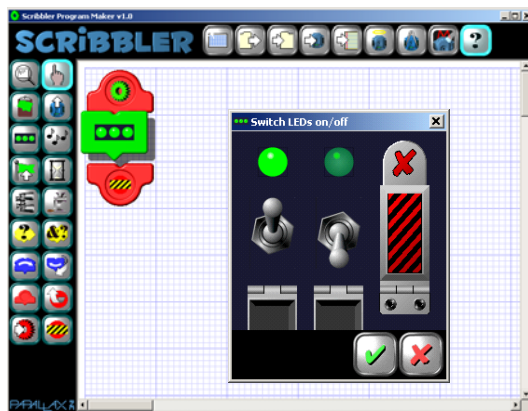


## Scribbler GUI Programming Guide

# Setting Up

Inside the Scribbler Robot is a small computer called a BASIC Stamp<sup>®</sup> microcontroller. With the Scribbler Program Maker software and your PC or laptop computer, you can build your own programs for your Scribbler. Then, you can load them into the BASIC Stamp inside the Scribbler through a serial cable. This Guide contains software installation and hardware connection instructions you need to complete so you can begin programming.



This guide will take you through the computer system requirements for your PC or laptop, obtaining and installing the Scribbler Program Maker software, and connecting your Scribbler Robot to your personal computer. There is also a test to verify that your computer and the BASIC Stamp inside the Scribbler Robot are communicating properly. If you run into difficulty, there are troubleshooting tips to try, and Parallax Tech Support contact information for direct help.

Once you have completed “Setting Up”, you will be ready for “First Programs,” the next module in this series. Its illustrated, step-by-step instructions will get you started with building graphical programs for your Scribbler Robot.

<b>COMPUTER SYSTEM REQUIREMENTS</b>	<b>2</b>
<b>INSTALLING THE SCRIBBLER PROGRAM MAKER SOFTWARE</b>	<b>2</b>
<b>CONNECTING THE SCRIBBLER ROBOT TO YOUR COMPUTER</b>	<b>8</b>
<b>TESTING THE PROGRAMMING CONNECTION</b>	<b>9</b>
<b>RESTORING THE FACTORY DEMO PROGRAM</b>	<b>10</b>
<b>TROUBLESHOOTING TIPS</b>	<b>10</b>
<b>TECH SUPPORT FROM PARALLAX INC.</b>	<b>12</b>

## Computer System Requirements

You will need either a PC or a laptop computer to run the BASIC Stamp Editor software. Your computer will need to have the following features:

- Microsoft Windows® 2000, XP, or newer operating system
- A CD ROM drive, Internet access, or both
- An available serial port (DB-9)  
- OR -
- A USB port with a USB to Serial Adapter (We only recommend using the FTDI US232B adapter. It is available from [www.parallax.com](http://www.parallax.com), part #800-00030.)
- A mouse or other pointing device

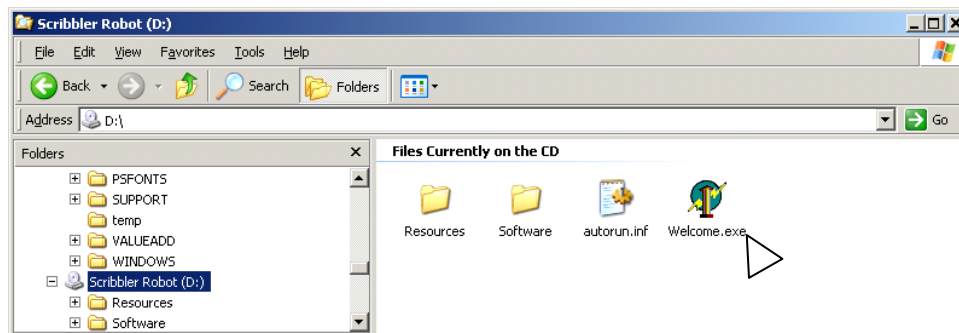
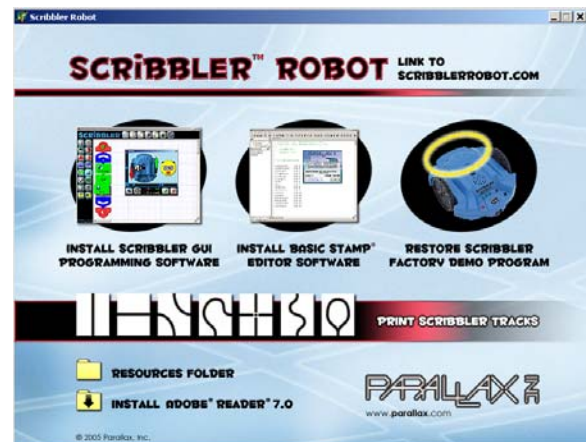
## Installing the Scribbler Program Maker Software

