

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.

My Lom	Open
🕥 My Netw	Explore
1	Search
	Manage
Control Pa	🕌 Scan with AVG
💽 Set Progr	Map Network Drive
Seraults 🔍	
Rinters a	Disconnect Network Drive
	Show on Desktop
	Rename
Help and !	
Search	Properties
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In the System Properties window select Hardware then select Device Manager.

System Proper	ties			? 🔀			
System Re:	System Restore Automa <u>tic Updates</u>						
General	Compu	uter Name	Hardware	Advanced			
Device Mana The on pro	Device Manager Image: The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.						
			Device Ma	anager			

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

🔜 Device Manager	
File Action View Help	
 JAKE3 ⊕ Satteries ⊕ Somputer ⊕ Somputer	
 Human Incertace Devices IDE ATA/ATAPI controllers 	
Communications Port (COM1) ECP Printer Port (LPT1) Intel(R) Active Management Technology - SOL (COM3) Processors COM3 COM3 Processors SCSI and RAID controllers Sound, video and game controllers	
Environmetrices	

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!"



🕮 Project1 - SmartMotor Interf	face		
File Edit View Communication Co	mpile	Tools Window Help	
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Configuration 🗙	Ter	Motor View	
Find Motors	Co	Monitor View Chart View	
🖃 🛄 Project: Project1		SmartMotor Playground	.9600,RS2
- 🦉 Com1 (9600 bps) - 🍠 Com3 (9600 bps)		Options	
Ethernet			

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.

-	SmartMotor Playground
	Port: Com1 Configure Port
	Connect Disconnect S OFF Not Connected
	Position Velocity Torque Terminal Motor Info

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 P	layground				
Port: Com1		ionfigure Port	Mot	or: Ma	ptor1-Com1
Connect D Position Velocit	Visconnect S y Torque Terminal	DFF 🛛 🕌	Online -	addr: 1	Bt: Busy Br: Histor
-303101 Destination: -303107	Velocity: 100 Fast Velocity: 1000 Acceleration: 10 Zero K Go	RPM RPM Rev/Sec ²	Left Limit: -100000 Right Limit: 100000 Apply		 Bi: Index Bv: Wrap Be: Excess Bo: Motor Bo: Motor Bx: Index Bp: (+) Lir Br: (-) Lir Bd: Mathree Bu: Array Bs: Synta
-100000		0	1000	00	Ba: Peak Bk: Prog.
••		Input/ A B ● ●	Output: — Red 5v, Grey C D E F G	νΟν]	
Ver: 440C	Model: Unknown	l	Clos	:e	Disable S Disable Hardu

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.

Project1 - SmartMotor Interface								
File	Edit	View	Communication	Compile	Tools	Window	Help	
) 🗁	-	Talk to Motors Settings	5			Ctrl+T	A
	nıyur	Find	Detect/Address Motors on RS-232 chain Upload Program			3		
	P È - Ĵ	roject: 7 Com1	Find Motors	nie				m3,9600

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

Open Compiled program	? 🔀
Look in: 🗀 Height Control	
AVHC Help SMI2112 Hypertherm and Miller HC Code Smooth.smx New HT code.smx New TD code Long Wait.smx New TD code Long Wait.smx	Thermal Dynamics HC Code Fa
	>
File name:	Open
Files of type: SMI compiled programs (*.smx)	Cancel

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 Motor	
Please select the serial port and then a mot	or from lists, or enter the motor address.
Ports:	Motors:
ZAII Ports	Global in port "Com1"
Scom1	Each Motor in port "Com1"
🖉 Com3	BMotor1-Com1
Z Ethernet	
_ y USB	
	<
Motor Address: -1	🛨 📃 📃 Blind Download
01	
UK	

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.

SMI	
Cannot download to a motor that is servoing.	Ok Cancel
Turn off and download	

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.