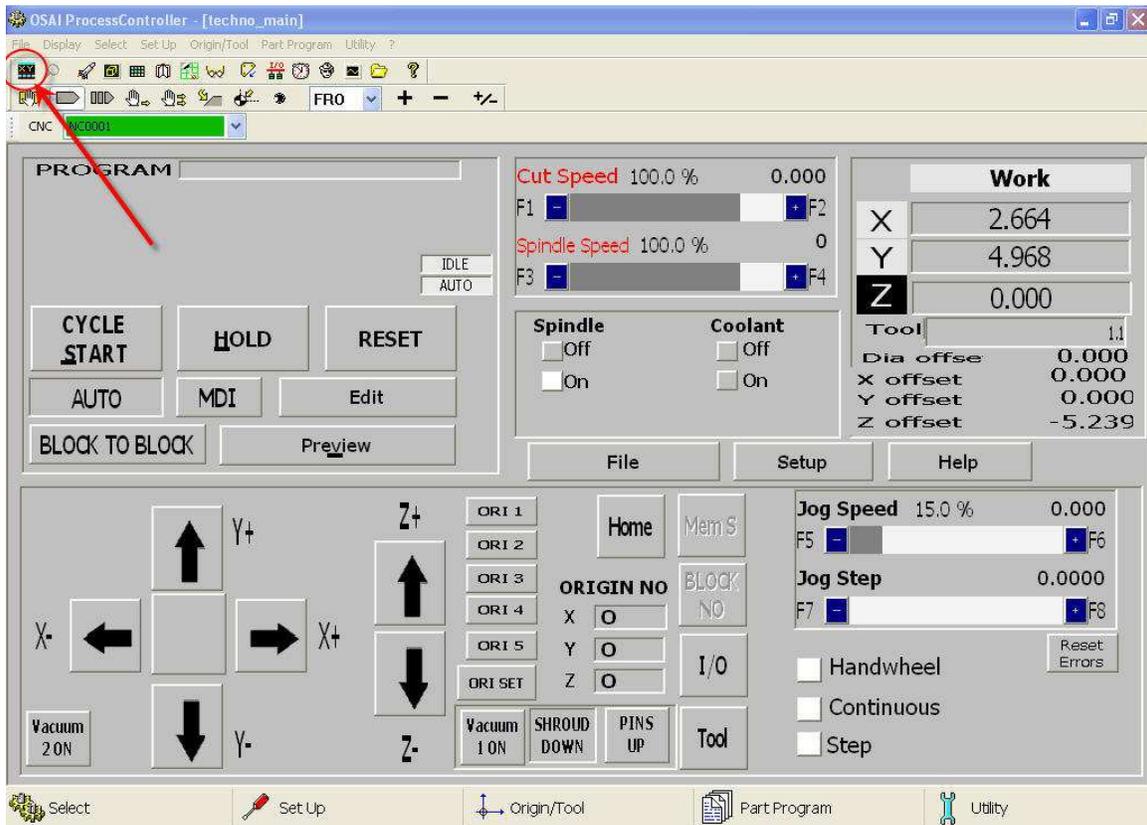# How To Define Axis Settings on HDS Machines

This is a quick, step-by-step tutorial for how to change the axis parameters. This should NOT be done without the guidance of a Techno technician.

*Note: The values that are pictured are directly from a machine here at Techno. They will apply for the **X and Y axis settings only**. The Z axis will vary slightly.*

Click on the 'CNC Vision' icon to bring up the controller screen.

Note: To navigate through the menus in the controller screens: use F10 to scroll the highlight bar and then the corresponding function key to select what's highlighted.

Hit F4 to go to the top menu. Use F10 to move the highlight bar until it is on the bottom line, and then hit F9 to go to the 'Utility" menu.

Go to the 'AMP' menu.

