

DFS/Cutter

Technical Support Bulletin

Debugging Communication Problems

Abstract: This TSB is written to help users debug communication problems where the cutter appears to ignore everything the computer sends to the cutter. In this document it is assumed that the cutter is connected to the COM port of your computer. Last Update 3-27-7

Communications depends on three working pieces of equipment.

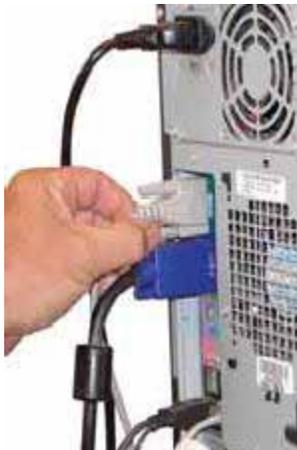
The Computer

The Cable

The Cutter

The Allen Datagraph equipment ships with a special plotter cable. They are not commonly available and should be ordered from Allen Datagraph. P/N PL-00-09-126-9. If your computer does not have a serial port to connect it to the cable supplied to your cutter you will have to purchase the USB to Serial converter approved for use with Allen Datagraph Cutters. You may order P/N H05-320 from Allen Datagraph and download the driver from our website.

If you are not using the Cable that came with the Allen Cutter this is the most likely culprit.



56 Kendall Pond Road
Derry, NH 03038
603-216-6344



All products made in America

	9 pin		Plotter
Rx	2 ---	2	Tx
Tx	3 ---	3	Rx
Gnd	5 ---	7	Gnd
Dsr	!- 6 ---	20	Dtr
	!		
Cts	!- 8		
Dtr	4 ---	6 --!	Dsr
		!	
		5 --!	Cts

The Allen cable should be wired as shown above. Assuming you have a 9-pin rs232 connector on the computer end.

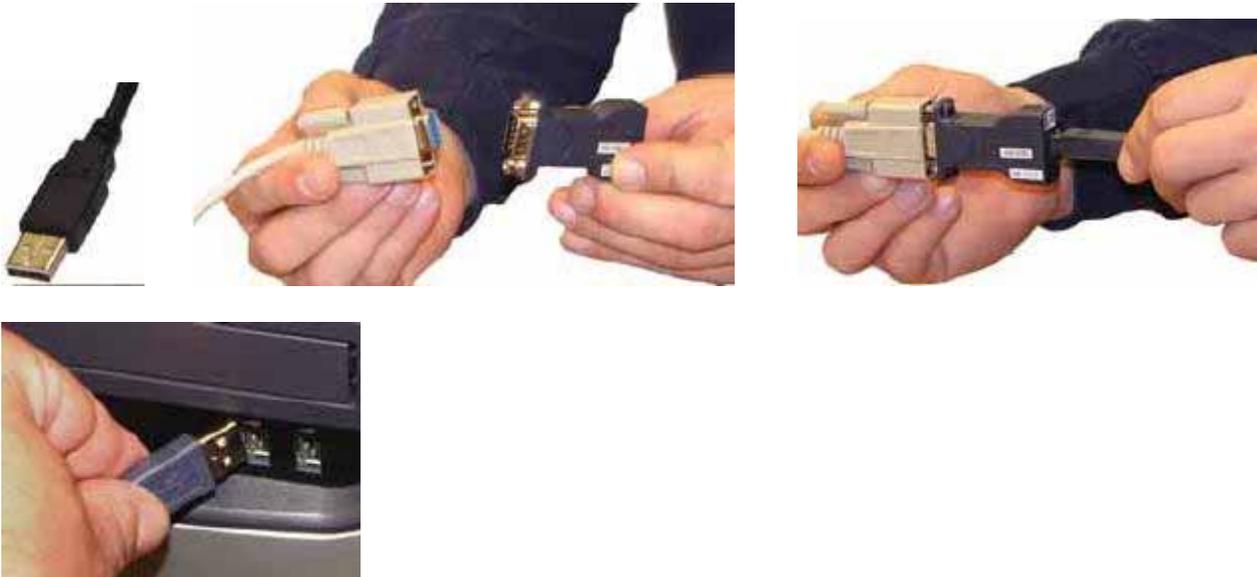
If you are not using the supplied cable, check the cable you are using against the schematic above with a digital voltmeter set for ohms.

