

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

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**'.

SANDEL Uploader, Version 3.07 Setu	up for SN4500
2	
	Update System Software
1. 0. 1	Write new System Software to Unit
	C:\NighthawkFS\NAVDATA Database\System Files\ Browse
' X	Update Database
	C Write new Terrain database to Unit
	Write new Airport database to Unit
Λ' Α	C:\NighthawkFS\NAVDATA Database\Airport Files\NA\ Browse
12m	Enter Key Supplied with Database Key
	Update Configuration
11 12.9	C Read Configuration from Unit
1 2 2 2	O Write Configuration to Unit
	C:\Temp\SN4500_Param_1668459618.dat Browse
· · ·	
Copyright@SANDEL Avionics 1998 - 2012	<u>N</u> ext > <u>E</u> xit

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'.

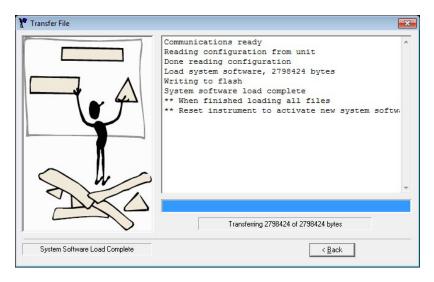
Y SANDEL Uploader, Version 3.07 Setu	p for SN4500
	Select Loader Function
	Update System Software
1 · · · ·	Write new System Software to Unit
	C:\NighthawkFS\SN4500\SN4500_Software_2_05\Sys Browse
	Update Database C Write new Terrain database to Unit C Write new Airport database to Unit
΄Λ	C:\NighthawkFS\ST3400\ST3400 Database\Terrain File Browse
	Enter Key Supplied with Database Key
2/2:3	Update Configuration C Read Configuration from Unit C Write Configuration to Unit
	C:\Temp\SN4500_Param_1668463727.dat Browse
Copyright®SANDEL Avionics 1998 - 2012	<u>N</u> ext > <u>E</u> xit



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

END



Appendix A NFSI SN3500, SN4500 and ST3400 USB Driver Installation Instructions

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.

Driver Software Installation	on 🔀
Device driver softwar	e was not successfully installed
SN3500	X No driver found
What can I do if my device of	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 softwa
Files (17)	
input	
gameport	
oem31	
🗿 oem16	
oem12	
oem32	
👔 msmouse	
keyboard	
i machine	
igdlh	
brmfcmf	
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 SN4500/ST3400 as appropriate). Then click on 'Update Driver Software'.

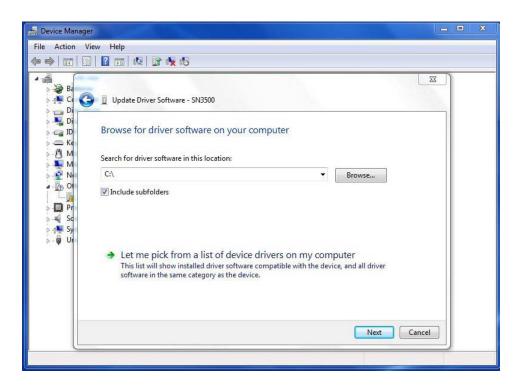
🛃 Device Manager			
File Action View H	lelp		
	📅 👰 📴 🙀 🚯		
▲ ∰ Windows7-PC ▶ ∰ Computer ▶ ⊡ Disk drives			
 Display adapte DVD/CD-ROM Floppy drive co 	drives		
Generation Generation Generation Generation Generation Generation Generation Generation Generation Generation	ce Devices		
 Mice and other Monitors Network adapt Other devices 			
Ports (COM	Update Driver Software		
Processors Sound, vide System dev	Disable Uninstall		
👂 🏺 Universal Se	Scan for hardware changes		
👂 🟺 USB Virtual	Properties		
Launches the Update Drive	r Software Wizard for the selected devic	e.	

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'.

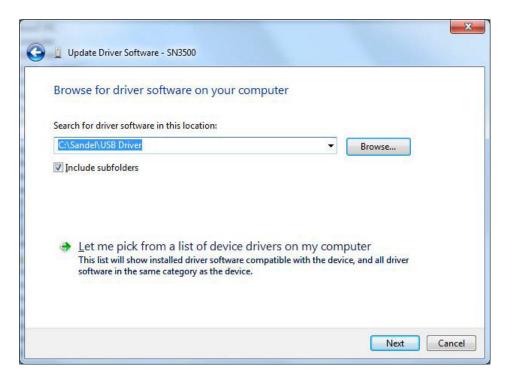


8. Select the Sandel USB Driver folder. **NOTE: The default location has changed to 'C:\NighthawkFS\USB Driver'**. Click on 'OK'.

	drivers for your hardware.
Program Files (x8)	6)
👂 퉲 ProgramData	
De Recovery	
4 🍌 Sandel	
4 🍌 USB Driver	
🍌 amd64	-
i386	
🚮 System Volume I	nformation
🖻 퉲 Temp	
Users	
Windows	
▷ 🖉 DVD RW Drive (D·)	
older: USB Driver 64	



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'.**

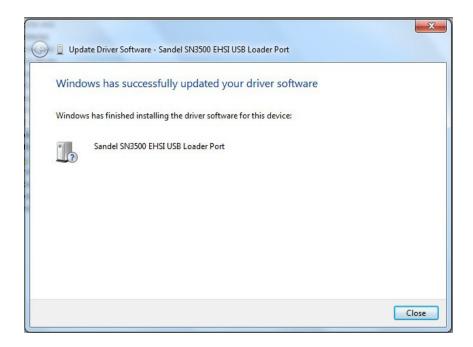


10. If a window appears asking 'Would you like to install this device software?' click on 'Install'.





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.