The Scribbler Program Maker Software is included on the Scribbler Software CD that came in the box with your robot. As expansions and updates are made to this software, new versions will be made available for free download from our official website, [www.ScribblerRobot.com](http://www.ScribblerRobot.com).

### Installing the Software from the Scribbler CD

Follow these directions to install the Scribbler Program Maker directly from the Scribbler Software CD:

- ✓ Place the **Scribbler Software CD** into your computer's CD drive.
- ✓ If the Welcome Menu displays automatically, skip ahead to **Software Installation Steps**.
- ✓ If the CD does not auto-run, browse to your computer's CD drive.
- ✓ Open "**Welcome.exe**" to view the Welcome Menu.



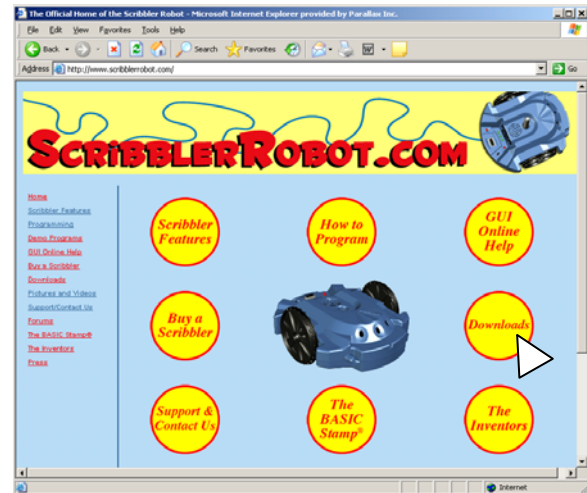
- ✓ In the Welcome Menu, click on “**Install Scribbler GUI Programming Software**” to begin the installation process.
- ✓ Skip the next section, and begin again at **Software Installation Steps** on page 5.



### Downloading the Software from the Internet

The very latest versions of the Scribbler Program Maker GUI software, educational Programming Guides, and other resources are always available as free downloads from [www.ScribblerRobot.com](http://www.ScribblerRobot.com).

- ✓ With your Internet browser, go to **www.scribblerrobot.com**.
- ✓ Click on the **Downloads** button.



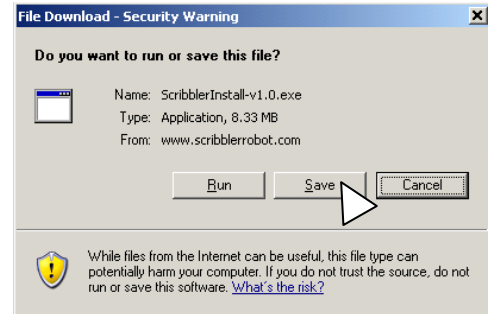
- ✓ Under **Program with Graphics**, locate **Scribbler Program Maker GUI**.
- ✓ Click on the button in the **Download** column.



## 4 - Module Name

The File Download window will open. We recommend that you download the program and save it to your computer before launching the installation process.

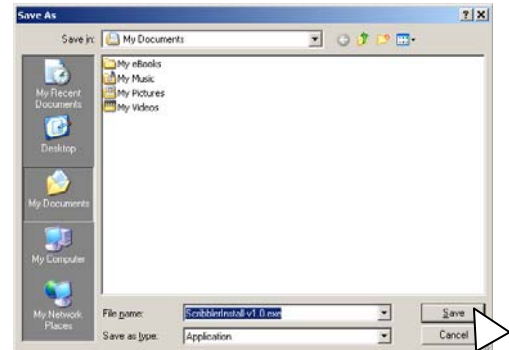
✓ Click **Save**.



The Save As window opens next,

✓ Browse to the location where you want to save the file you are downloading.