Hit 'Select' to activate the current configuration.
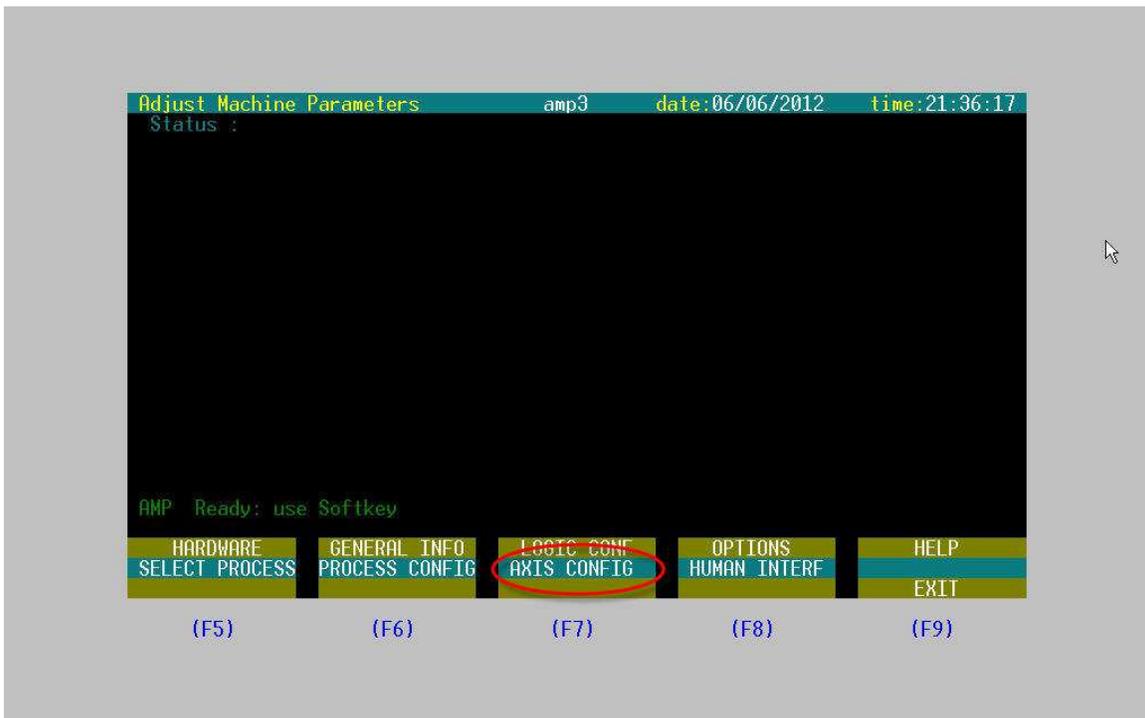
Select 'Axis Config'.
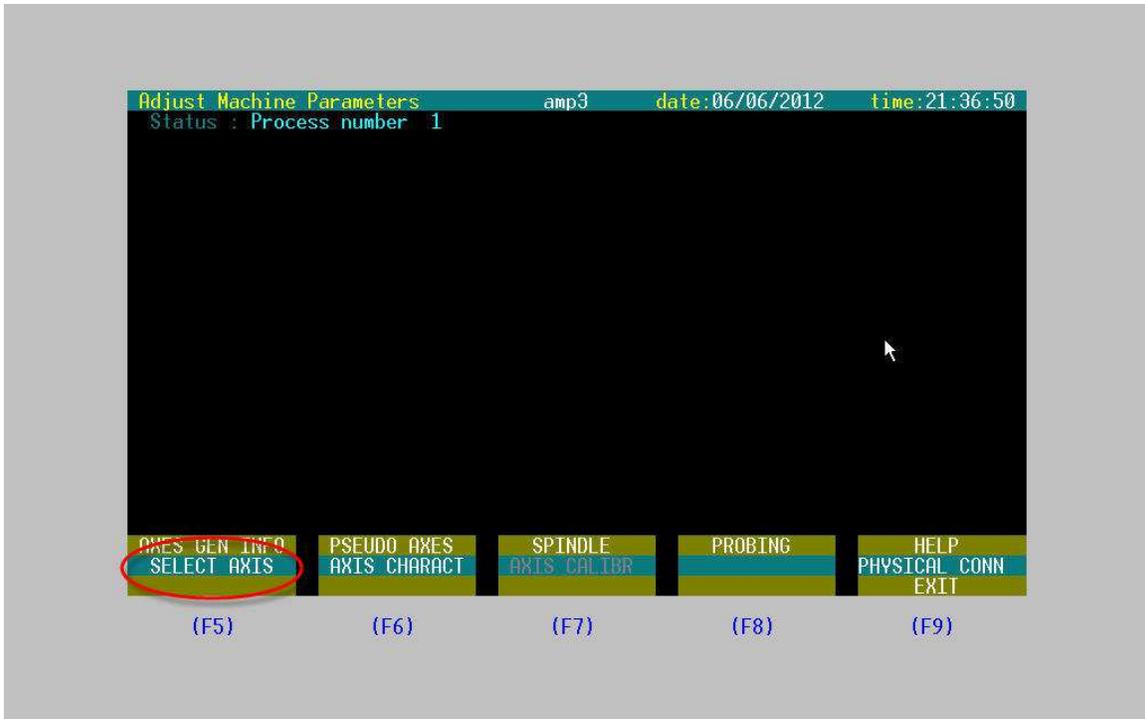
'Select Axis' to choose which axis' configuration we will look at.
