

Using a Terminal Program to Communicate with an Ioline Plotter

Introduction

This guide demonstrates how to send instructions and files to Ioline plotters with a terminal program like Hyper Terminal (included with Microsoft Windows). Using a terminal program is not necessary if using the Ioline Control Center, available on the web at <http://www.ioline.com/> or by mail from Ioline customer service. A complete list of Ioline syntax commands is available on the web in PDF format.

Prepare to communicate

1. Attach the plotter to a computer communication port.
2. Turn on both the computer and plotter.
3. After the plotter finishes the initialization sequence the keypad LED will turn red.
4. Press **Start Point** or **Set Origin** so that the LED changes from red to green.

Setup the Terminal Program

1. Start the terminal program (Hyper Terminal in Windows, Zterm in Mac, etc.).
2. Set up the terminal for communication through the computer port chosen above.
3. If using serial communication, ensure the properties are set to match the following:

Baud rate: 9600
Data Bits: 8
Parity: none
Stop Bits: 1
Flow Control: Xon\Xoff

4. If the program has a 'Local Echo' setting, enable this to view what is typed into the terminal and sent to the plotter.

Communicating

1. After setting the communication properties, check to see if the connection is active by typing !IC@. An ID code should appear on the screen. The keypad LED remains green when the plotter receives the command without an error. See the *Troubleshooting* section below if the keypad LED flashes alternating red and green.
2. If the terminal program did not automatically connect to the plotter, look for a command to start the connection and try the above test again.
3. When communication is successful, the plotter will accept any Ioline syntax command or a plot file written in HPGL 7475 or DMPL. To use HPGL 7596, switch modes as specified in the Ioline Syntax Guide.

Troubleshooting

1. If nothing happens when trying to communicate, try the following:
 - Check that local echo is enabled in the terminal program.
 - Make sure that all characters are typed in UPPERCASE.
 - Ensure that the syntax command always starts with an ! and ends with @. More than one syntax command can go between the ! and @. Example:

```
!LL0,0 UR46000,49000 RF1@
```

- A single space is allowed between each command but not between a command and associated vector endpoints or parameters. Example:

```
Good: !RF1@  
!IC AE0@  
!LL0,0@
```

```
Bad: !RF 1@  
!IC AE0@  
!LL 0,0@
```

- Vector endpoints are in mils (thousandths of an inch) and are in the format X,Y. Example, to set a Lower Left point at 1 inch in X and 2 inches in Y, type:

```
!LL1000,2000@
```

2. If the keypad LED is flashing alternating green and red, then the last syntax was not understood. This is a *Syntax Error*. To clear the syntax error, press the **Start/Stop** key until the LED turns green and try the command again using the above suggestions as a guideline.