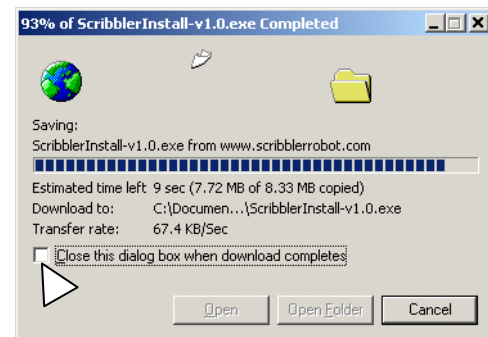
✓ Click **Save**.



A window opens showing the download progress.

✓ Uncheck the "**Close this dialog box**" option.

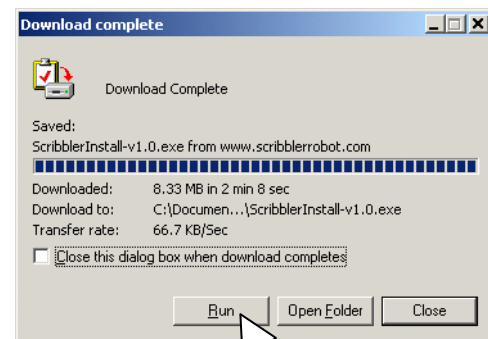
Downloading the file can take several minutes.



The Download Complete message will appear.

✓ Click **Run**.

(If this window did not open, browse to the location where you saved the downloaded program, and run it from there.)

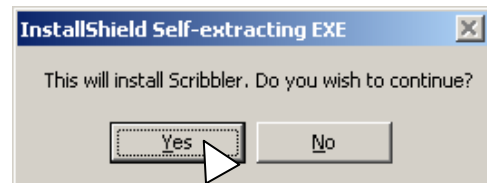


When you run the program, you may get a security warning.

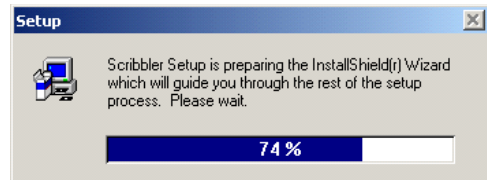
✓ Click **Run**.



✓ Click **Yes**.



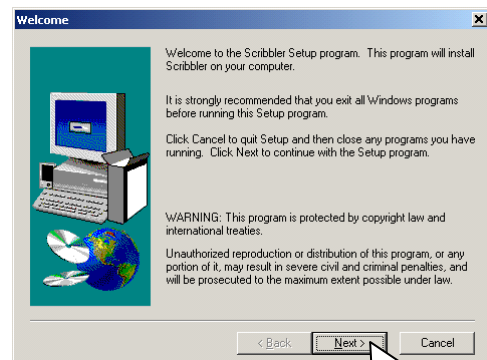
A window with a progress bar may appear. When it closes, you are ready to continue with **Software Installation Steps**, below.



## Software Installation Steps

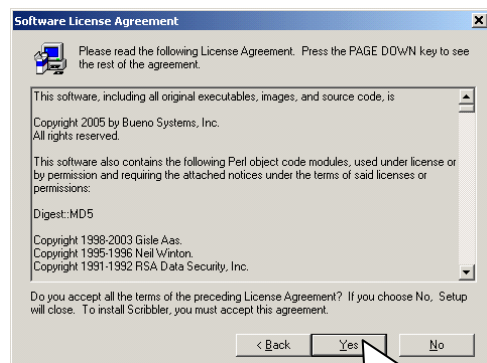
The Welcome window opens first.

✓ Click **Next**.



The next window that opens up will be the Software Licensing Agreement.

✓ If you accept the terms of the License Agreement, click **Yes**.

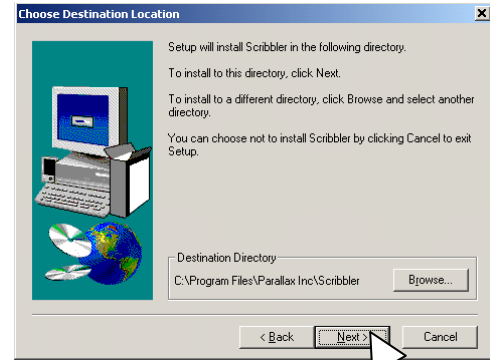


## 6 - Module Name

The next window asks you where you would like the Scribbler Program Maker files to reside on your computer. The default directory is:

