FIF-10A USB PROGRAMMING INTERFACE

The **FIF-10A** is the Interface Unit which allows cloning of channel data to Vertex Standard transceivers,* and/or re-writing of the firmware on some Vertex Standard transceivers,* using the USB port of a personal computer.

*: Check with your Vertex Standard Dealer for applicable models.

OPERATING SYSTEM REQUIREMENTS

 $Microsoft^{\$}$ Windows \$ 2000, Windows \$ XP (32 bit Ver. only), Windows \$ Vista (32 / 64 bit Ver.), or Windows \$ 7 (32 / 64 bit Ver.)

PACKING LIST

FIF-10A Interface Unit USB Cable CD-ROM (Includes the Driver File and Operating Manual)

OPERATION

- Log on to the computer using the "Administrator" account. If you do not know how to change the account to "Administrator," please consult your computer system administrator.
- □ Connect the supplied USB Cable between the **FIF-10A** and your computer, then connect the appropriate Connection Cable (option) between the **FIF-10A** and the transceiver.
- When turning on your computer for the time after connecting the FIF-10A to your computer, the computer will ask for the FIF-10A driver. Please see page 2 through 7 regarding driver installation.

Confirm the computer's communication port which detects the **FIF-10A**. Describe details on the page 8 through 11.

□ Execute the cloning/writing software.

If this is the first time you have executed the programming/ writing software on this computer after installing the **FIF-10A** USB Interface, check the programming/writing software's "CONFIGURE" parameter, to be sure that the communication port of the programming/writing software matches that set for the **FIF-10A**. See page 12 through 14 for details.

Note: When the DC power from the USB Bus is insufficient, connect the **NC-85** or any regulated DC power supply (6 V, 1 A) to the DC power jack of the **FIF-10A**. Be sure to use the correct polarity when connecting the regulated DC power supply; *the center pin of the power jack is positive* (+).

OPTIONS

- CT-104A Connection Cable with 8-pin Modular Jack (for the VX-2100/-2200/-4100/-4200, VXR-9000 etc.)
- CT-105 Connection Cable with 14-pin Universal Connector (for the VX-600/-800/-900 etc.)
- CT-106 Connection Cable 4-conductor Mini-phone Jack (for the VX-160/-180/-230/-350/-410/-420 etc.)
- CT-108 Connection Cable with 14-pin Universal Connector (for the VX-820/-920 etc.)
- NC-85 AC Adapter

NOTE

The **FIF-10A** is designed to be connected directly to the computer's USB port. Devices that are made to convert a USB device to a 9 pin serial port will not work and/or may damage the **FIF-10A**.





TYPICAL SETUP FOR THE FIF-10A



INSTALLATION PROCEDURE FOR THE FIF-10A DRIVER (Microsoft[®] Windows[®] 2000)

Note: Please perform this operation after changing user account to an "Administrator".

- 1. Set the supplied CD into your CD-ROM drive.
- When FIF-10/A is connected to the USB port on the computer, the following window (Found New Hardware Wizard) will be open. Click the left mouse button on "Next >" button.



 Select "Search for a suitable driver for my device," then click the *left* mouse button on the "Next >" button.



 Select "CD-ROM drives," then click the *left* mouse button on the "Next >" button.



5. Click the *left* mouse button on the "Next >" button.

Found New Hardware Wizard
Driver Files Search Results The wizard has finished searching for driver files for your hardware device.
The wizard found a driver for the following device:
Vertex Standard FIF-10
Windows found a driver for this device. To install the driver Windows found, click Next.
e:\fif-10 inst2kxp.inf
(J)
<pre></pre>

6. Click the *left* mouse button on the "Finish" button.



INSTALLATION PROCEDURE FOR THE FIF-10A DRIVER (Microsoft® Windows® XP)

Note: Please perform this operation after changing user account to an "Administrator".

- 1. Set the supplied CD into your CD-ROM drive.
- When FIF-10/A is connected to the USB port on the computer, the following window (Hardware Update Wizard) will be open. Select "Install from a list or specific location (Advanced)," then click the *left* mouse button on the "Next >" button.



