_Software_[version].zip to this location: c:\nighthawkfs\.
- 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**'.

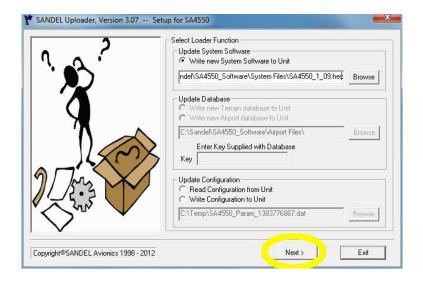
2.0.	Update System Software • Write new System Software to Unit	
	SUSandel\SA4550_Software10_sonFiles\SA4550_1_(Browse
	Update Database C Write new Terrain database to Unit C Write new Airport database to Unit	
΄Λ	C:\Sandel\SA4550_Software\Airport Files\	Browse
1xm	Enter Key Supplied with Database	
N Jers W	Update Configuration C Read Configuration from Unit C Write Configuration to Unit	
	C:\Temp\SA4550_Param_1383776867.dat	Browse

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'.

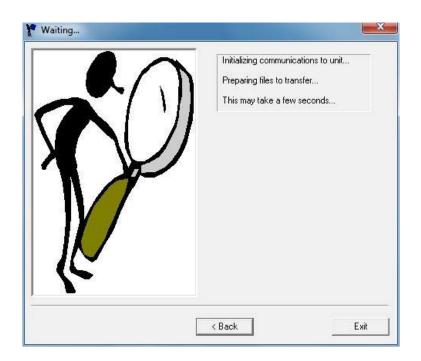
Look in:	System Files	•	+ 🗈 (* III *		
Name	*		Туре		hit	1
■ SA4550_	1_09.hex		HEX File		m Files\SA4550_1_(Brows	e
					nit iit	
					t Files\Brows	se
					ase	
•	III			,		
File name:	SA4550_1_09.hex		•	Open		
Files of type:	System Files (*.hex)		•	Cancel	376.dat Brows	1
	#		_			~



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: <u>support@nighthawkfs.com</u>

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.

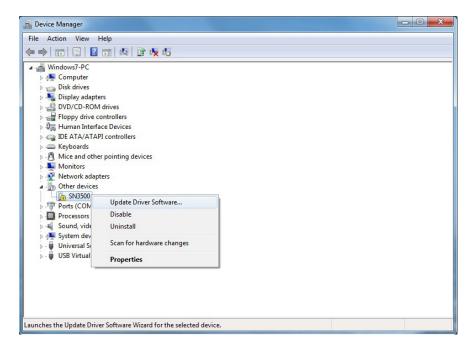
🕖 Driver Software Installati	on	X
Device driver softwa	re was not successfully installed	
SN3500	🗙 No driver found	
What can I do if my device	did not install properly?	
		Close

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.

🚔 Device Manager		
🖶 View devices and printers 🚔 Update device drivers	Device Manager View and update your hardware's	settings and driver software.
les (17)		
input		
gameport		
oem31		
oem16		
oem12		
oem32		
msmouse		
keyboard		
achine machine		
igdlh		
Drmfcmf		
See more results		
device manager	× Shut down +	



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'.

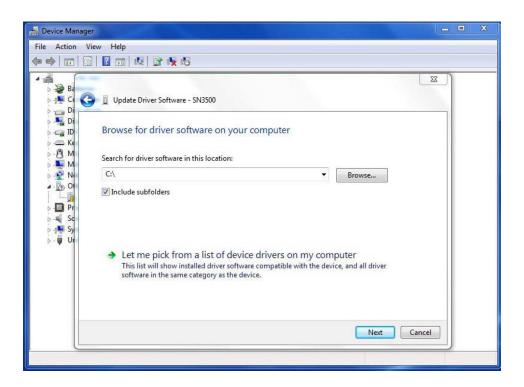


6. The Update Driver Software window will appear. Click on 'Browse my computer for driver software'.

> 9	Search automatically for updated driver software
V f	Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.
	B <u>r</u> owse my computer for driver software Locate and install driver software manually.



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.

🕖 Driver Software Installati	on	X
Device driver softwa	re was not successfully installed	
SN3500	🗙 No driver found	
What can I do if my device	did not install properly?	
		Close

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.