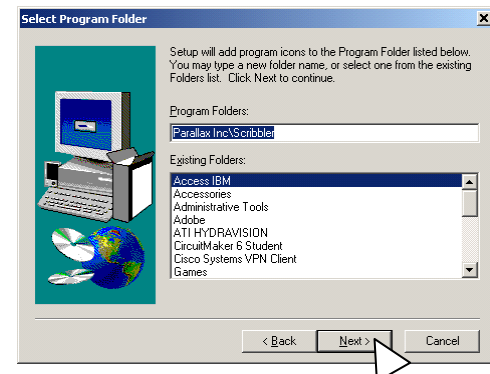
C:\Program Files\Parallax Inc\Scribbler.

- ✓ If you want to install to the default directory (recommended), click **Next**.
- ✓ If instead you want to install to a different location, Click **Browse**, choose another directory, then click **Next**.



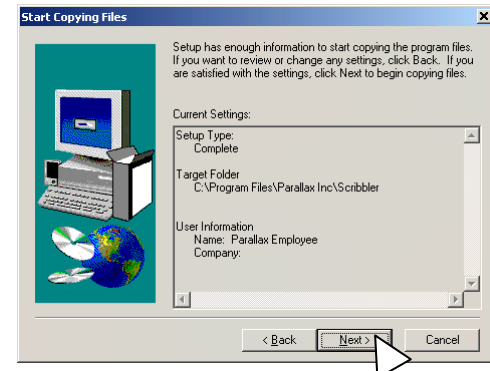
The next window informs you that program icons will be added to the folder Scribbler program folder.

- ✓ If you want the program icons to be added to this folder (recommended), click **Next**.
- ✓ If you want the program icons to be added to another folder, choose one from the list displayed, then click **Next**.

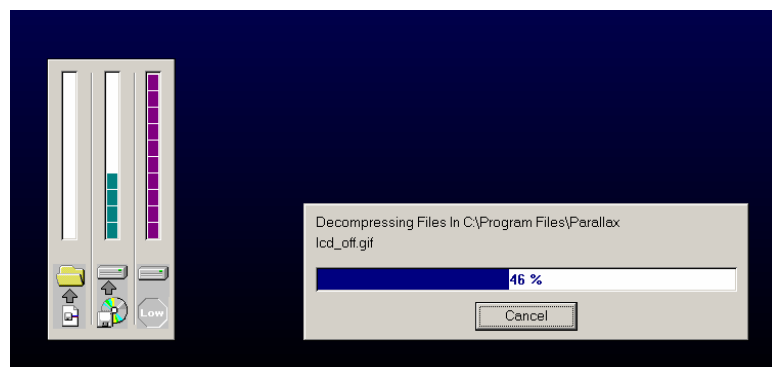


The window after that tells you that it is ready to start copying files

- ✓ Click **Next**.



As the program files are being installed, you may see some gauges tracking the installation progress.





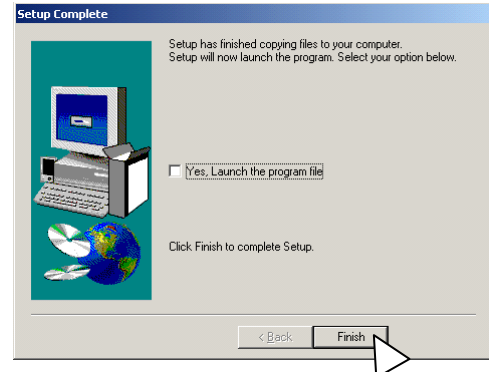
When the setup is complete this window opens.

- ✓ Click **Finish**.

If you checked “Yes” in this window, the Scribbler Program Maker will automatically open. If you did not, you can open the program from the Start menu:

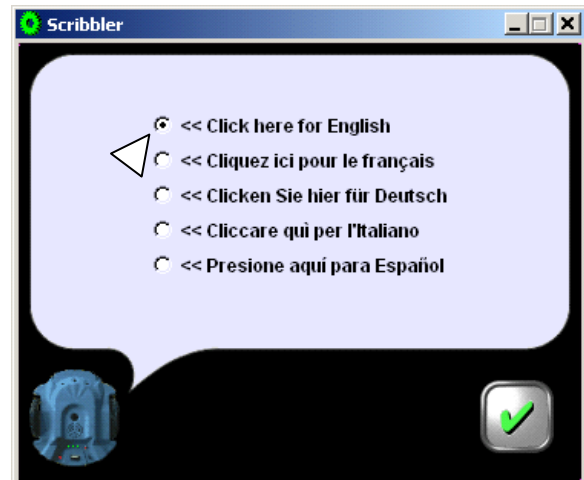
Start > All Programs > Parallax Inc > Scribbler > scribbler.