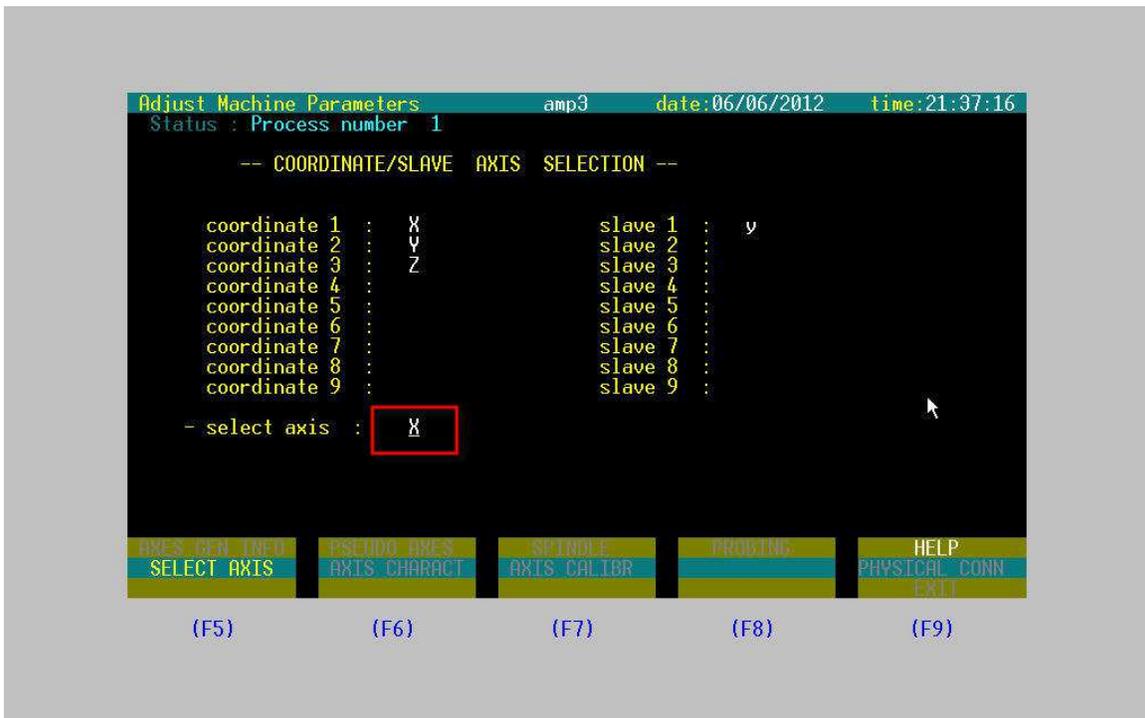
Type (in CAPS) the letter of the axis you wish to activate the settings for and then hit 'Enter' on the keyboard's number pad.