3. Select "Include the location in the search:" then click the *left* mouse button on the "Browse" button.

Hardware Update Wizard
Please choose your search and installation options.
 Search for the best driver in these locations. Use the check boxes below to limit or expand the default search, which includes local paths ar trable media. The best driver found will be installed. Include this Igoation in the search: Include th
< <u>₿</u> ack <u>N</u> ext > Cancel

 Click the CD-ROM Drive, then click the *left* mouse button on the "OK" button.

Browse For Folder	? 🗙
Select the folder that contains drivers for your hardwar	e.
🖃 😼 My Computer	~
🗄 🍓 31/2 Floppy (A:)	
🗄 🧼 XP (C:)	
FIF_10A-VISTA (D:)	
🗄 🧼 Backup (E:)	
🕀 🥪 Vista (F:)	~
To view any subfolders, click a plus signation ove.	
OK Cancel	

 Click the *left* mouse button on the "Next >" button, then starting the driver install.

Hardware Update Wizard			
Please choose your search and installation options.			
 Search for the best driver in these locations. Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed. Search removable media (floppy, CD-ROM) Include this location in the search: D:\ Browse Den't search. I will choose the driver to install. Choose 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.			
Hardware Update Wizard			
Please wait while the wizard searches			
Vertex Standard FIF-10			

-

< <u>B</u>ack

<u>N</u>ext >

Cancel

 Click the *left* mouse button on the "Continue Anyway" button.



7. Click the left mouse button on the "Finish" button.



INSTALLATION PROCEDURE FOR THE FIF-10A DRIVER (Microsoft® Windows® Vista)

Note: Please perform this operation after changing user account to an "Administrator".

- When FIF-10/A is connected to the USB port on the computer, the following window (automatic device recognition window) will be open. Click the *left mouse button* on "Locate and install driver software (recommended)".
- 2. The screen becomes dark, and the "User Account Control" window will be open. Click the *left mouse button* on "Continue" button.



3. The following window will be open. Click the *left mouse button* on "**Don't search online**".



4. The following window will be open. Insert the FIF-10A CD-ROM into your computer.



5. The "Windows Security" window will be open. Click the *left mouse button* on "Install this driver software any-way".

😵 Wir	ndows	Security
🛞 Windows can't verify the publisher of this driver software		
	•	Don't install this driver software You should check your manufacturer's website for updated driver software for your device.
	*	Install this driver software anyway Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See <u>d</u> etails		

 The following window will be open. The driver installation is complete. Click the *left mouse button* on "Close" button.

		X
\bigcirc	Found New Hardware - Vertex Standard FIF-10/A (COM3)	
	The software for this device has been successfully installed	
	Windows has finished installing the driver software for this device:	
	Vertex Standard FIF-10/A	
		Close

INSTALLATION PROCEDURE FOR THE FIF-10A DRIVER (Microsoft[®] Windows[®] 7)

Note: Please perform this operation after changing user account to an "Administrator".

- 1. Set the supplied CD into your CD-ROM drive.
- When FIF-10/A is connected to the USB port on the computer, the following window will be open. Click the *left* mouse button on "x".



 Click the *right* mouse button on the "Computer" Item, then click the *left* mouse button on "Properties" to open the "System Properties" window.



 Click the *left* mouse button on the "Device Manager" Item, to open the "Device Manager" window.



 Click the *right* mouse button on the "Vertex Standard FIF-10" Item, then click the *right* mouse button on "Properties".

🚔 Device Manager	- • •
File Action View Help	
Biometric Devices Computer Disk drives Display adapters DVD/CD-ROM drives DVD/CD-ROM	E
Universal Serial B	•
Launches the update Driver Software wizard for the se	

6. The following window will be open. Click the *left mouse button* on "Browse my computer for driver software".

	Update Driver Software - Vertex Standard FIF-10	
Ηοι	w do you want to search for driver software?	
•	Search automatically for updated driver software Windows will search your computer and the Internet — the latest driver software for your device, unless you've disabled this feature settings.	
٠	Browse my computer for driver software Locate and install driver software manually.	
		Cance

INSTALLATION PROCEDURE FOR THE FIF-10A DRIVER (Microsoft® Windows® 7)

7. The following window will be open. Click the *left* mouse button on the "**Browse...**" button.



 Click the CD-ROM Drive, then Click the *left* mouse button on the "OK" button.

