# Installing the IF-NMEASC & SC30 Windows XP Drivers & Software

The following document will outline the installation and use of the IF-NMEASC and SC-30 USB drivers and SC-30Tool software in three parts: Part 1-USB Driver Installation, Part 2- Checking the USB Drivers and Part 3- Using the SC-30Tool software.

## Part 1 - Driver Installation

Section 1- What you will need

- SC-30Tool and USB DRIVER software (supplied on DVD with the IF-NMEASC and SC-30 Test Cable) or downloadable from <u>www.furunousa.com</u>)
- USB Cable for connecting IF-NMEASC to PC
- Hot Fixes (if required) \*For XP systems running SERVICE PACK 1 & 2 Only\*

#### Section 2- Hot Fix Installation

Note: Steps 2 through 8 only apply to Windows XP systems running Service Pack 1 & 2. Skip to step #9 if you have Service Pack 3 or higher. The patch files MUST BE unzipped before they can be installed. Once unzipped, simply "double click" each patch file to install them (installation is automatic)

- 1. Copy DRIVER folder to the desktop on your PC.
- 2. Open the HOT FIXES folder and select KB890927 patch file.
- 3. Double click KB890927 Windows patch file to install it on your PC.
- 4. When the Following screen appears, click NEXT.



Fig. 1

5. When the License Agreement window appears, select I AGREE and click NEXT



6. The patch file will now install. The following screen will appear.

ndows XP KB8	90927 Setup Wizard			
Updating Yo	ur System			
1 <b>P</b>	Please wait while setup your files.	inspects your current c	onfiguration and	updates
	Checking for necessar	y space		
_ Deta	ils			-
Cre	ating restore point			

Fig. 3

7. When the installation is complete the following window will appear, click **FINISH**.



Fig. 4

8. Double click KB901122 Windows patch file to install it on your PC. Repeat steps 4 -7. \*After patch KB901122 is installed, your system will automatically restart to complete the installation\*

#### Section 3- Driver Installation

- 9. Turn on the IF-NMEASC without the SC30 connected.
- 10. Connect the USB cable between the PC and the IF-NMEASC.



Fig. 5

11. You should see the following screen appear. IF THIS SCREEN DOES NOT APPEAR, MAKE SURE THE DRIVERS HAVE NOT ALREADY BEEN INSTALLED.



Fig. 6

12. Select "Install from a list of specific location [Advanced]" and click Next.



Fig. 7

 Select the path to the DRIVER folder, using the Browse button and click Next. Fig. 8-10

Hardware Wizard
choose your search and installation options.
Search for the best driver in these locations.
se the check boxes below to limit or expand the default search, which includes local aths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
Include this location in the search:
C:\ Biowse
2on't search. I will choose the driver to install.
hoose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< <u>B</u> ack <u>N</u> ext> Cancel

Fig. 8

Please choo	Browse For Folder	? ×
	Select the folder that contains drivers for y	our hardware.
Search		
Use the paths a	My Network Places	des local
□ :	New Folder (2)	inst in the second
	SC30Tool	
ŀ		e
C Don't s	Hot Fixes	•
Choose the driv	, To view any subfolders, click a plus sign ab	guarantee
	ОК	Cancel
-	- De st	News Coursel

Fig. 9

Please choose your search and ins	tallation options.
<ul> <li>Search for the best driver in these</li> </ul>	locations.
Use the check boxes below to limit paths and removable media. The b	t or expand the default search, which includes local jest driver found will be installed.
🔲 Search removable media (fle	oppy, CD-ROM)
Include this location in the s	search:
C:\Documents and Settings	\wkadmin\Desktop\US  Browse
C Don't search. I will choose the driv	ver to install.
Choose this option to select the de the driver you choose will be the br	vice driver from a list. Windows does not guarantee t est match for your hardware.
	< Back Next > Cancel
	Fig. 10

14. Wait until the wizard search is complete.



Fig. 11

15. The following screen will appear next. Select the top option and click **NEXT**.

g	F-NME	ASC			
Des	cription	Version	Manufacturer	Location	
	F-NMEASC	Unknown	Grape.S	c:\windows\inf\f_compsc.inf	
<u>^</u>	This driver	is not digi	itally signed!		

