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Article applies to – AIT2000, all AIS Receivers with USB interface and USB to NMEA Adaptor

ISSUE: How to install the USB to NMEA Interface Mac OsX drivers

Many of the AIS units that Digital Yacht produce feature an NMEA to USB Interface which requires that specific drivers are installed on a Mac, before it can operate correctly. The drivers create a "Virtual COM port" which the NMEA 0183 data is received and transmitted on.

The drivers are included on a disk image (DMG) file that can be found on the Digital Yacht Software and Drivers CD-Rom in the "USB Driver for AIS Units\Mac OS X\" folder. On double clicking this DMG file, you will be presented with two installer packages; one for OsX V10.3 and one for the latest Intel based Macs OsX V10.4/10.5/10.6. Select and double click the relevant file for you Mac.

After installation is completed, plug in the USB cable. The Mac does not behave like Windows, in as much as when you plug the new device in, you do not get a notification that the device is found. However, in the Utilities folder, there is a program called System Profiler that is a bit like Device Manager in Windows. If you run this program you should see an entry for the USB section called FT232R USB UART which indicate that our USB interface is properly installed – see below.

• • •		MacBook	
			13/10/2010 23:15
Contents	USB Device Tree		
▼Hardware	USB Bus		
ATA	▼ USB Bus		
Audio (Built In)	IR Receiver		
Bluetooth	▼ USB Bus		
Diagnostics	Bluetooth USB Host Contro	ller	
Disc Burning	▼ USB Bus		
Ethernet Cards	Apple Internal Keyboard /	Trackpad	
Fibre Channel	FT232R USB UART		
FireWire	▼USB High-Speed Bus		
Graphics/Displays	Built-in iSight		
Hardware RAID			
Memory		ē	
PCI Cards	FT232R USB UART:		
Parallel SCSI	Product ID: 0x600	1	
Power		3 (Future Technology Devices International Limited)	
Printers	Version: 6.00		
SAS	Serial Number: A100e		
Serial-ATA	Speed: Up to Manufacturer: FTDI	12 Mb/sec	
USB		100000	
▼Network	Current Available (mA): 500		
AirPort	Current Required (mA): 90		
Firewall			
Locations			
Modems			
Volumes			
WWAN			
▼ Software			
Applications			
Developer			

Assuming that you can see the USB interface listed in System Profiler, you can use another useful tool CoolTerm to "View" the NMEA 0183 data that the Mac should be receiving and prove that everything is working correctly. Use the following link to download the latest version of CoolTerm....

http://www.macupdate.com/info.php/id/31352/coolterm

Once you have installed and run this program, you should see the following screen....

. 0 0				CoolT	erm_2		-		\bigcirc
New Open	Save	Connect	Disconnect	Clear Data	Options	HEX View Hex	(2) Help		
New Open	Save	Connect	Disconnect	Clear Data	Options	view nex	нер		- 11
									- 11
									- 11
									- 11
									- 11
									- 1
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									- 1
									- 1
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									- 1
									- 11
ushsorial	A100eeib /	28400 8-1	N_1						
Disconnec		58400 8-1	N-1				CTS	O DSR	

Click the Cog and Spanner Icon which will take you to the setup window shown below. You only need to change one setting, the baud rate from the 9,600 default value to 4,800 for normal NMEA 0183 or 38,400 for the latest High Speed NMEA 0183 as used by AIS units.

