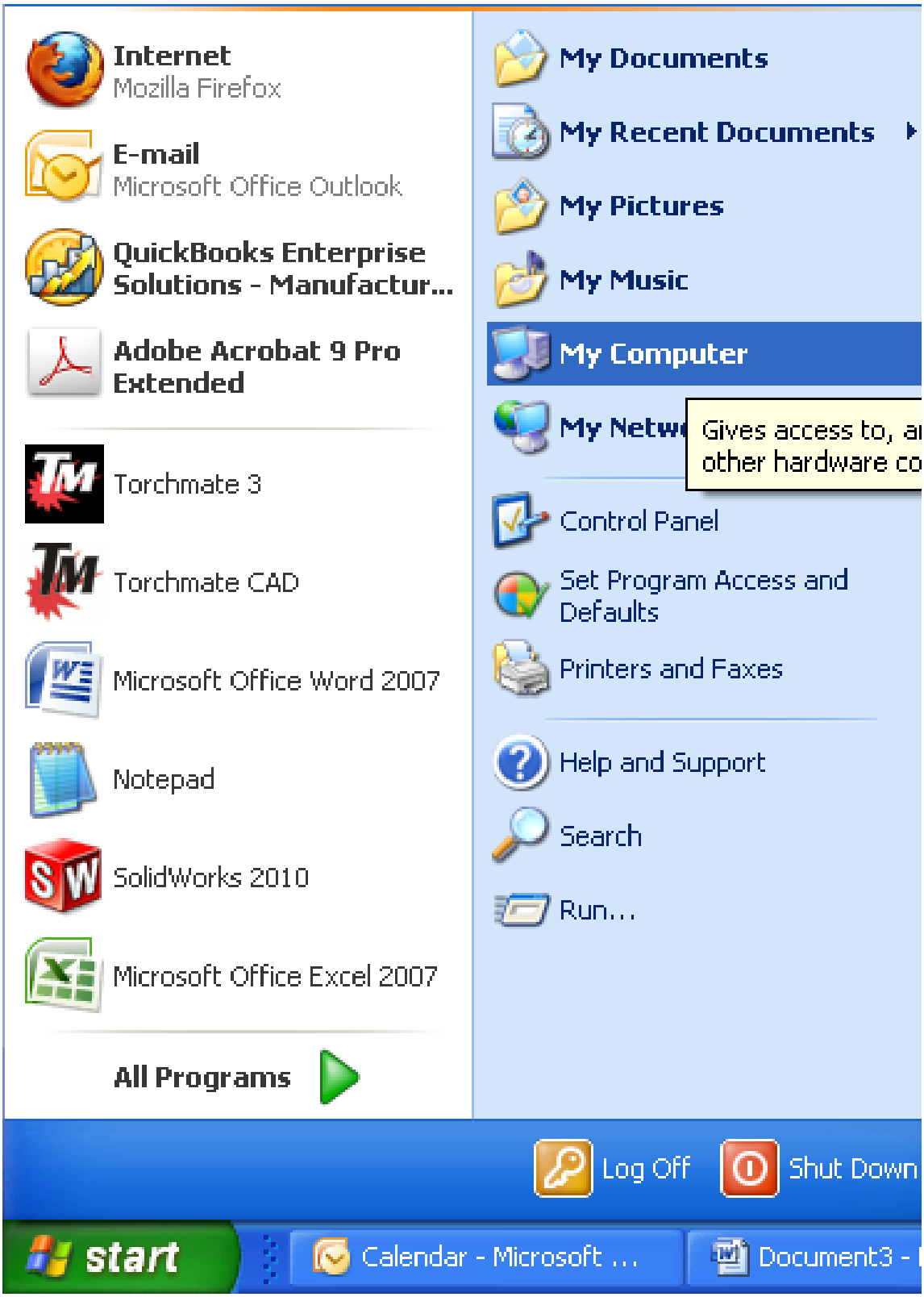
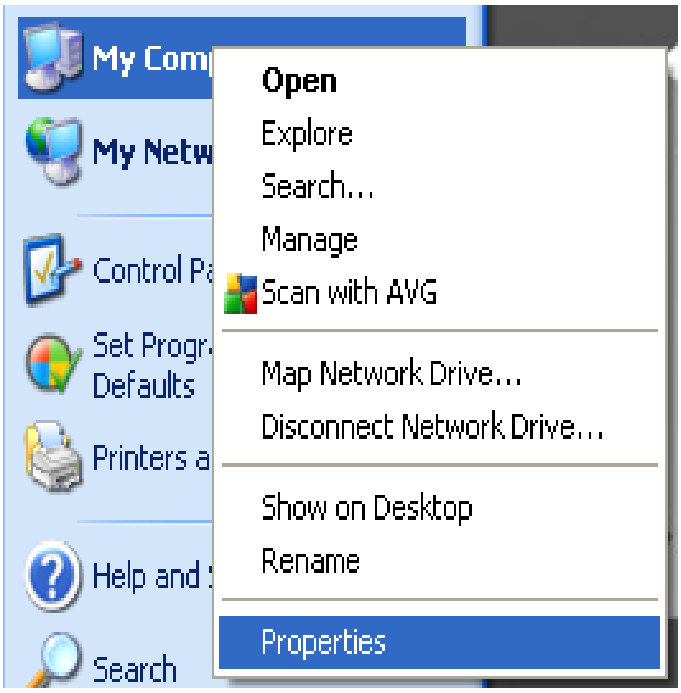
Reprogramming a Height Control Motor is a fairly simple process. Making sure that you are using a straight 9 pin to 9 pin serial port cable connect one end to your 9 pin port on your computer and the other end to the 9 pin pigtail connector wired into the main power cable that provides power to your AVHC motor.