16. When the following window appears, click **Continue Anyway**.

\*This window may not appear during the install process. This is normal and will simply continue to the window in Fig. 15\*



Fig. 13

17. Wait until the software installation is complete.



Fig. 14

18. The following window FILE NEEDED will appear. Click BROWSE and select the path as shown below. Fig. 15-19



Fig. 15



Fig. 16

Locate File						? ×
Look in:	C US_Drivers		•	] 🔾 🕫	• 🖽 🏹	
My Recent Documents Desktop My Documents My Computer	Hot Fixes					
My Network	File name:	usb_comf.sys			•	Open
Places	Files of type:	usb_comf.sys;	usb_comf.sy_		¥	Cancel

Fig. 17

Locate File						<u>?</u> ×
Look in:	C DRIVER		•	0 🕫	• 📰 🍯	
My Recent Documents Desktop My Documents My Computer	USB_COMF.sys					
My Network	 File name:	USB_COMF.sys			•	Open
Places	Files of type:	usb_comf.sys;usb_comf.sy_				Cancel

Fig. 18

#### 19. Click OK



Fig.19

#### 20. Click Finish.



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21. NOW CONNECT THE SC-30 TO THE IF-NMEASC BOX and wait until the following wizard window appears on the PC. Select NO, NOT THIS TIME and then click NEXT.



Fig. 21



22. Wait until the search is complete.



Fig. 23

23. Select the path to the DRIVER folder, using the **Browse** button and click **Next**. Fig. 24- 26.

Pleas	e choose your search and ins	tallation options.	ENT.
6	Search for the best driver in these	locations.	
	Use the check boxes below to limit paths and removable media. The b	or expand the default searc est driver found will be instal	h, which includes local led.
	🔲 Search removable media (fl	oppy, CD-ROM)	
	Include this location in the s	earch:	
	A:\	-	Browse
C	Don't search. I will choose the driv	ver to install.	
	Choose this option to select the de the driver you choose will be the b	vice driver from a list. Windo est match for your hardware.	ows does not guarantee ti

Fig. 24

Diassa akaa				
Flease criou	Browse For Folder		<u>?</u> ×	
	Select the folder that contains dri	vers for yo	ur hardware.	
Search				
Use the	🗄 🍕 My Network Places		•	des local
paths a	New Folder			
□ :	New Folder (2)		100	
Ę.	E C US_Drivers			e
			- Specie	
🔿 Don't s	Hot Fixes			
Choose				guarantee tha
the driv	To view any subfolders, click a plu	us sign abov	/e.	
		ок	Cancel	
-			<u> </u>	<u>~</u>

Fig. 25

und New Hardware Wizard			
Please choose your search and installation	options.		E.
Search for the best driver in these location:	s.		
Use the check boxes below to limit or expain paths and removable media. The best drive	nd the default r found will be	search, which installed.	includes local
🔲 Search removable media (floppy, CD	-ROM)		
Include this location in the search:			
C:\Documents and Settings\wkadm	n\Desktop\U	<b>T</b> [	Browse
C Don't search. I will choose the driver to inst	all.		
Choose this option to select the device driv the driver you choose will be the best match	er from a list. An for your hard	Windows does ware.	not guarantee th
	< Back	Next >	Cancel
Fig. 2	26		

24. Select f\_compsc.inf and click Next.



Fig. 27

25. When the following window appears, click Continue Anyway.

\*This window may not appear during the install process. This is normal and will simply continue to the window in Fig. 26\*

Hardwar	e Installation
1	The software you are installing for this Fardware: SC-30
	has not passed Windows Logo testing to verify its compatibility with Windows XP. ( <u>Tell me why this testing is important.</u> )
	Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	<u>Continue Anyway</u> <u>S</u> TOP Installation