Browse For I	Folder	— ×
Select the	folder that contains drivers for your har	dware.
📃 Des	ktop	^
🛛 🍃 🔚 Lil	braries	
Þ 🦹 Us	ser	
⊿ <u>i</u> ≣ Co	omputer	E
Þ 💒 -	windows7 (C:)	
Þ 📖	OS-Backup (D:)	
▶ 📻	Removable Disk (E:)	
	DVD Drive (H:) FIF_10A-VISTA	Ŧ
<u>F</u> older:	DVD Drive (H:) FIF_10A-VISTA	
	ОК С	ancel

 Click the *left* mouse button on the "Next >" button, to start the driver install.



10. The "Windows Security" window will be open. Click the left mouse button on "Install this driver software anyway".

😵 Wir	ndows Security
\bigotimes	Windows can't verify the publisher of this driver software
	Don't install this driver software You should check your manufacturer's website for your device.
	➔ Install this driver software anyway Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
ی چ	See <u>d</u> etails

11. The following window will be open. The driver installation is complete. Click the *left mouse button* on "**Close**" button.

Update Driver Software - Vertex Standard FIF-10/A (COM4)	×
Windows has successfully updated your driver software	
Windows has finished installing the driver software for this device:	
Vertex Standard FIF-10/A	
	\bigcirc
	025
	Close

CONFIRMING THE COMPUTER'S COMMUNICATION PORT (Microsoft® Windows® 2000)

 Click the *right* mouse button on the "My Computer" icon on the desktop, then click the left mouse button on the "Properties" item to open the "System Properties" window.



 Click the *left* mouse button on the "Hardware" Folder, then click the *left* mouse button on the "Device Manager" Button to open the "Device Manager" window.

System Properties	? ×
General Network Identification Hardware User Profiles Advanced	
Hardware Wizard	
The Hardware wizard helps you install, uninstall, repair, unplug, eject, and configure your hardware.	
Hardware Wizard	
Device Manager	
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to charge the properties of any device.	
Driver Signing Device Manager	
Hardware Profiles	
Hardware profiles provide a way for you to set up and store different hardware configurations.	
Hardware Profiles	
OK Cancel App	y

 Confirm the computer's communication port which detects the FIF-10A.



CONFIRMING THE COMPUTER'S COMMUNICATION PORT (Microsoft® Windows® XP)

 Click the *left* mouse button on the "start" button, then click the *left* mouse button on the "My Computer" Item.

Test User	
Internet Internet E-mail Outlook Express MSN Explorer Image: Windows Media Player Image: Windows Movie Maker Image: Tour Windows XP Image: Files and Settings Transfer Image: Window Image: Plaint	My Documents My Recent Documents My Pictures My Music My Computer Control Panel Printers and Faxes Help and Support Search Entry Run
All Programs 🕨	Dell Solution Center
Start My Comput	Log Off 💽 Turn Off Computer er 📻 CaptureXP

2. Click the *left* mouse button on "View system information" to open the "System Properties" window.



 Click the *left* mouse button on the "Hardware" Folder, then click the *left* mouse button on the "Device Manager" button to open the "Device Manager" window.

tem Proper	ties							
System Re	Remote							
General	Compu	uter Name	Hardware	Advanced				
Add Hardware Wizard The Add Hardware Wizard helps you install hardware.								
Device Mana Th on pro	ager e Device M your compu perties of a Driver 9	anager lists al uter. Use the E ny device. Signing	the hardware device levice Manager to ch					
Hardware Pro	ofiles Irdware prof Terent hardw	iles provide a vare configural	way for you to set up	and store				
			Hardware <u>F</u>	Profiles				
			Cancel					

 Confirm the computer's communication port which detects the FIF-10A.



CONFIRMING THE COMPUTER'S COMMUNICATION PORT (Microsoft® Windows® Vista)

 Click the *left* mouse button on the "start" button, then click the *right* mouse button on the "Computer" Item.



