**$port = New-Object System.IO.Ports.SerialPort**

**$port.PortName = "COM6"**

**$port.BaudRate = "9600"**

**$port.Parity = "None"**

**$port.DataBits = 8**

**$port.StopBits = 1**

**$port.ReadTimeout = 9000 # 9 seconds**

**$port.DtrEnable = "true"**

**The line that made all the difference was this:**

**$port.DtrEnable = "true"**

**Also, I have my Arduino write back a response after it executes every command, hence the read afterwards.**