Now select 'Axis Charact' to see the settings for the selected axis.

Make sure your settings match these...
Note: Hit 'page down' on the keyboard to move on to the next pages.

```
Status : Process number  1
          Axis name  X    (*) measuring unit = inches
             -- COORDINATE  AXIS  CHARACTERIZATION --

 - rapid traverse feed     (*/min): 1500.00000
 - rapid acceleration    (*/s x s): 59.00000
 - manual feed             (*/min): 800.00000
 - manual acceleration   (*/s x s): 38.30000
 - electrical pitch   (pulses/rev): 40000
 - mechanical pitch            (*): 2.47369
 - rollover pitch              (*): 14.17323
 - rapid traverse voltage   (Volt): 8.500
 - maximum feed            (*/min): 1500.00000
 - home position feed      (*/min): 10.0000
 - null offset value           (*): 0.00000
 - home position value         (*): 0.00000
 - homing direction             : NEGATIVE
 - percent of VFF              (%): 85
 - upper software overtravel   (*): 49.60630
 - lower software overtravel   (*): -1.25740
                                                    page 2  of 4
```

AXES GEN INFO	PSEUDO AXES	SPINDLE	PROBING	HELP
SELECT AXIS	AXIS CHARACT	AXIS CALIBR		PHYSICAL CONN
				EXIT
(F5)	(F6)	(F7)	(F8)	(F9)