2. Click the *left* mouse button on "**Propeties**" to open the "System Properties" window.



3. Click the *left* mouse button on the "Device Manager" Item, to open the "Confirmation" window.



 Click the *left* mouse button on the "Continue" button to open the "Device Manager" window.



5. Confirm the computer's communication port which detects the **FIF-10A**.



CONFIRMING THE COMPUTER'S COMMUNICATION PORT (Microsoft® Windows® 7)

 Click the *left* mouse button on the "start" button, then click the *right* mouse button on the "Computer" Item.



 Click the *left* mouse button on "Properties" to open the "System Properties" window.



3. Click the *left* mouse button on the "Device Manager" Item, to open the "Device Manager" window.

Control Pane Control Pane Control Anager Remote settings System protection Advanced system settings	System and Security • System View basic information Windows edition Windows 7 Professional Copyright © 2009 Microso	ty Search Control Panel about your computer It Corporation. All rights reserved.	
See also Action Center Windows Update Performance Information and Tools	System Rating: Processor: Installed memory (RAM): System type: Pen and Touch:	System rating is not available Intel®, Celeron(R) CPU 280GHz 2.79 GHz 512 ME (502 MB valable) 22-bit Operating System No Pen or Touch Input is available for this Display	

4. Confirm the computer's communication port which detects the **FIF-10A**.

🚔 Device Manager	
Ele Action View Help	
♦ ♦ m 10 10 10 m 40 10 fg 45	
🦻 🐏 Computer	
Disk drives	
> 📲 Display adapters	
DVD/CD-ROM drives	
- Q ₂₀ Human Interface Devices	
IDE ATA/ATAPI controllers	
👂 📼 Keyboards	
B Mice and other pointing devices	
Monitors	
Network adapters	
5 - 🚯 Other devices	
Portable Devices	
Ports (COM & LPT)	
Vertex Standard FIF-10/A (COM3)	
P-I Processors	
5 📲 Sound, video and game controllers	
b 📲 System devices	
b - Universal Serial Bus controllers	

1. Click the *left* mouse button on the "File" parameter.

C:¥CE39¥default	v.c39 - CE39V	Vin for VX-	600/900)
<u>File E</u> dit <u>V</u> iew	<u>C</u> ommon S	òignalling	<u>R</u> adio	Ch <u>a</u> nne
) 🛍 🎒 i	😦 😐 🤋		
Serial No	0B010001			
Freq Band	VHF			
ProductType	VX-900			
SW Version	2.00			
Group 1	TAG [GROUP	-01] (16 0	Channel
		F	requen	.cy
Chn Pri W/N	TAG	Receiv	ve T	ransmit

2. Click the *left* mouse button on the "Configure" item to open the "Configure" window.

C:¥CE39¥	defaultv	.c39 - (CE39W	in for \	/X-	600/9	900
<u>F</u> ile <u>E</u> dit	⊻iew	Commo	on <u>S</u>	ignallin	g	<u>R</u> adio	o Ch <u>a</u> nne
<u>N</u> ew Open Save Save <u>A</u> s	Ct Ct Ct	rl+N rl+O rl+S	3 9 <u></u> 00	2	ę		
<u>P</u> rint Print Pre <u>v</u> P <u>r</u> int Setu	Ct iew p	rI+P 勿					
<u>C</u> onfigure							
<u>1</u> defaulty	.c39				_		
E <u>x</u> it			ROUP-	-01]	(16	Channel
					Fı	requ	ency
Chn Pr:	i W/N	TA	G	Rec	eiv	7e	Transmit

 Select the communication port which is detecting the FIF-10A, then click the *left* mouse button on the "OK" button.