After the connection from the computer to the motor has been made we need to check your Device Manager on your computer to see what Com Port is defined for your 9 pin port. Start by clicking Start in

the lower left hand corner of your desktop.

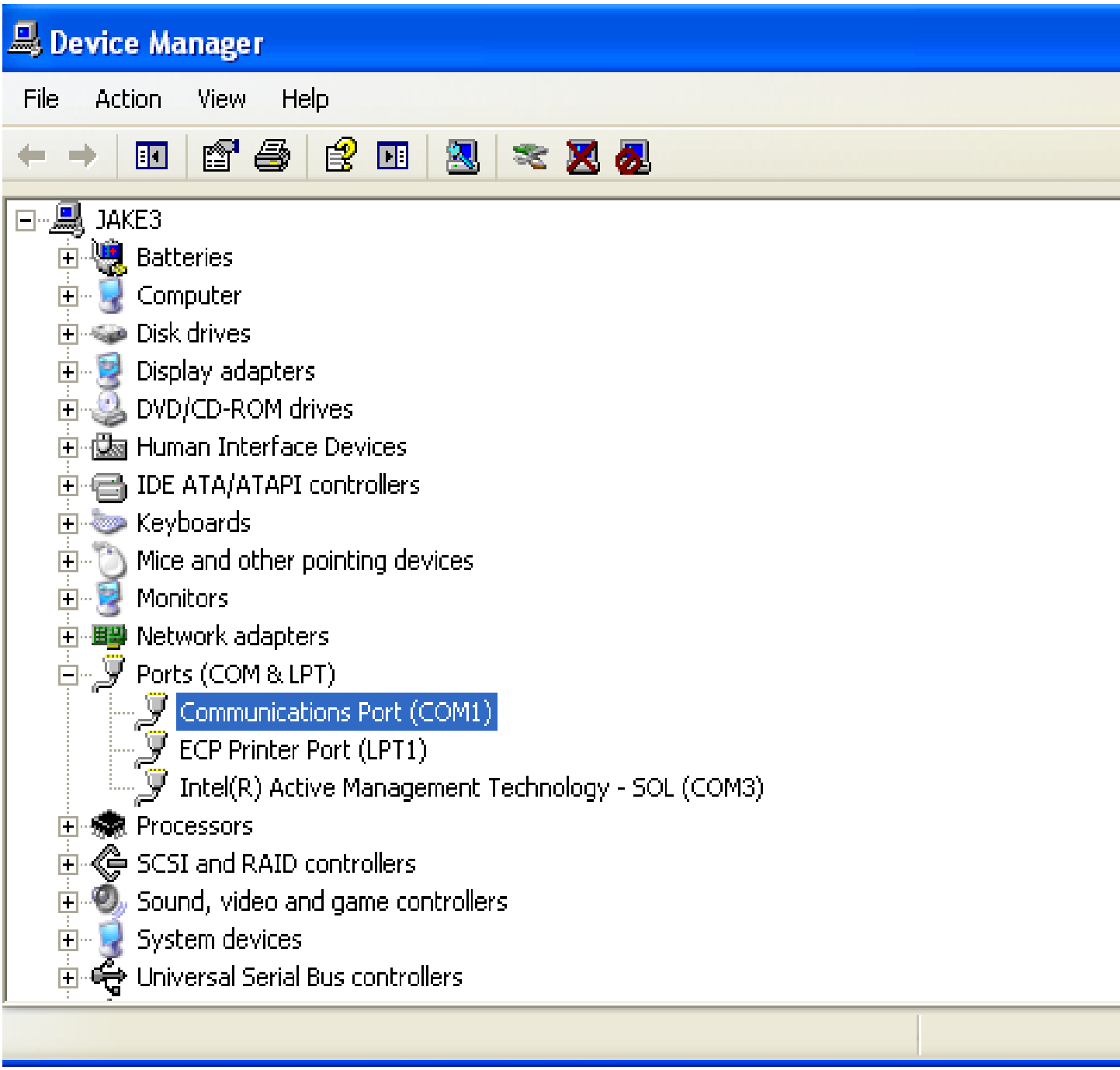


Right click with your mouse and select properties.



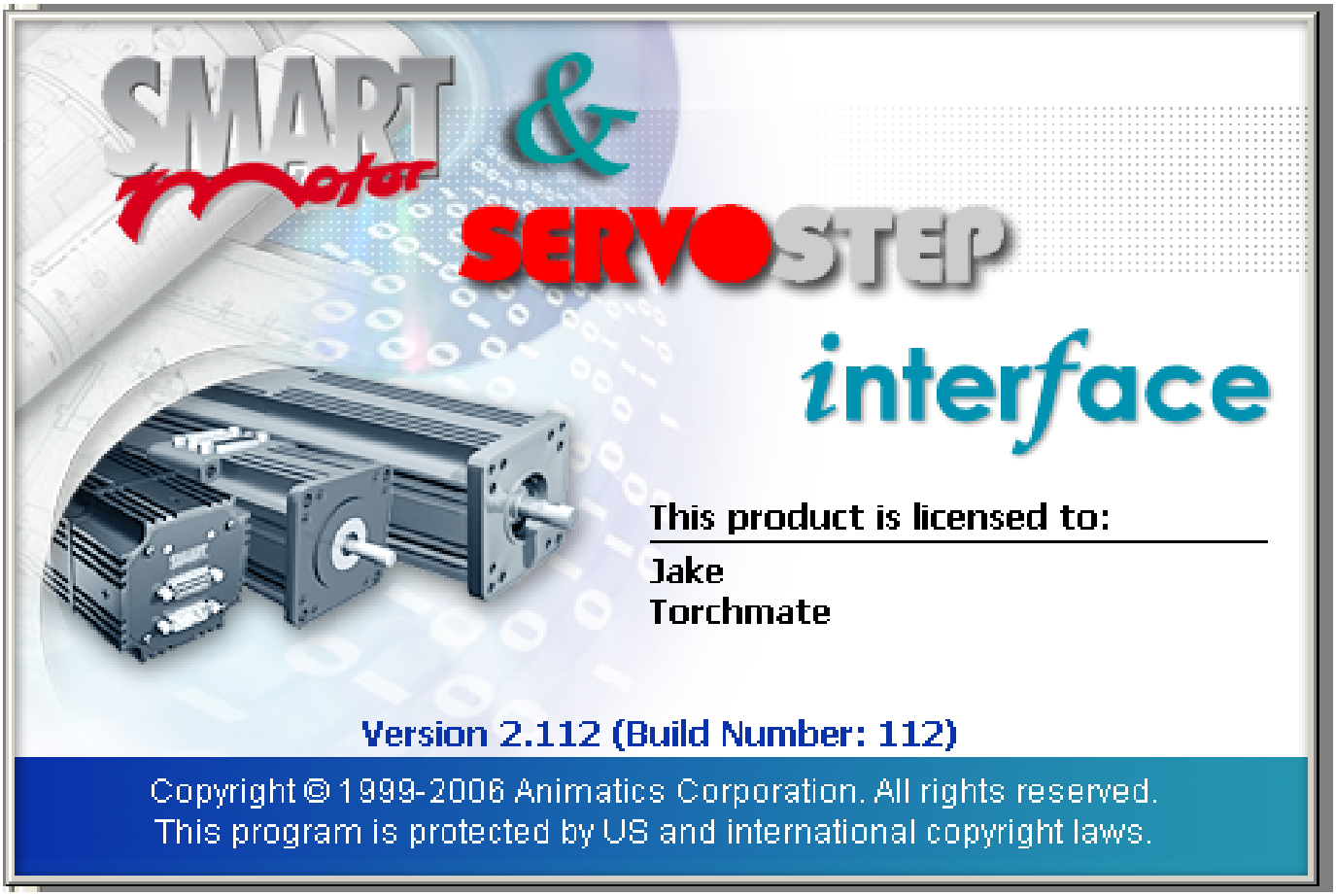
In the System Properties window select Hardware then select Device Manager.