- ✓ Open the program.



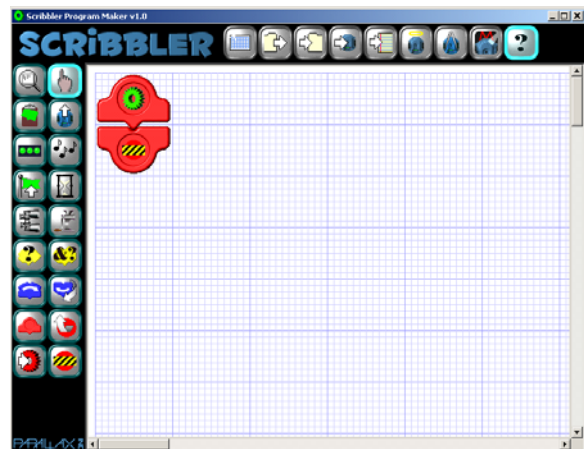
The first time you run the Scribbler Program Maker software, a window opens that allows you to choose a language for messages and tool tips (flyover help).

- ✓ Click in the circle next to the language you want to use.
- ✓ Click the green checkmark to accept your choice.



Scribbler Program Maker installation is complete, and a blank worksheet opens.

- ✓ Leave this program open while you connect your Scribbler Robot to your computer.



## 8 - Module Name

### Connecting the Scribbler Robot to your Computer

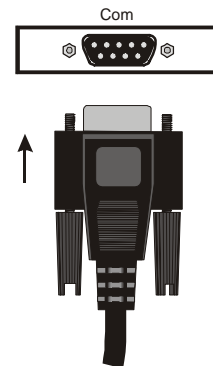
Your Scribbler Robot came packaged with a programming cable. This is a standard 9-pin serial cable (DB-9). To program your Scribbler, you will need to connect it to your computer with this cable.



If you do not have a serial port, only a USB port, you will need to install a USB to Serial Adapter before continuing. At the time of this writing, we only recommend using the FTDI US232B (Part #800-00030).



- ✓ Connect the 9-hole end of the serial cable to the serial COM port on your computer (or, the serial end of the USB-to-Serial Adapter.)



- ✓ Then, connect the other end of the serial cable to the Programming Port on the Scribbler Robot.

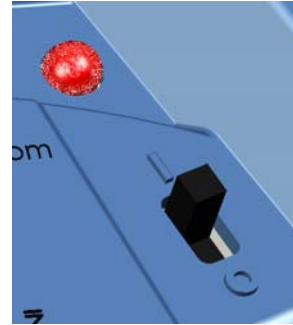


- ✓ Place your Scribbler Robot on a small box or book so its wheels are not touching anything. Remember, the factory-loaded Demo program is already inside the Scribbler, so the motors might start when you turn it on.





- ✓ Place the Scribbler power switch in the “on” position.  
**1 = ON    0 = OFF**
- ✓ Make sure the red power light is on. If it is not, or if it blinking, your Scribbler may need new batteries. See the Scribbler Start-up Guide for instructions.



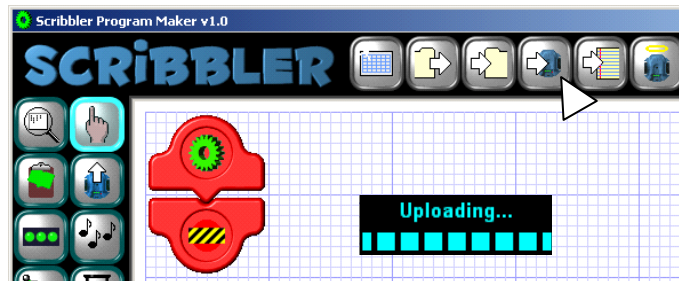
## Testing the Programming Connection

Now, we are going to use the Scribbler Program Maker to run an “empty” program. This program will not make the Scribbler do anything. But, running it will show whether or not your computer is communicating with the BASIC Stamp microcontroller inside the Scribbler.