"CONFIGURE" PARAMETER SETTING PROCEDURE (EXAMPLE: "CE59")

1. Click the *left* mouse button on the "File" parameter.

C:\V	ertex S	Standa	rd\CE59 for Windo	ws\defaultv.c5	9 - CE59Win fo	r VX-4200/VX	-920/
ile <u>E</u>	dit <u>\</u>	/iew	Common Signal	ling <u>R</u> adio	Ch <u>a</u> nnel <u>H</u> el	р	
ΔC	×9		🛱 🚑 👱 🖻	9			
-6	アり			-			
9		-	2121 2 2 2 2			Duradurat	
Seri	ai N	0	00010000			Product	:1ype
Freq	I Ban	d	VHF 1.25kHz			FW Vers	ion
Gro	up 1	•	TAG [Group-0	01] (16	Channels)	
				Freq	lency	Sub A	udic
Chn	Pri	W/N	TAG	Receive	Transmit	Dec	Б
1	-	W5	- Vertex -	154.10000	154.10000		
2				154.10000	154.10000		
				154.10000	154.10000		
4				154.10000	154.10000		
		MC	Channel-005	154 10000	154 10000		
6					101110000		
		WS	Channel-006	154.10000	154.10000		
7	-	W5 W5	Channel-006 Channel-007	154.10000	154.10000 154.10000		

2. Click the *left* mouse button on the "**Configure**" item to open the "**Configure**" window.



3. Select the communication port which is detecting the **FIF-10A**.

Configuration			×
			_{(T)}
Com Port	СОМЗ	(FIF-10)	- <i>Ou</i> į
	COM3 COM4	(FIF-10)	
BaudRate	COM5		
9600 bps(A))		
() 19200 bps ()	B)		OK
C 38400 bps(2)		
L		C	ancel

 Select the Baud Rate for the transceiver's computer interface circuitry, then click the *left* mouse button on the "OK" button.

Configuration	X
Com Port COM3	
- BaudRate C 9600 bps(A) C 19200 bps(B) (• 38400 bps(C)	OK
	Cancel

"CONFIGURE" PARAMETER SETTING PROCEDURE (EXAMPLE: "CE99")

1. Click the *left* mouse button on the "File" parameter.

C:¥	Vertex §	Standa	rd¥CE99¥defau	iltud.c99 - CE9	9 for VX-23
File	<u>E</u> dit	<u>V</u> iev	v <u>C</u> ommon	<u>S</u> ignaling	<u>R</u> adio
	Ð			a & 3•	× 🖪
Se	rial N	10	8L00	0000	Pro
Fr	eq Bar	nd	UHF (450-520)	FW
			Frequ	uency	Sub A
Chn	Pri	W/N	Frequence	uency Transmit	Sub A Dec
Chn 1	Pri	W/N W5	Frequ Receive 480.50000	uency Transmit 480.50000	Sub A Dec
Chn 1	Pri	W/N W5	Freq Receive 480.50000	uency Transmit 480.50000	Sub A Dec
Chn 1 2 3	Pri	W/N W5 W5	Freq Receive 480.50000 480.50000	uency Transmit 480.50000 480.50000	Sub A Dec
Chn 1 2 3	Pri	W/N W5 W5 W5	Freq Receive 480.50000 480.50000	uency Transmit 480.50000 480.50000	Sub A Dec
Chn 2 3 4 5	Pri	W/N W5 W5 W5 W5	Freq Receive 480.50000 480.50000 480.50000 480.50000	uency Transmit 480.50000 480.50000 480.50000	Sub A Dec
Chn 2 3 4 5 6	Pri	W/N W5 W5 W5 W5 W5 W5	Freq Receive 480.50000 480.50000 480.50000 480.50000	uency Transmit 480.50000 480.50000 480.50000 480.50000	Sub A Dec

 Click the *left* mouse button on the "Configure" item to open the "Configure" window.



3. Select the communication port which is detecting the **FIF-10A**.

Configuration		×
	Select COM Port	(J)
COM Port	COM2 (FIF-	-10) 🔻
	COM1	
BaudRate	COM2 (FIF-	10)
,	OK C	ancel

4. Select the Baud Rate for the transceiver's computer interface circuitry.

Confi	guration			×
		Select C	OM Port	
	COM Port		COM2 (FIF-10)	(J)
	BaudRate		9600	-
	,		9600	
		OK	19200	
			38400	

5. Click the *left* mouse button on the "OK" button.

Select COM Port COM Port BaudRate
COM Port COM2 (FIF-10) •
BaudRate
19/1
OK Cancel