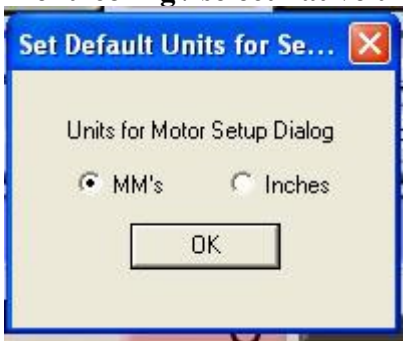
PD/250 Cnc Retrofit Quick Start Guide

MECHANICAL ASSEMBLY
Mechanical assembly instructions PD/230:
https://www.youtube.com/watch?v=1140UK11ibY
Mechanical assembly instructions PD/250:
https://www.youtube.com/watch?v=Xd4HGjnid5I
Assembly on PD/230 and PD/250 is very similar.
Some parts are better explained on one video, some other parts on the other, so please watch both.

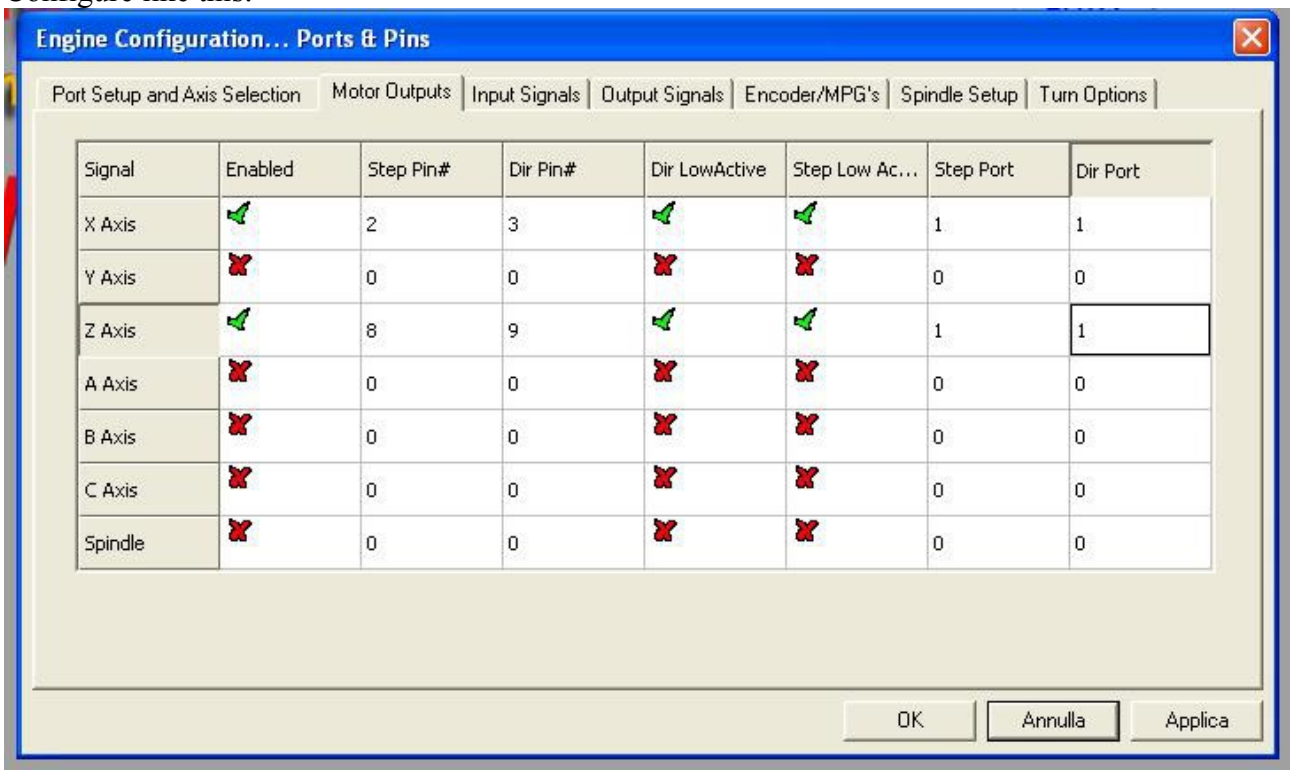
COBRA ELECTRONIC BOARD
Please download cobra electronic board user's manual here ENG, ITA and software:
http://www.ideegeniali.it/shop/attachment.php?id_attachment=76
http://www.ideegeniali.it/shop/attachment.php?id_attachment=77
http://www.ideegeniali.it/shop/attachment.php?id_attachment=78
On page 13 or ITA manual see stepper motor wiring scheme.
Please also watch videotutorial on motor wiring:
https://www.youtube.com/watch?v=epqAnQL48m4&t=2s
and testing:
https://www.youtube.com/watch?v=PWCzl0r6Uko

MACH3 SOFTWARE CONFIGURATION
Menu config / select native units



Please choose mm.