Driver Software Installation	on 🔀
Device driver softwa	re was not successfully installed
SN3500	XNo 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.

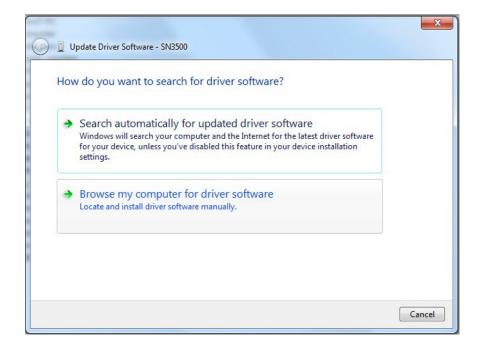
<u>Device Manager</u>		
ᡖ View devices and printers 📇 Update device drivers	Device Manager View and update your hardware's settings and driver	software.
Files (17)		
input		
gameport		
oem31		
😰 oem16		
🧿 oem12		
oem32		
🔊 msmouse		
😰 keyboard		
🗿 machine		
igdlh		
😰 brmfcmf		
See more results		
device manager	× Shut down +	



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

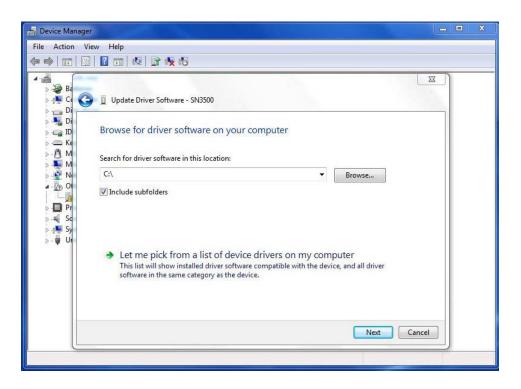
File Action View Help Computer Computer Computer Disk drives Display adapters DVD/CD-ROM drives DVD/CD-ROM drives DVD/CD-ROM drives DVD/CD-ROM drives Computer Floppy drive controllers Computer Computer DVD/CD-ROM drives DVD/CD-ROM drives DVD/CD-ROM drives Computer Computer Computer DVD/CD-ROM drives Computer Computer DVD/CD-ROM drives DVD/CD-ROM drives Computer Computer DVD/CD-ROM drives Computer Computer DVD/CD-ROM drives DVD/CD-ROM drives DVD/CD-ROM drives Computer DVD/CD-ROM drives DVD/CD-ROM drives DVD/CD	Device Manager		
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Floppy drive controllers Human Interface Devices IDE ATA/ATAPI controllers Keyboards Keyboards Nice and other pointing devices Monitors Network adapters SN3500 Update Driver Software Ports (COM Disable Uninstall System devices Scan for hardware changes			
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Keyboards Mice and other pointing devices Monitors Monitors Ports (COM Ports (COM Processors Disable System dev System dev Scan for hardware changes			
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Image: System dev Update Driver Software Image: System dev Uninstall Image: System dev Scan for hardware changes		pointing devices	
Image: SN3500 Update Driver Software Image: SN3500 Update Driver Software Image: Sound, vide Disable Image: System dev Uninstall Image: System dev Scan for hardware changes			
SN3500 Update Driver Software Ports (COM) Disable Processors Disable System dev Uninstall Universal IS Scan for hardware changes		rs	
Ports (COM Update Driver Software Processors Disable Sound, vide Uninstall System dev Scan for hardware changes			
Processors Disable Uninstall System dev Universal S Scan for hardware changes		Update Driver Software	
Sound, vide Uninstall Image: System dev Scan for hardware changes Image: Image		Disable	
System dev General Second for hardware changes Scan for hardware changes	and the second s	Uninstall	
⊳- ₩ USB Virtual Properties	🔈 🏺 Universal S	Scan for hardware changes	
	👂 🏺 USB Virtual	Properties	

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'.

Þ	Program Files (x86)	
Þ	📔 ProgramData	
Þ	Recovery	
4	Sandel	
-	USB Driver	
	鷆 amd64	- C
	鷆 i386	
8	System Volume Information	1
	📕 Temp	
Þ	📕 Users	
Þ	July Windows	
D.C	DVD RW Drive (D·)	1



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'.

, Device Manager	x
File Action View Help	
A Second Se	
D-W M Search for driver software in this location:	
P N C:\Sandel\USB Driver ■ Browse ✓ Include subfolders	
 Prive Science Science Science Science Science Science Science Science 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 Cance	

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'.

	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.

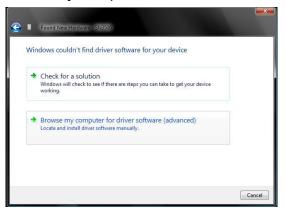




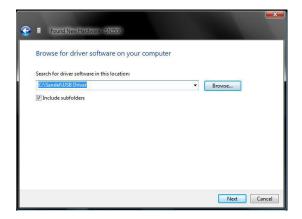
6. After several seconds, Windows will prompt to 'Insert the disc'. lick on 'I don't have the disc. Show me other options.'



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'.





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'. 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.)



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