- ✓ In the Scribbler Program Maker, click on the Upload button.



- ✓ An Uploading progress bar may appear briefly.



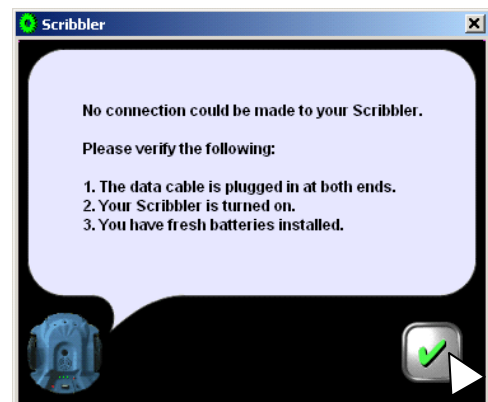
If the programming connection is working, a window will open with the message “Upload successful!”

- ✓ Move on to the *Scribbler GUI Programming Guide* “First Programs” to learn how to use the Scribbler Program Maker software. It is available free from the Downloads page at [www.ScribblerRobot.com](http://www.ScribblerRobot.com).



If the programming connection is not working properly, you may get the message “No connection could be made to your Scribbler.”

- ✓ Follow the tips, then click the checkmark to close the window.
- ✓ Try running the empty program again.
- ✓ If that doesn't work, move on to the next section, **Troubleshooting Tips** on page 10.



## 10 - Module Name

### Restoring the Factory Demo Program

After you have experimented with making your own programs, you can easily reload the Factory Demo Program that came installed in your Scribbler Robot. Restoring this program will overwrite any custom program you may have loaded into your Scribbler.

- ✓ In the Scribbler Program Maker, click on the Restore button.



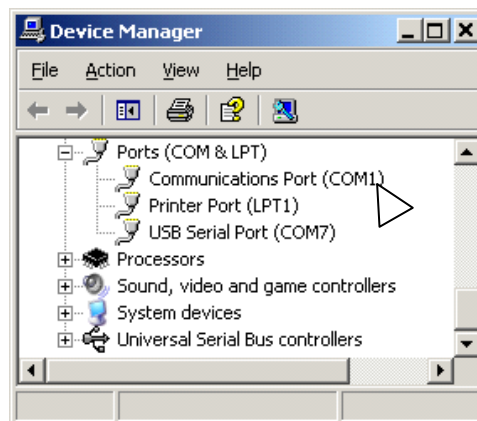
### Troubleshooting Tips

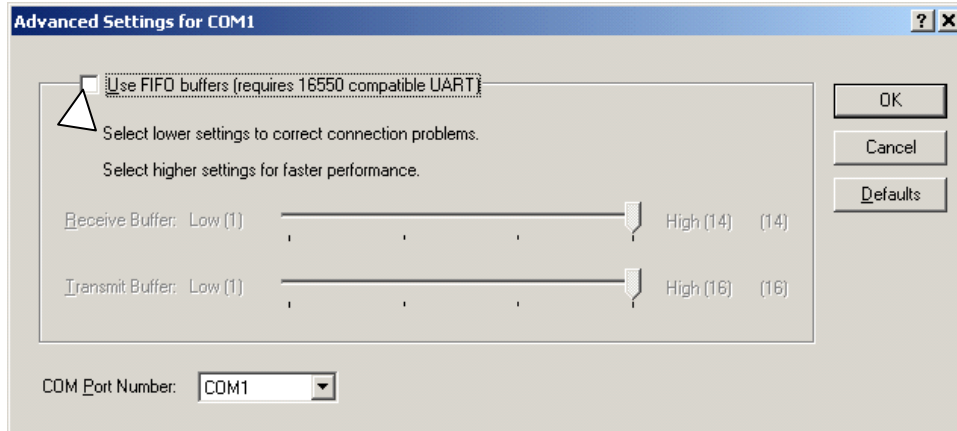
Here is a list of things to try to quickly fix any difficulties getting the Scribbler Program Maker to communicate with the BASIC Stamp inside the Scribbler Robot:

- ✓ Rule out dead batteries by using six new AA batteries of the same type.
- ✓ Make sure the serial cable is firmly connected to both the computer's COM port and the DB-9 connector on the Scribbler Robot.
- ✓ Make sure that you use the serial cable that came in your package, which is a normal DB-9 serial cable. DO NOT USE A NULL MODEM CABLE. Most null modem cables are labeled NULL or Null Modem; visually inspect the cable for any such labeling. If you find that label, do not try to use it to program your Scribbler Robot.
- ✓ Disable any palmtop communication software.