Fig. 28

26. Click OK.



Fig. 29

27. Click **Browse** and select the **DRIVER** file, then click **OK**. Fig. 30-34



Fig. 30



Fig. 31



Fig. 32

28. Select USB\_COMF.sys and click Open.

Locate File					? ×
Look jn:	C DRIVER		•	G 🤣 📂 🎞 •	
My Recent Documents	imindowspatch	5			
Desktop					
My Documents					
My Computer					
Mu Network	File name:	USB COMF.sys		•	<u>O</u> pen
Places	Files of <u>type</u> :	usb_comf.sys;usb_comf.sy_			Cancel

Fig. 33

#### 29. Click OK



Fig. 34

30. Wait until software installation is complete and click **Finish**.



Fig. 35

31. Right-click the **My Computer** icon, select **PROPERTIES.** When the system properties window appears, select the **HARDWARE TAB** and then **DEVICE MANAGER**.

System Properties			? ×		
System Restore   General Computer	Automatic U Name	pdates   Hardware	Remote Advanced		
Device Manager The Device Mana on your computer. properties of any d	ger lists all the H Use the Device evice.	ardware devices ir Manager to chan; Device Mana;	nstalled ge the ger		
Drivers       Driver Signing lets you make sure that installed drivers are compatible with Windows. Windows Update lets you set up how Windows connects to Windows Update for drivers.         Driver Signing       Windows Update					
Hardware Profiles Hardware profiles provide a way for you to set up and store different hardware configurations.					
		Hardware <u>P</u> rof	iles		
	ОК	Cancel	Apply		

Fig. 36

32. Click the plus sign in front of "Ports (COM & LPT)" to view your COM port assignments. In the example below, IF-NMEASC is assigned to "COM3" and SC-30 to "COM4." (Make sure the IF-NMEASC box and SC30 are connected)



Fig. 37

# Part 2 – Checking the Drivers

- To check that the drivers were installed successfully, download the SC30Tool software to your desktop and unzip the file by right clicking and selecting "Extract All".
- 2. Open the SC30Tool File and run the **SC30Tool.exe file**. The following window will appear. Click **Search** at the lower right-hand corner of the window.

t Name	Unique ID	Name	Software Version	Model Version
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
				Search Loc

3. The SC30Tool detects the IF-NMEASC and the SC30 and displays their software version numbers as shown below.

st Name	Unique ID	Name TE-NMEASC	Software Version	Model Version
M6	1855-4-0006603-0.00-00	SC-30	2051522-01.07	Ver1
		Success 💌		
		Search Complete!		
				Search Lock

Fig. 39

4. If the IF-NMEASC and the SC-30 are found on the list as shown above in Fig. 39, the program and the drivers were installed successfully. If the search fails, make sure of the following: The SC30 antenna is connected to the IF-NMEASC converter box. The IF-NMEASC box is powered on, and the USB cable is connected between your computer and the IF-NMEASC converter box.

# Part 3 – Using the SC30Tool Software

#### Section 1 - SC30Tool Software Overview

The **SC30Tool** software is used to view system parameters, change system settings and help troubleshoot the SC30.

# The system parameters that may be viewed appear on individual pages and are as follows:

- 1. Status page Displays the following information:
  - Accelerometer status
  - Rate Gyro status
  - Calculation (Calc) status
  - Installation (Inst) status (antenna location check)
  - Position Fix status
  - Software versions
- 2. Satellite page Displays the following satellite status information:
  - Number of satellites received
  - Satellite location above the ship in the sky
  - Signal strength of each satellite received
- 3. **Blocking Monitor page** Displays a 12 segment circular graph showing if and where any object is blocking the GPS satellite signal.
- 4. **Setting page** Displays the factory default settings and allows for these settings to be changed.

#### Some of the changes that can be made include:

- Offset values for Heading, Pitch and Roll
- Output interval for all output data
- Heading may be set to True or Magnetic
- Roll and Pitch may be set to Absolute or Relative
- Turning ON or OFF the WAAS Mode
- Setting WAAS Mode to Auto or Manual
- Restoring Factory Default settings

#### Section 2 - Connection

# There are 2 ways to connect the SC30 to a PC. They are as follows:

- 1. Connection between the PC serial port and the RS232C port in the SC30 using either of the following optional cables:
  - 000-166-889 15 meter
  - 000-166-890 30 meter



### OR

2. Connection between the PC USB port and the USB port on the optional IF-NMEASC (000-011-469) interface box which is wired to the SC30.