If the cable checks out then you could still have a COM port problem on your computer even if your com port works on another device.

Check the operation with another computer that has a COM port.

Using the USB to serial converter.

The Photos below show how to use the USB to serial converter.



In addition you must install the usb to serial driver located at [CD Copy](#) / [Web Site Copy](#). Select the link on this page to download and install the usb to serial driver. After installing the driver on your computer you must unplug the usb cable from the computer while the power is on and plug it back in to load the new driver.

Testing The Connection

Windows Vista / Windows XP / Windows 2000

The DirectCut Cutter Driver comes with a equipment locator. After running the setup program it attempts to locate the cutter. You can download and install the cutter driver at:

[CD Copy](#) / [Web Site Copy](#).

In addition since Vista does not support HyperTerminal anymore you may download the Allen Terminal program to allows direct communication with cutter and setting the com port, baud rate, hand shake methods. [CD Copy](#) / [Web Site Copy](#).

Select the port you want to talk to using the Allen Terminal Menus.

Now load media into the machine. The Load or Remote LED will be lit and the pause light will be out.

Type

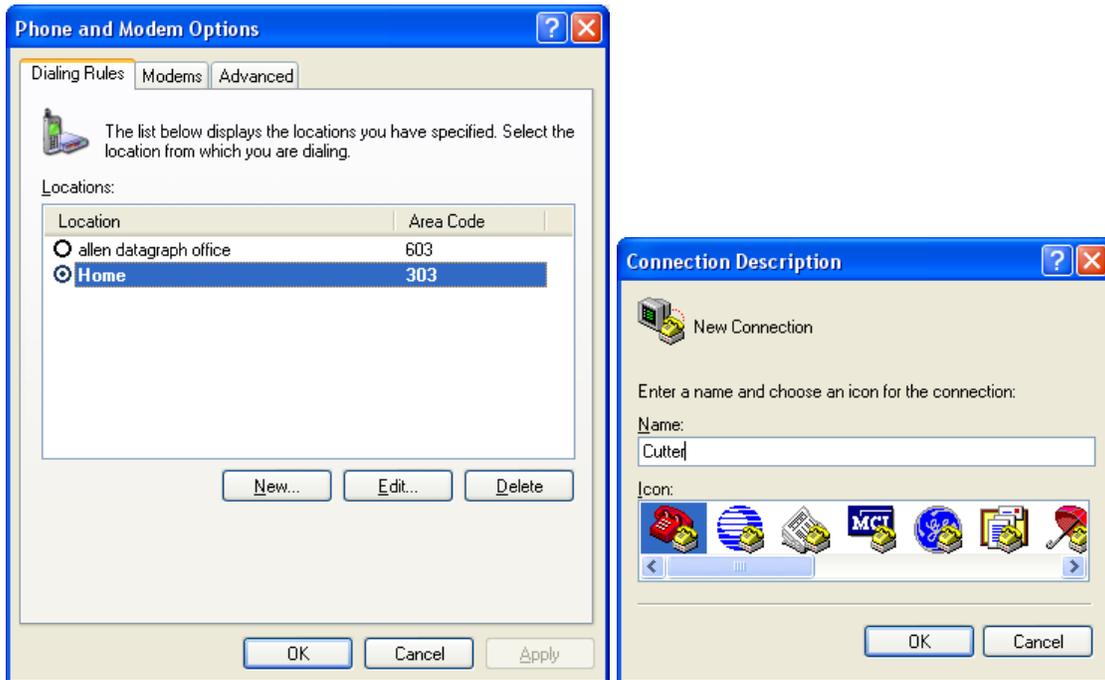
OI

(output identification command) into Allen Terminal. If working it will respond with ALLEN DATAGRAPH Model

The letters you type will not display unless local echo is turned on. The command CI5000;

will draw a ¼ to full circle.