If none these solutions help, you may need to try adjusting your computer's port settings.

- ✓ Under your computer's **Control Panel**, select **System**.
- ✓ Select **Hardware** → **Device Manager** → **Ports**.
- ✓ Select the COM port that your Scribbler Robot is connected to.
- ✓ Select **Port Settings** → **Advanced**.
- ✓ **Uncheck** the box labeled "Use **FIFO Buffers**" then click **OK**.
- ✓ Click **OK** to close each window, and return to the Scribbler Program Maker.
- ✓ Try loading the empty program once more.



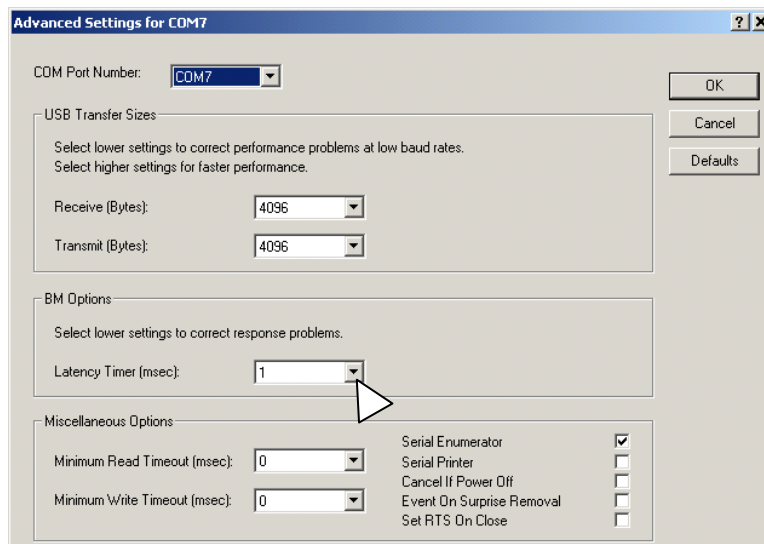


If you are using an FTDI USB-to-Serial Adapter, here are a few more hints. First, make sure you loaded the FTDI drivers onto your computer, from the Parallax Software CD that came with it.

- ✓ Insert the Parallax CD in your CD ROM drive.
- ✓ From the Welcome screen, choose **Software**, then **USB Drivers (FTDI VCP)**.
- ✓ Click on the diskette icon labeled **Windows Drivers**, and then click **Install**.
- ✓ A **Confirm** window will open; click **Yes**.
- ✓

You may also need to modify your USB port's latency settings.

- ✓ Under your computer's Control Panel, select **System**.
- ✓ Select **Hardware** → **Device Manager** → **Ports**.
- ✓ Select the COM port that your Scribbler Robot is connected to.
- ✓ Select **Port Settings** → **Advanced**.
- ✓ Reduce the **Latency Timer** setting to **1**.
- ✓ Click **OK** to close each window and return to the Scribbler Program Maker.
- ✓ Try loading the empty program once more.



## 12 · Module Name

### Tech Support from Parallax Inc.

If you are still having trouble installing the Scribbler Program Maker software or establishing a programming connection between your computer and the Scribbler Robot, you can contact Parallax Inc. for free Technical Support. You have several options:



#### Telephone

Parallax Inc.'s Tech Support staff takes calls on weekdays from 7:00 am to 5:00 pm Pacific Time.

Phone: **(916) 624-8333**

Toll Free in the US and Canada: **1-888-99-STAMP**

#### Email

Send an email to [support@parallax.com](mailto:support@parallax.com) explaining the problem. Emails are answered as promptly as possible throughout the business day.

#### Forums

You can post a question to the Scribbler Forums at [forums.ScribblerRobot.com](http://forums.ScribblerRobot.com). Your questions may be answered by other Scribbler owners and Parallax Tech Support staff. This free public forum is moderated, and has no pop-up advertisements.