Page 2...

```
Status : Process number  1
          Axis name  X    (*) measuring unit = inches
             -- COORDINATE  AXIS  CHARACTERIZATION --

 - servo loop gain                    : 1.00
 - stand still servo loop gain        : 1.00
 - position error at stand still (*): 0.09843
 - position error with VFF       (*): 1.00000
 - position error without VFF    (*): 1.77000
 - in position band              (*): 0.01000
 - in position wait (time out)   (s): 1.500
 - in position window            (s): 0.050
 - rapid jerk             (*/s^3): 984.25000
 - working jerk           (*/s^3): 393.70000
 - rapid minimum ramp time  (msec): 0.00000
 - working minimum ramp time (msec): 0.00000
 - axis backlash                 (*): 0.00000
 - dead zone                     (*): 0.00000
                                                    page 3  of 4
```
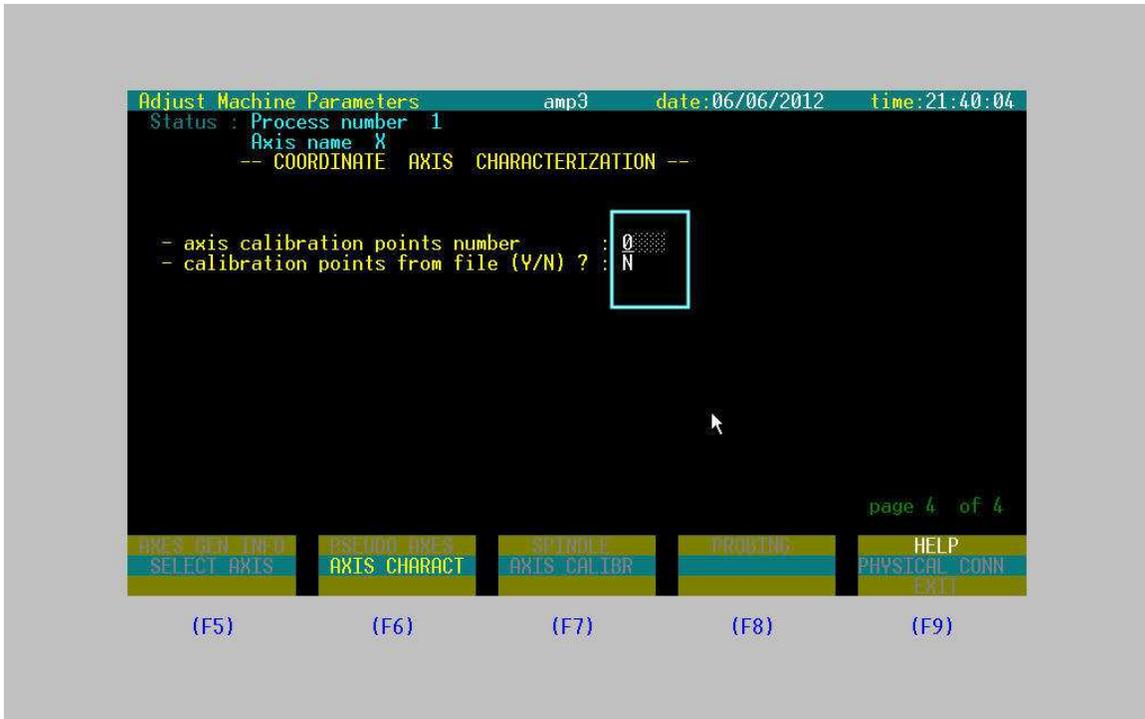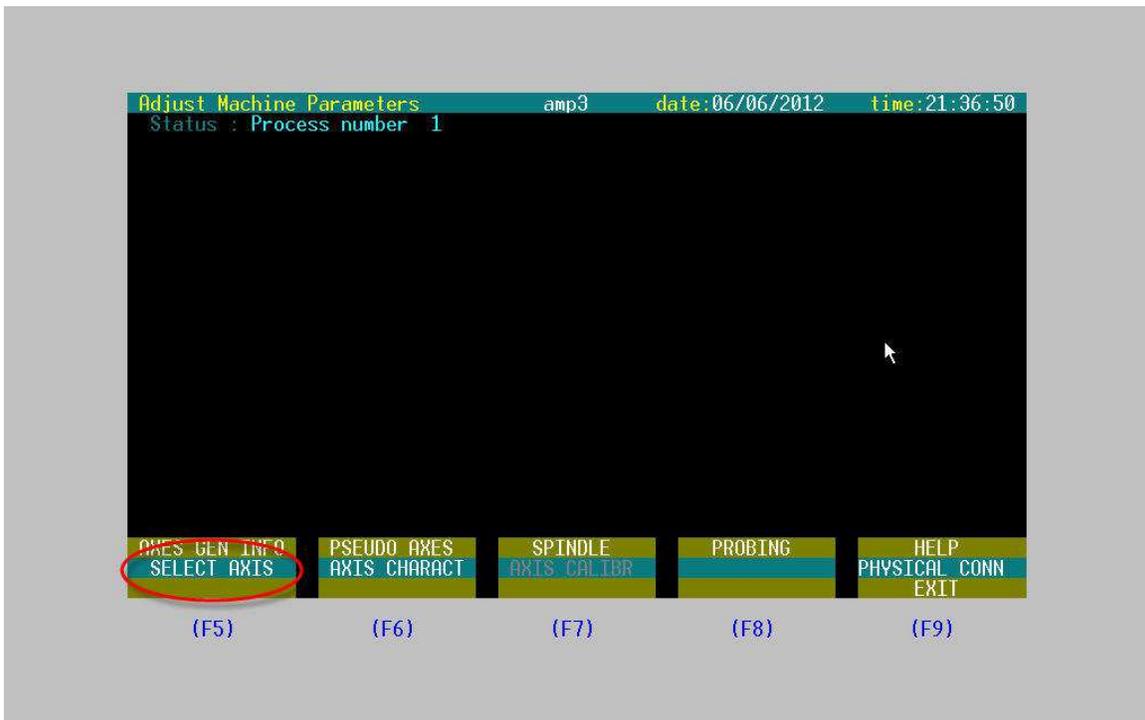
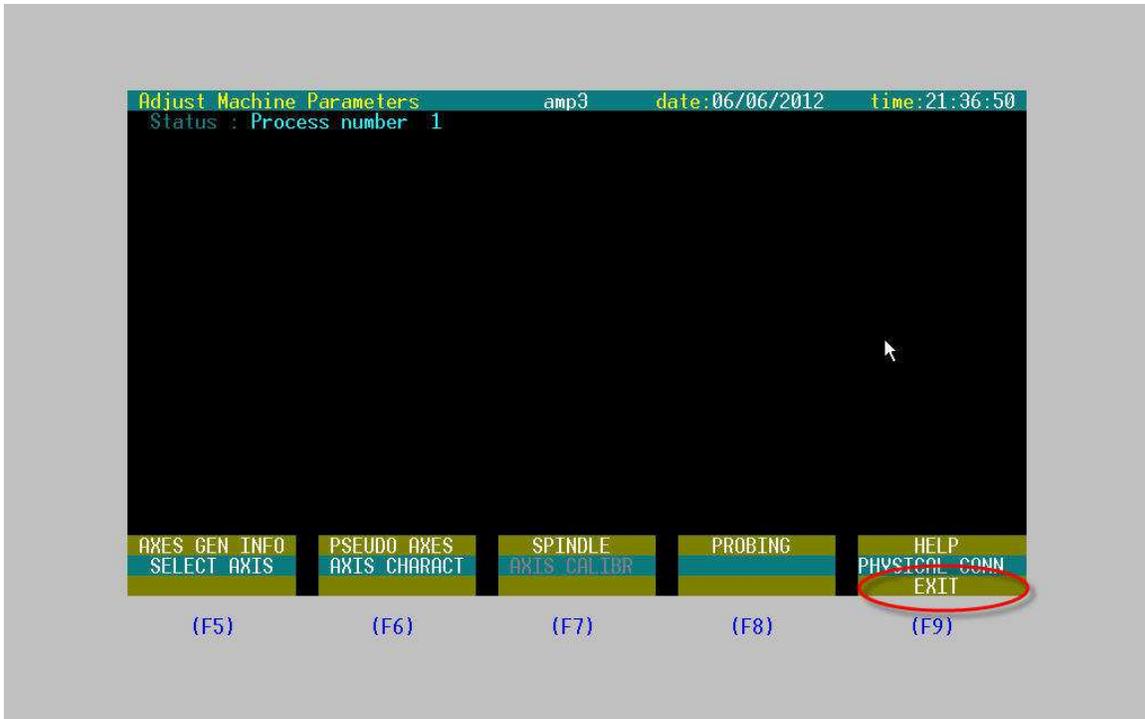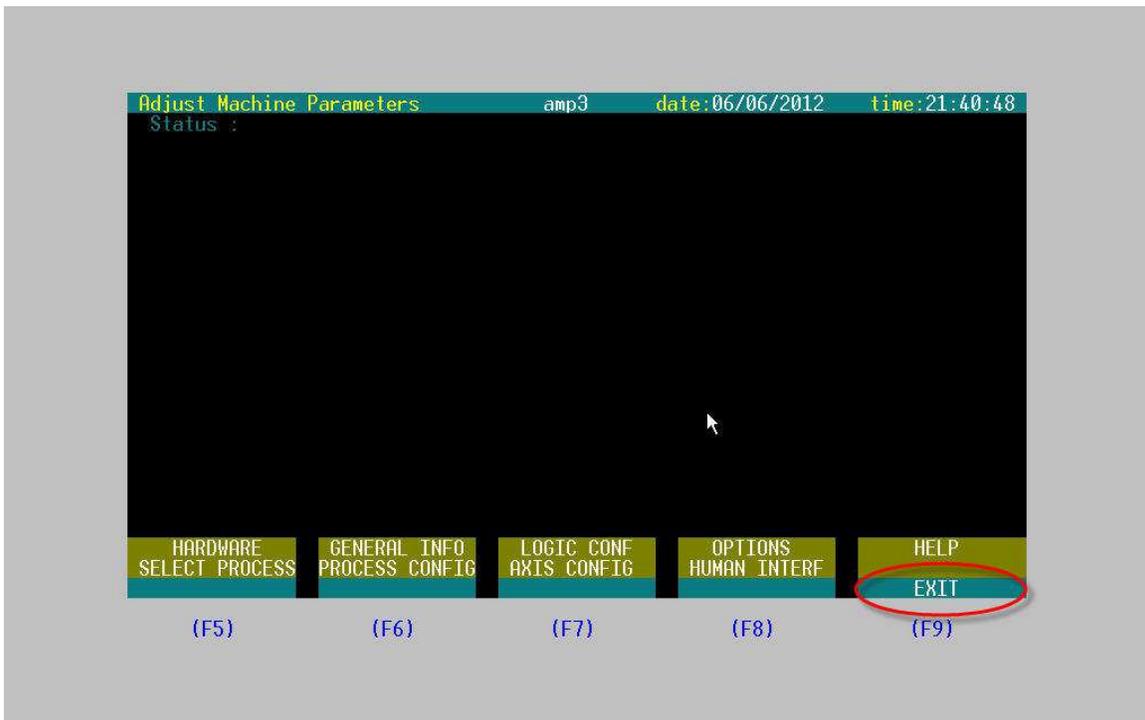| AXES GEN INFO	PSEUDO AXES	SPINDLE	PROBING	HELP
SELECT AXIS	AXIS CHARACT	AXIS CALIBR		PHYSICAL CONN
				EXIT
(F5)	(F6)	(F7)	(F8)	(F9)