The Device Manager shows you all the hardware that is installed on your computer.

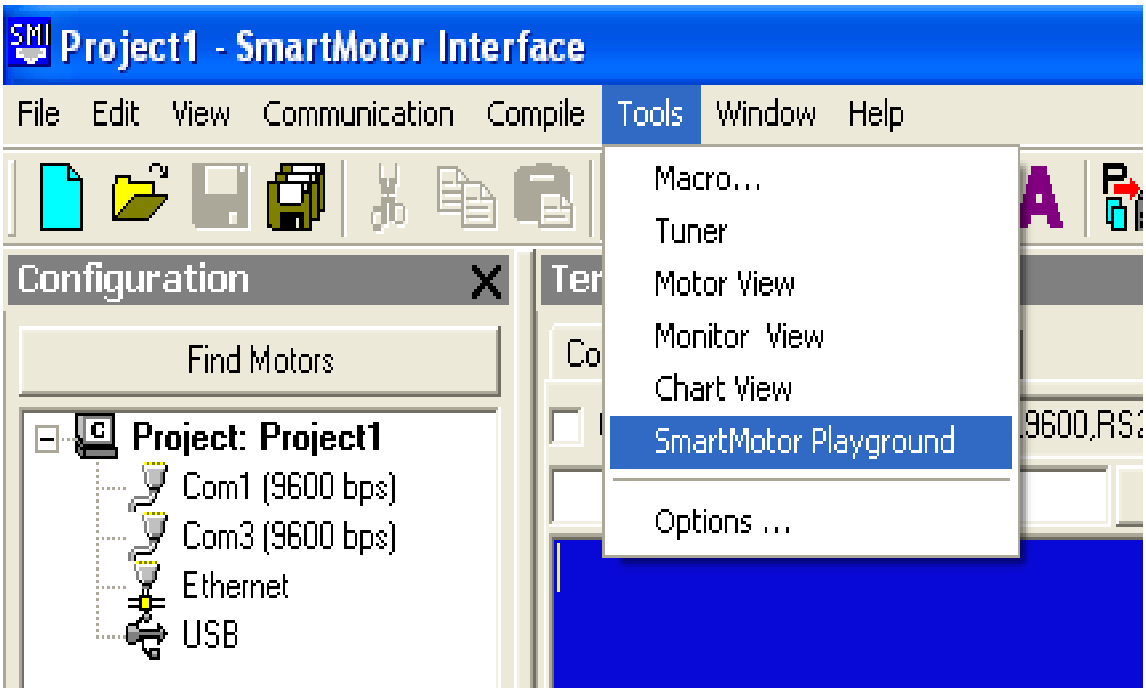


Usually most computers will default your 9 pin port to Communications Port (Com1), but there are some that will define your 9 pin port to another communications port. The reason for checking which com port your computer defines in the Device manager is to ensure that your SMI software communicates with your AVHC motor.

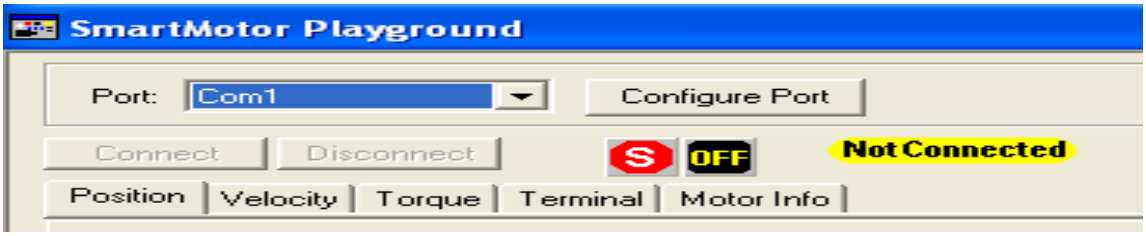
Close out of your Device manager and open the SMI software. “Make sure that your Height Control Box is powered on!”