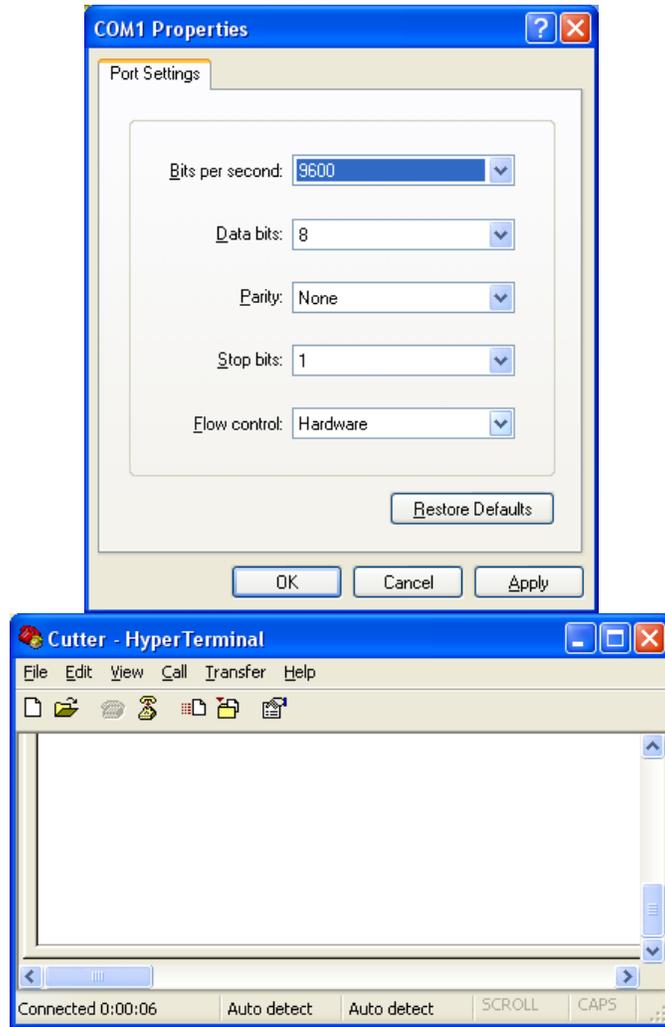
Using HyperTerminal Program to talk to cutter (not supplied with Windows Vista)



Hyper terminal then displays the Connect To menu. Change the Connect Using to Com1 or Com2 depending on where you have the cable plugged into the computer. If you are unsure of which port try them all one at a time. Then click on OK.



Change the baud rate from the default 2400 baud to 9600 baud.



Now load media into the machine. The Load or Remote LED will be lit and the pause light will be out.

Type

OI

(output identification command) into HyperTerminal. If working it will respond with:

ALLEN DATAGRAPH Model

The letters you type will not display. The command
CI5000;

will draw a ¼ to full circle.

Checking Cutter Communication Settings

Verify the cutter is set to the same parameters as the computer. To see if it is set correctly, run diagnostic 4.

800 Series (25 button panel)

Function, 3, Displays flashing D

0, 4, enter

This will display the baud rate of 96. Type 96 or press enter to cycle to Parity

This will display the parity of 0. Type 0 or press enter to cycle to data bits.

This will display the data bits of 8. Type 8 or press enter to cycle to stop bits.

This will display the stop bits of 1. Type 1 or press enter to exit serial setup.

This will display a flashing D. Type 99 enter to restart cutter.

i-TECH (16 button panel)

Press select key. Press right arrow until "dia" then up arrow to 0004.

Press select. This will display the baud rate. Use up/down to select 9600. Press select.

This will display parity. Use up/down to select none. Press select.

This will display data bits. Use up/down to select 8. Press select.

This will display stop bits. Use up/down to select 1. Press select.

This will display 2 and flash error. Use down arrow to select 99. Press select, to restart cutter.

Another common cause of communication problems is board/cable reseating. Remove and reseal the communication cable. If you have recently moved the cutter one of the boards may have be jarred loose. Place a ground strap on your wrist and ground to machine. Take off the electronic chassis cover and remove and reseal each of the boards and cables.

If it appears as if the Cutter is at fault you can send the Computer Board (This is the lower board of the set (6 inch x 13 inch) with a black reset button on the front) of the cutter to the factory for checkout and repair. Call the factory to get a RMA number prior to sending the board.