Page 3...

When all 4 pages are checked, hit 'Enter' on the number pad.

Now go back into 'Select Axis', choose a different axis, and repeat the above steps for checking the settings.

When all of the settings are checked, 'Exit'.

'Exit' again...

When prompted to 'Translate New Parameters' type 'Y' and hit 'Enter".

'Exit' again...
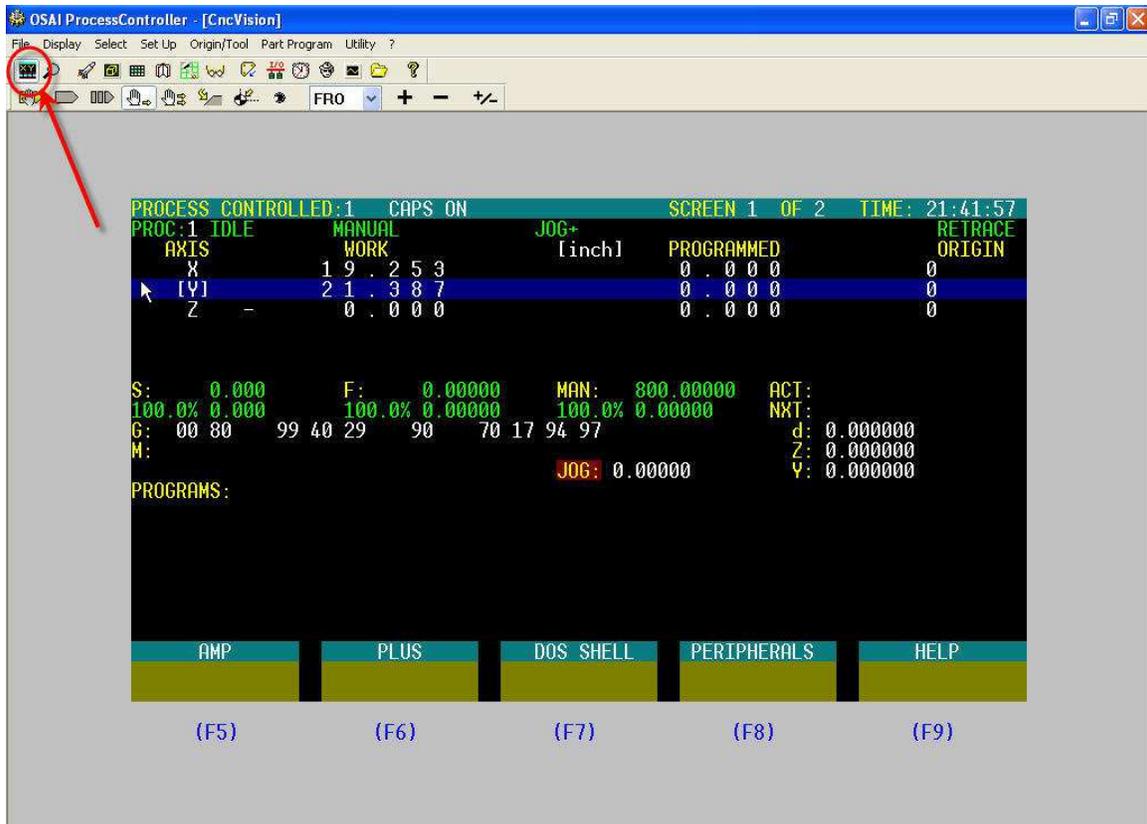
Click the 'CNC Vision' button to return to the main interface screen.

Reminder: You will have to re-start the controller for these changes to take effect.

IMPORTANT!! DO NOT exit out of the AMP settings without determining if you want to 'Translate New Parameters'. This could result in the controller settings not being compiled – which would mean that the machine WILL NOT run.
Even if you say 'N', that's fine. However, the changes you made will not be saved.