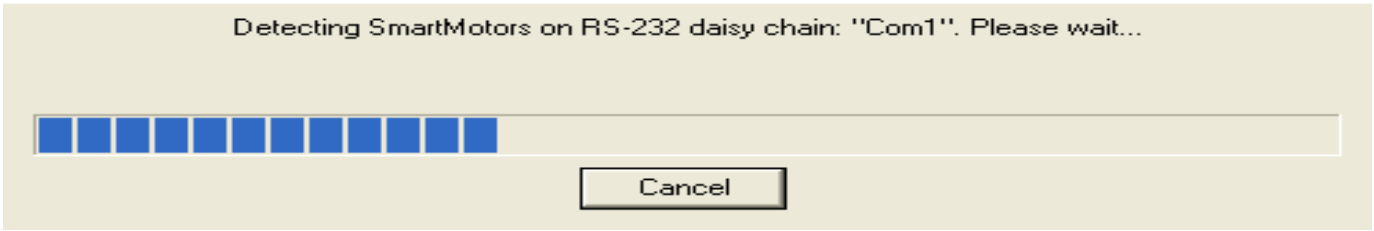
Once the software is opened select Tools-Smart Motor Playground.



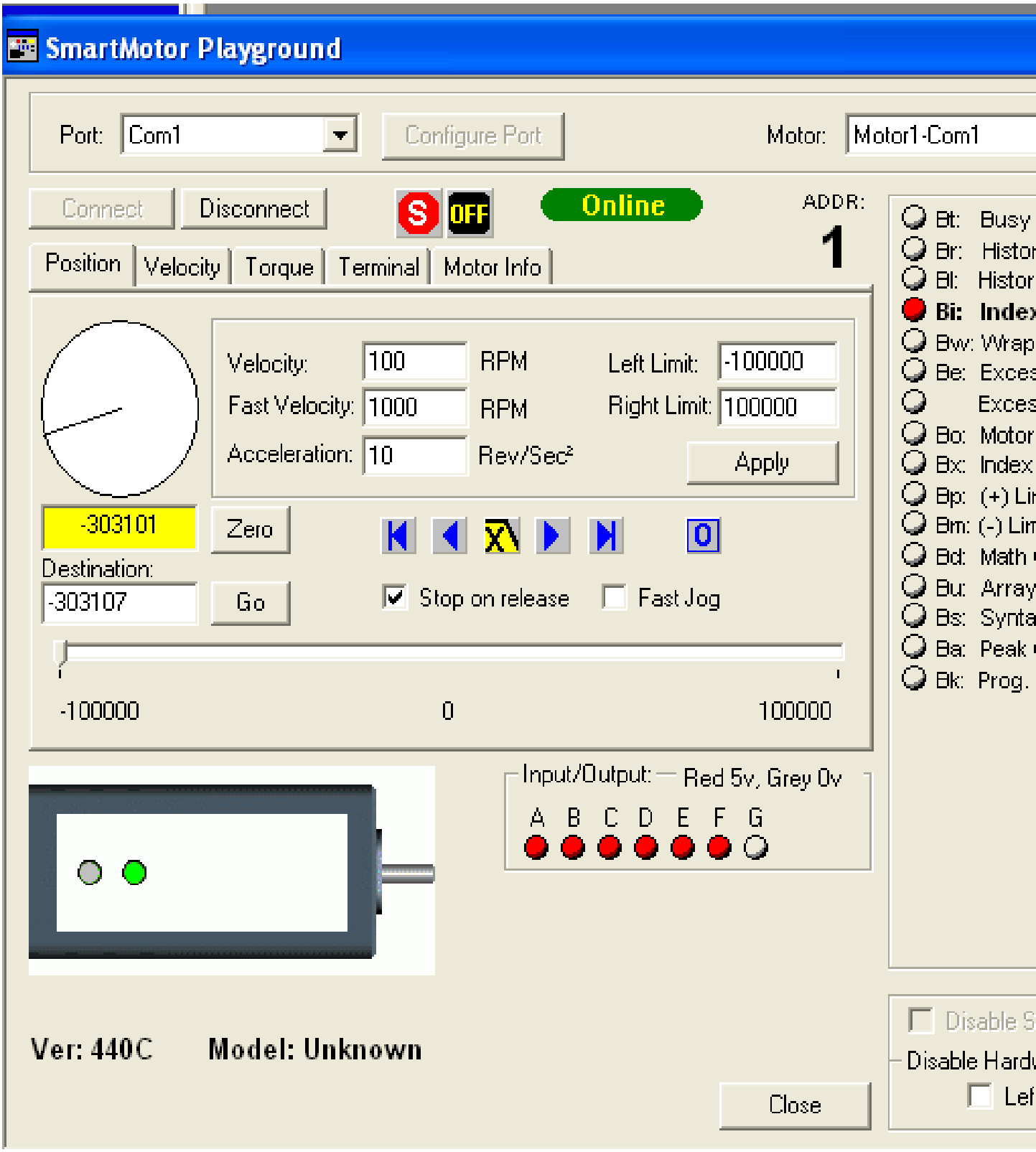
Once the Smart Motor Playground is open you'll need to select the appropriate Com Port you checked previously when you where in the Device Manager Window.



