Troubleshooting USB Connections

**Install the Control software and connect the USB cable:**

If you have not installed the ShopBot Control Software on the computer, do it now **before connecting the USB cable for the first time!** This will install the driver for the USB connection between your ShopBot and your computer. If you installed ShopBot Software on your computer earlier to try it out and chose not to install the USB drivers, you may want to repeat the installation.

After installing the software, plug the USB cable from the Control Box into a USB port on your computer. On many computers, there are multiple slots for the USB cable. Once you have decided on the one you are going to use, always plug the ShopBot USB cable into the same slot.

The USB cable provided for your machine is 10 feet long. ShopBot does not recommend using a cable longer than 10 feet. Using an extension or longer cable may result in loss of signal or increased electrical interference. To ensure full speed communications the USB cable to the ShopBot controller must be plugged into a USB 2.0 hub. ShopBot has provided a USB 2.0 hub for this purpose. Should you need to replace the one provided, there is no need to purchase a powered hub, just one of the small simple ones. Do not use USB equipment made by Belkin. Do not plug any other devices into that hub.
Verify USB Connection and Enhanced Port:
You will also want to verify that the ShopBot is located on the USB tree under an Enhanced Port. This will allow full speed communication with the machine. The "USB View" program is located in the diagnostics folder `C:\Program Files (or Program Files(x86) if 64 bit)\ShopBot\Diagnostics`. When you open the USBView (double click to run) program you should see:

1) That the ShopBot is visible on the USB Tree

2) The branch where the ShopBot is located is directly below an "Enhanced" controller or port. (see red circled below)

3) That the ShopBot is shown on one of the ports of the hub

Also in the diagnostics folder is the "Speed Test.exe" program. This program will locate and verify the communications speed between the computer and controller card. SB3 must be closed prior to running Speed Test. Comm rates at or above 70% are acceptable, below 70% are not. The ShopBot 3 software must be closed prior to running the Speed Test program.

![USB Tree Screenshot](image-url)
**Windows 7 and Manual Driver Install:**

Windows 7 has a few differences when compared to XP and in some cases has made installing SB3 software more difficult due to its enhanced security. Due to these security features Win-7 does not always install all the ShopBot drivers properly. This problem is sometimes made worse by plugging the ShopBot into the computer prior to installing the SB3 software. To verify a proper install, do the following:

Go to [START] > [Control Panel] > [Devices and Printers] (double click) Near the bottom of the shown devices there will be an "Unspecified" category. The V204 ShopBot Controller AND a virtual numbered COM port should show up there like this:

If you have a spindle speed controller installed there there must be 2 devices and 2 COM ports shown and the COM port numbers must be unique for each of the 2 devices. If your ShopBot devices are not shown as above, then try the following methods to install the proper drivers:

1) Easy method: Turn "User Accounts" to its lowest Setting. Reinstall the latest version of the SB3 software. Cycle the ShopBot Control box off and then back on.

2) Use SB "Driver Loader" to reinstall drivers:

Navigate to C:\Program Files (or x86)\ShopBot\ShopBot 3\Drivers\ShopBotControllerV201. Double click to open and then Right click on the "DriverLoader.exe" and select "Run as Administrator". When complete, cycle the ShopBot Control box off and then back on.
3) Windows Manual Driver Install:
Navigate to [START] > [Control Panel] > [System] In the upper left, click on "Device Manager", Scroll down to "Ports", Click to expand the line. You should see something that resembles this:

- Network adapters
- Portable Devices
- Ports (COM & LPT)
  - ShopBot Controller (COM3)
- Processors
- Sound, video and game controllers

In your case the port number may be different, or in some cases not specified. Right click on the "ShopBot Controller" and select "Update Driver Software....". Then select "Browse my computer for driver software", press the [BROWSE] button and navigate to the C:\Program Files (or x86)\ShopBot\ShopBot 3\Drivers\ShopBotControllerV201 folder. Press "Next". Windows should then either install the drivers or tell you that they are up to date.

Next, scroll down in the Device Manger to "Universal Serial Bus controllers" and expand to find the ShopBot device:

- Intel(R) 5 Series/3400 Series Chipset Family I
- SafeNet Inc. HASP Key
- SafeNet Inc. Sentinel HL Key
- SafeNet Inc. USB Key
- ShopBot
- USB Composite Device
- USB Composite Device
- USB Mass Storage Device
- USB Root Hub

Right Click on "ShopBot" and repeat the above process. Close out all of the above windows. **At this time you must cycle the ShopBot Control box power off and then back on.**

You should now be able to go back into the devices page of the Control panel and see that your ShopBot devices have been properly installed. The procedure for XP is the same in the Device Manager, but ShopBot devices are not shown in the Devices and Printers page as this was an addition to Win-7.

You may also want to rerun the "SpeedTest.exe" and see if/how your comm rate has improved.