Fig. 2

#### Section 3 - Running the SC30Tool Software

- Scrob Device Status Satellite Booking Manitor Satting | Host Name Unique D Name Software Version Model Version
- 1. Run **SC30Tool.exe** and the following window will appear.

- Fig. 3
- 2. Click **Search** at the lower right-hand corner of the window.

The SC30Tool detects the IF-NMEASC and the SC30 and displays their software version numbers as shown below.

lost Name	Unique ID	Name	Software Version	Model Version
COM5 COM6	1855-4-0006600-0.00-00 1855-4-0006603-0.00-00	IF-NMEASC SC-30	2051523-01.06 2051522-01.07	Ver1 Ver1
		Success X		
4			1	
•				Search

- 3. Click OK.
- 4. Select SC-30 and then click **Lock**, at the lower right-hand corner of the window to read information, including satellite status.

lost Name :OM5	Unique ID 1855-4-0006600-0.00-00	Name IF-NMEASC	Software Version 2051523-01.06	Model Version
OM6	1855-4-0006603-0.00-00	SC-30	2051522-01.07	Ver1
L.			1000000000	
				Search Lock

Fig. 5

#### Section 4 - SC30Tool Software Display Modes

#### **Status Page**

This page displays output data status, Accelerometer status, Rate Gyro status, Calculation (Calc) status, Installation (Inst) status or Antenna location check, Position fix status and software versions.



#### Satellite page

"Satellite" page shows satellite status information including number of satellites received, their location above the ship in the sky, and the signal strength of each satellite received. The information is displayed for both GPS receivers, GPS1 and GPS2.

The sky view portion shows the location of overhead satellites. The outer ring represents the horizon in all directions from the ship location. Satellites appearing at the center of the sky view are directly overhead. To the right of the sky view are signal strength bars. These bars give an indication of the signal strength.



Fig. 7

#### **Blocking Monitor page**

The blocking monitor display is a circular graph having 12 sectors. If any object blocks the GPS satellite signal, the corresponding and opposite sectors are displayed in black. In the example of Fig.8, no obstruction blocks the satellite signal.



Fig. 8

#### Setting page

This page shows factory default settings when it is opened. The software does not provide the feature to monitor the set value used currently on the connected SC-30.

To change the value, select an option in the pull down menu. Reboot the SC-30 to save changes.

Please note the following tips when using this page.

- 1. Offset Input Mode is always used in Add mode.
- 2. Once the SC-30 is connected to the IF-NMEASC, the output interval of Heading, Attitude, and Heave data is automatically set by the IF-NMEASC to 25 ms.

The SC-30 does not use received NMEA2000 DGPS correction data.

🖁 SC30Tool			×
Search Device Status	s   Satellite   Bloc	ing Monitor Setting	
Heading Roll / Pitch Heave ROT Position COG & SOG Time Magnetic Variation	100ms           100ms           100ms           100ms           00ff           Off           Off           Off           Off	True Absolute 2.5 s Smoothing factor Used to s Heading of and Roll / Relative.	et the output interval. data is True or Magnetic Pitch is Absolute or
Heading Offset Pitch Offset Roll Offset Offset Input Mode	0.0 degree 0.0 degree 0.0 degree Add	DO NOT change. (Always used in Add	nter offset value.
HDG Back Up DGPS Mode WAAS Search	5min 💌 OFF 💌	Sets how long the system outputs HDO Turns ON / OFF the SBAS (WAAS / EG Sets WAAS satellite search mode (Auto	G after blocking the GPS signal. LOS / MSAS) mode. o / Manual)
Disable SV1 Disable SV2 GPS Clear			
System Clear	— Resets a — Resets A	bove settings to original Factory setting LL data including GPS Almanac.	]. Exit

Fig. 9