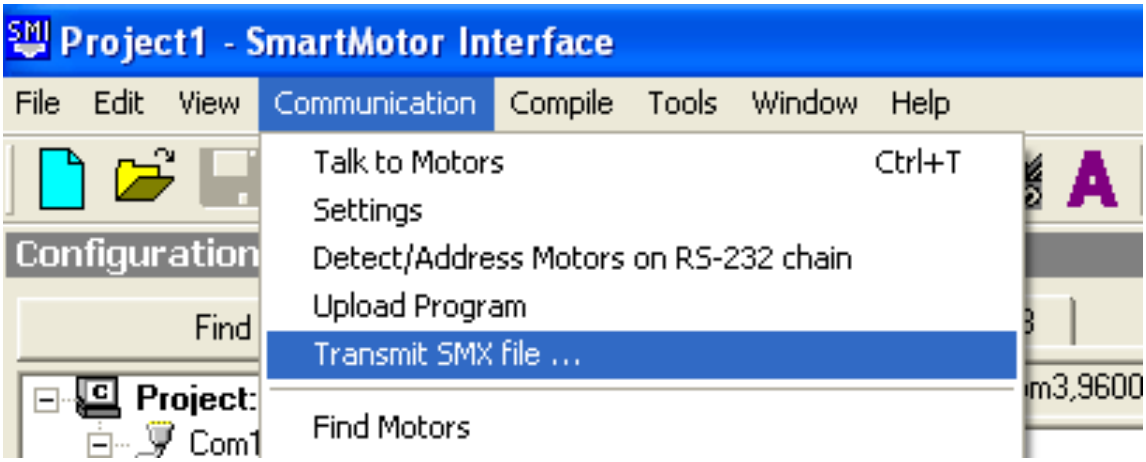
Once you have selected the appropriate Com Port click on Detect Motors.



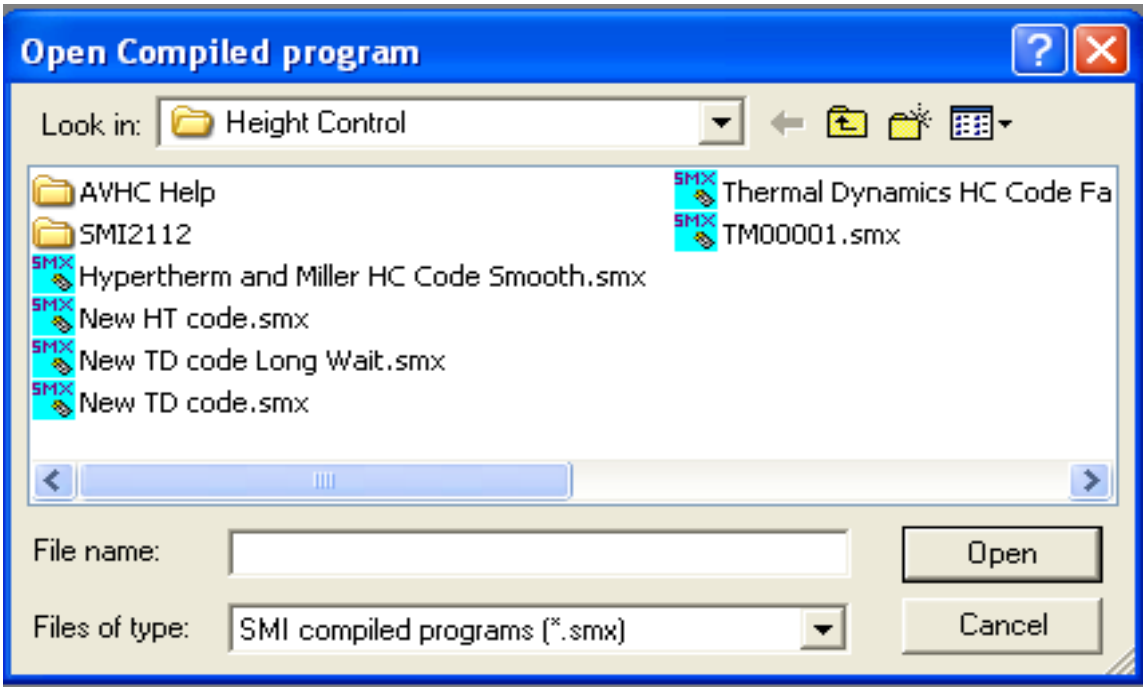
The software will begin searching for your AVHC motor. When the link between the software and the motor is successful you will be notified on your screen as being online.