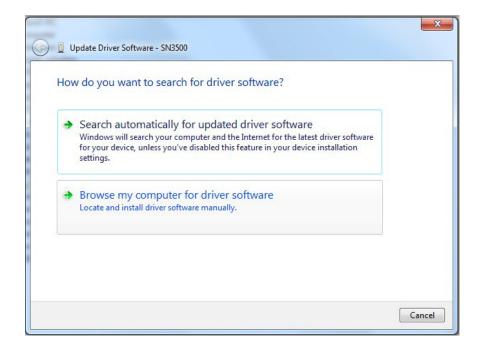
🚔 Device Manager		
🖶 View devices and printers 🔏 Update dev <mark>i</mark> ce drivers	Device Manager View and update your hardware's se	ttings and driver software
les (17)		
🗊 input		
gameport		
oem31		
oem16		
oem12		
oem32		
👔 msmouse		
👔 keyboard		
i machine		
igdlh		
ist in the second secon		
See more results		
device manager	× Shut down ►	



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'.

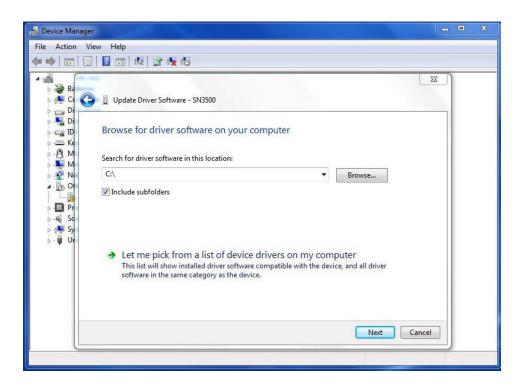
🛃 Device Manager		
File Action View H		
	TT Q D Q 05	
Windows7-PC Mindows7-PC Computer		
Disk drives		
🕟 骗 Display adapte	rs	
DVD/CD-ROM		
Floppy drive control		
Human Interfa IDE ATA/ATAP		
> C Keyboards	Controllers	
Mice and othe	pointing devices	
Monitors		
Network adapt	ers	
▲ Dother devices ▲ SN3500		
Ports (COM	Update Driver Software	
Processors	Disable	
Sound, vide	Uninstall	
⊳ 👰 System dev ⊳ 🏺 Universal S	Scan for hardware changes	
👂 🖣 USB Virtual	Properties	
_		
Launches the Undate Drive	r Software Wizard for the selected device	

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

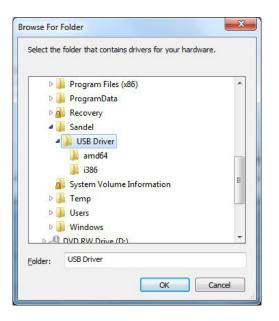




7. 'Browse for driver software on your computer' will be shown. Click on 'Browse'.



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'.

File Action View Help	
Browse for driver software on your computer	
Search for driver software in this location:	
Point C:\Sande\USB Driver Browse Browse	
Include subfolders Image: Stress of the	
Let me pick from a list of device drivers on my computer This list will show installed driver software compatible with the device, and all driver software in the same category as the device.	
Next Cancel	

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'.

	und New Hardware.
۲	Locate and install driver software (recommended) Windows will guide you through the process of installing driver software for your device.
+	Ask me again later Windows will ask again the next time you plug in your device or log on.
۲	Don't show this message again for this device Your device will not function until you install driver software.
	Cancel

- 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.





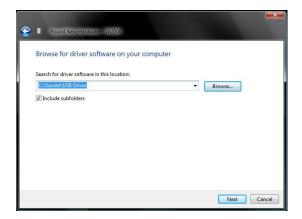
6. After several seconds, Windows will prompt to 'Insert the disc'. If the software or database was distributed on a CD-ROM, insert the CD and go to Step 9. Otherwise click on 'I don't have the disc. Show me other options.'



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

Wir	ndows couldn't find driver software for your device	
•	Check for a solution Windows will check to see if there are steps you can take to get your device working.	
+	Browse my computer for driver software (advanced) Locate and install driver software manually.	

 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'.

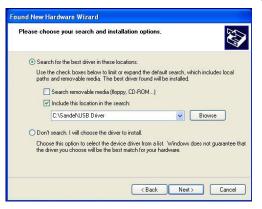




6. Windows will ask for the location of the driver. Select the option ' Search for the best driver in these locations' and check the box 'Include this location in search:'. Click on 'Browse' and select the folder that contains the file 'ST3400.inf'. The default location is

'c:\nighthawkfs\SA4550_Software_[version]\USB Driver'. If installing from a CD-ROM, the file will be located in the

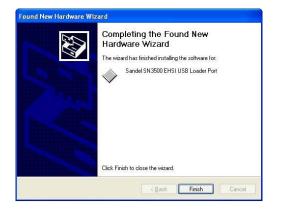
'c:\nighthawkfs\SA4550_Software_[version]\USB Driver' folder. Click on 'Next'. (Note: ST3400.inf is used for all models.)



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 SA4550_Software_1_10_or_A1_10_Update_Instructions.doc