Serial Port Op	otions		Terminal Options		
Port:	usbserial-A100eeib	•	Terminal Mode:	🖲 Raw Mode	
Baudrate:	38400			O Line Mode	
Data Bits:	8				
Parity:	none		Enter Key Emulation:	CR+LF	
Stop Bits:	1			⊖ CR	
Flow Control:				⊖ LF	
	DTR		Handle Bell Character		
			🗌 Local Echo		
Special Serial	Special Serial Options		ASCII View Options		
Loop back	Loop back received data		Convert Non-printable Characters		
Ignore rec	Ignore receive signal errors		Handle Backspace Character		
Receive Buffe	Receive Buffer Size: 10000		Send String Options		
			🗌 Terminate 'Send St	tring' Data	
			Termination String (H	ex): DD 0A	
Re-S	Scan Serial Ports		Cance		

If you have more than one interface connected, you will also need to select the relevant Port, but once you have set the required baud rate and port, click OK. Then from the original window, click on the Connect icon and you should now see NMEA 0183 data sentences start to scroll down the page, as shown below. The sentences in this case are from an AIS, but you will see whatever sentences your navigation equipment is transmitting.

\varTheta 🔿 🔿 CoolTerm_0	\Box
Image: New Open Save Image: Connect Disconnect Image: Char Data Imag	
ALVUM, 1, 1, , A, 3387 JI K3QFUFTI MSTD=341 אטטטטע, שד41	<u>)</u>
!AIVDM,1,1,,A,D02=aTh00000,0*30	
!AIVDM,1,1,,A,13P9fuh0000rwn0M4ceVHBGn2<0s,0*55	
!AIVDM,1,1,,A,13P<0EU000wrtA@M4eS776n20H19,0*7D	
!AIVDM,1,1,,B,13P7et0P01wruhLM3k8DH?v>0h1f,0*3D	
!AIVDM,1,1,,B,13P9<@PP1dwrPc`M2FH8tgv20822,0*27	
!AIVDM,1,1,,A,130i6j0001wrscNM4V:cLaf60`2=,0*50	
!AIVDM,1,1,,A,402=aTiubViN3OrrhPM4EU1020S:,0*50	
!AIVDM,1,1,,B,33P7JTP31GOrtPpM3g3=0Th60000,0*0D	
!AIVDM,1,1,,A,13chuG002SOrNN4M2vR3h2v600Rr,0*27	
!AIVDM,1,1,,A,13M@ENh0000rtQ4M4U0tdc<40D1>,0*4A	
!AIVDM,1,1,,B,13P;Qdh03uwrdp6M2GKHF6`:00S1,0*33	
!AIVDM,1,1,,A,13P<0EU000wrtA@M4eS886n:083a,0*5F	
!AIVDM,1,1,,A,13P;i=P001wrtDHM4T;>1`J<00Rw,0*2D	
!AIVDM,1,1,,B,10FGp`00010rs:6M4VtTC2n<0h4c,0*55	
!AIVDM,1,1,,B,13P;Qe@001wrrwvM4>UN0rp>1110,0*73	
!AIVDM, 1, 1, , B, 13P7EpPP000rq3tM4: e5bgv@0<1J, 0*29	
!AIVDM,1,1,,A,13P7JTP2AHOrtPpM3gL=34h>084u,0*2F !AIVDM,1,1,,A,13PH6i@P000raPdM41hVcwwp0d13,0*38	
!AIVDM,1,1,,A,13P<0EU001wrtA@M4eS7A6nB0862,0*06	
!AIVDM,1,1,,8,13P9fuh0000rwn0M4ceVHBF@286@,0*48	
!AIVDM,1,1,,B,33HhKt50000rw0@M4in0FRLB0lt:,0*43	
!AIVDM,1,1,,B,13chuG002S0rNc <m2vm3h2v@069p,0*07< td=""><td></td></m2vm3h2v@069p,0*07<>	
!AIVDM,1,1,,B,33P7JTP31IOrtMhM3aL <v4jb0000,0*28< td=""><td></td></v4jb0000,0*28<>	
	× T
usbserial-A100eeib / 38400 8-N-1	😝 RTS \ominus DTR 😁 DCD
Connected 00:02:38	\varTheta CTS 🕤 DSR 💮 RI

If everything is working correctly, you should now be able to setup the navigation software, that you wish to use on you Mac, to receive the NMEA 0183 data through the Digital Yacht USB interface.