SmartMotor Playground
Port:
Com1
Configure Port
Motor:
Motor1-Com1
Connect
Disconnect
S
OFF
Online
ADDR:
1
Position
Velocity
Torque
Terminal
Motor Info
Velocity:
100
RPM
Fast Velocity:
1000
RPM
Acceleration:
10
Rev/Sec²
Left Limit:
-100000
Right Limit:
100000
Apply
-303101
Zero
Destination:
-303107
Go
Stop on release
Fast Jog
-100000
0
100000
Input/Output:
Red 5v, Grey 0v
A B C D E F G
Bt: Busy
Br: Histor
Bl: Histor
Bi: Index
Bw: Wrap
Be: Exces
Exces
Bo: Motor
Bx: Index
Bp: (+) Li
Bm: (-) Lim
Bd: Math
Bu: Array
Bs: Synta
Ba: Peak
Bk: Prog.
Disable S
Disable Hardw
Lef
Ver: 440C
Model: Unknown
Close

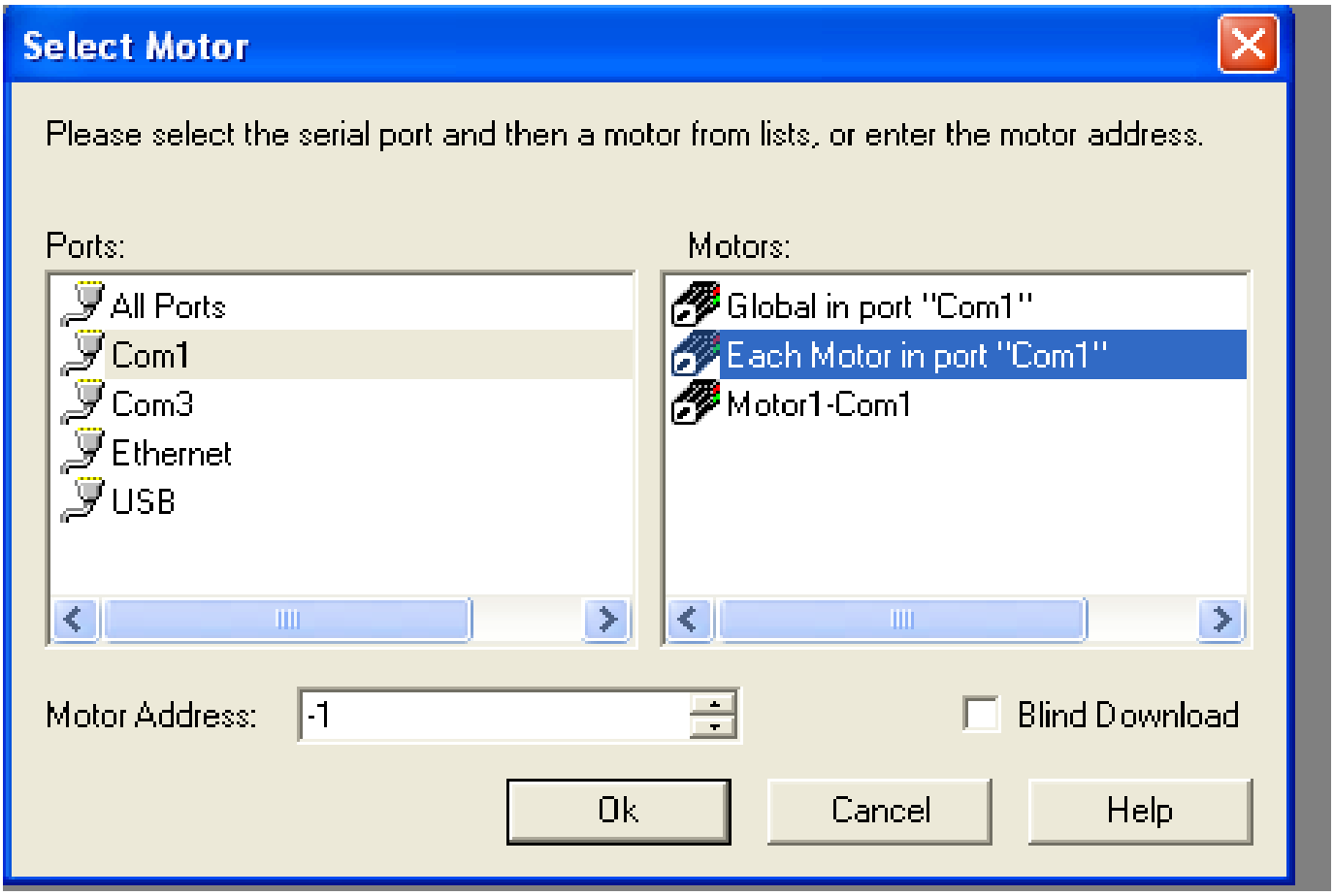
Once the motor is online you will need to select close at the bottom of the window to get out of the Smart Motor Playground. Select Communications-Transmit SMX file.