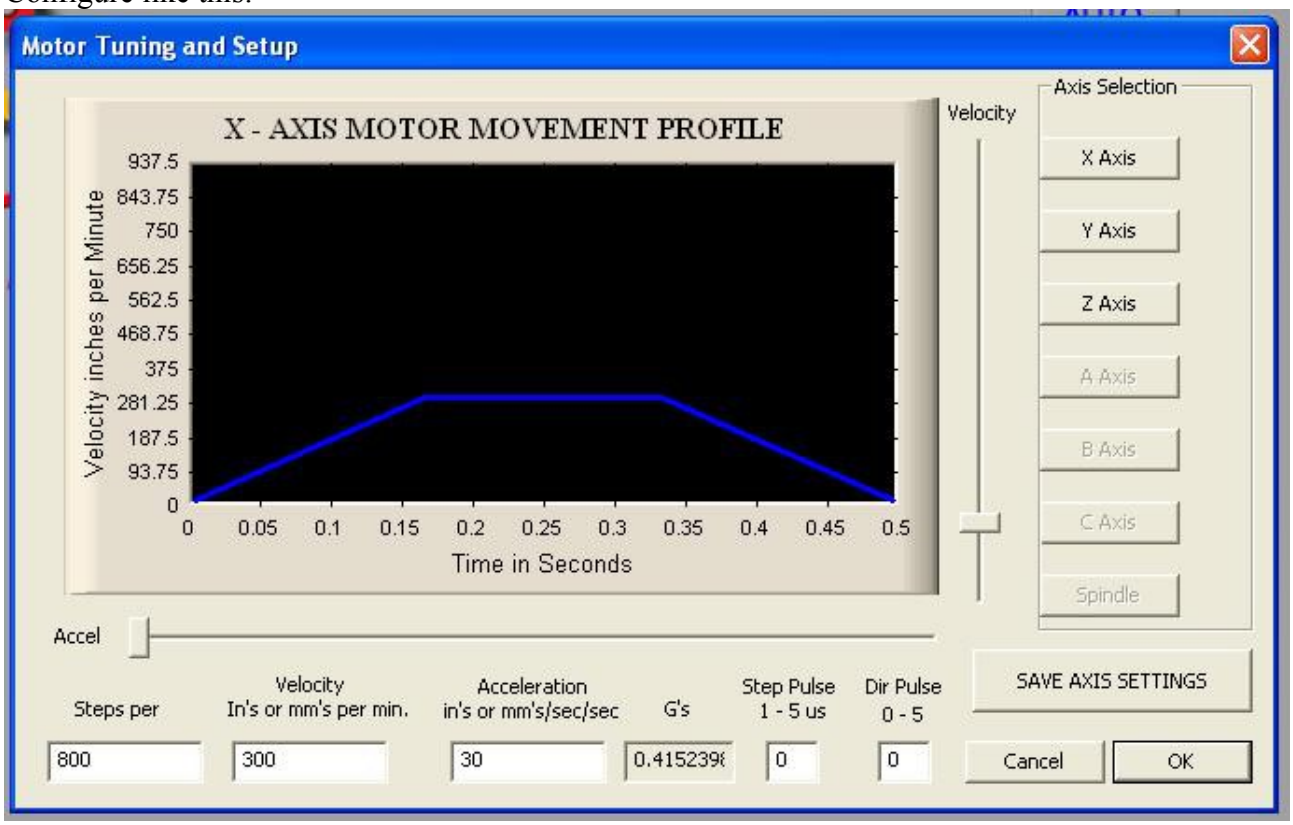
Menu config / ports and pins / motor output
Configure like this:



Signal	Enabled	Step Pin#	Dir Pin#	Dir LowActive	Step Low Ac...	Step Port	Dir Port
X Axis	✓	2	3	✓	✓	1	1
Y Axis	✗	0	0	✗	✗	0	0
Z Axis	✓	8	9	✓	✓	1	1
A Axis	✗	0	0	✗	✗	0	0
B Axis	✗	0	0	✗	✗	0	0
C Axis	✗	0	0	✗	✗	0	0
Spindle	✗	0	0	✗	✗	0	0

Then check if movement reversed:
Right arrow should move Z axis to right, left arrow to left.
If reversed, change "DirLowActive" from V to X for Z axis.
Up arrow should move tool against workpiece, Down arrow should move tool away from workpiece.
If reversed, change "DirLowActive" from V to X for X axis.

Menu config / motor tuning
Configure like this:



This dialog box works like this:
Click on button "X Axis"
Configure parameters for x axis (click on the textfields and insert numbers from keyboard):
  Steps per unit: 800 (*)
  Velocity mm/min: 300
  Acceleration mm/sec/sec: 30
  Step pulse: 0
  Dir pulse : 0
Click on button "SAXE AXIS SETTINGS" (or it won't save them!)
Click on button "Z Axis"
Configure parameters for z axis:
  Steps per unit: 800
  Velocity mm/min: 300
  Acceleration mm/sec/sec: 30
  Step pulse: 0
  Dir pulse : 0
Click on button "SAVE AXIS SETTINGS"
Click on button "OK"

Please note: (*) X axis is configured for mm of radius. If you prefer working with diameters instead of radius, please change 800 step per unit to 400 step per unit for X axis.