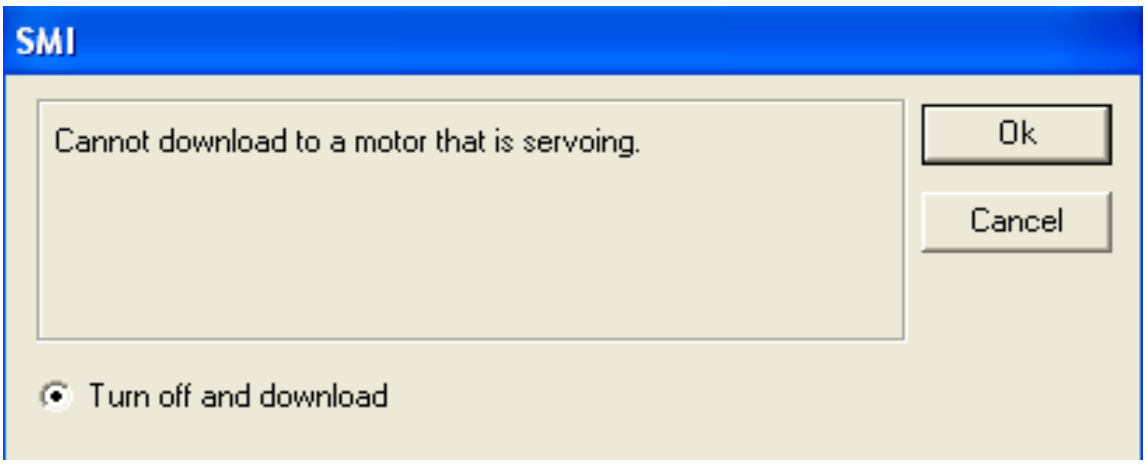
Select Communications-Transmit SMX file. There is a browse window that will appear prompting you for SMX file for your motor.



Choose the appropriate program that pertains to your plasma cutter. “HT stands for Hypertherm” “TD stands for Thermal Dynamics.” In this case for myself I own a Thermal Dynamics cutter so I will be choosing the New TD Code.smx. Once the file is selected click on Open. The next window that will appear will be the options for sending the height control program for the motor.



Select the Com Port that your AVHC Smart Motor is connected to just like when you were in the Smart Motor Playground earlier. For the box on the right you want to select the option Each Motor in port "Com?." Once selected go ahead and select OK. The next SMI screen that will appear will be an error window saying that the Program cannot download to a motor that is currently powered on. Disregard the error and select OK.



The new program is then uploaded to the motor.

Once the program is finished close out of the SMI software. Power cycle the Height Control Box. The AVHC motor should have a green led light lit indicating a ready state. In order to check the Height Control motor for proper functionality jump the Start Input Connector on the back of the AVHC box. This will trigger the on command to tell the Lifter Station to come down, and sense the material.