Testing the Axes of your Eclipse CMC.

Turn on the air compressor.

Connect air to machine. 80 psi on the left filter/regulator. 40 psi on the right regulator.

Plug in the machine.

Check the main breakers on the machine.

Turn the machine's power switch to the ON position.

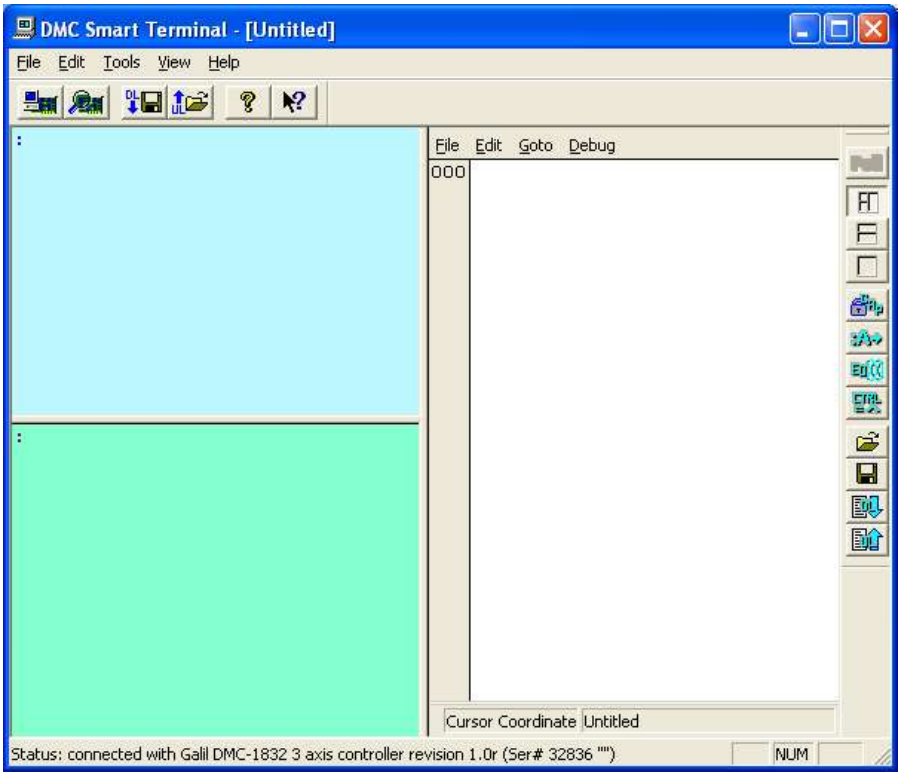
Turn the clamp switch ON. Do the clamps activate? If, YES, turn the clamps switch OFF. Proceed to testing each axis below. If NO, clamps are not working check outlet for power and start over.

Help is a phone call away. Check https://thecmcdoctor for support rates and the phone number.

Turn on the PC connected to the machine.

Find and start either Galil WSDK (Windows Servo Design Kit) or Galil SmartTerm.

In WDSK Open a terminal window. In SmartTerm the terminal window is open by default.



The lt blue area is used to send commands to the motion controller. The lt green area is use by the motion controller to respond to you. The white area is creating programs to send to the motion controller (you will not use this area).

Tip the cutting head back, aka open, like you are going to change a blade. Leave it open for all testing.

Remove the blade from the cutting head, if one is installed.

CAPS lock on the keyboard must be ON.

Testing the Z-Axis: every line is followed by the Enter Key ↩.

Note: There is a video illustrating this process here: https://www.youtube.com/watch?v=7nDcCTbsiUw

CB 2 ↩

SB 3 ↩

SH Z ↩

Check to verify that the cutting head will not rotate. Push on it with a screw driver or pencil. DO NOT grab it with your hand.

If locked proceed…

PRZ=4000 ↩

BG Z ↩ Wait for the move to complete.

The foot housing will rotate CCW.

BG Z ↩ Wait for the move to complete.

The foot housing will rotate CCW again.

FE Z ↩

BG Z ↩ Wait for the move to complete.

The foot housing will rotate CW until the home Z-Home switch is tripped.

To shut off the Z-axis…

MO Z ↩

CB 3 ↩

Testing the X-Axis: every line is followed by the Enter Key ↩.

CB 2 ↩

SB 3 ↩

SH X ↩

Check to verify that arm will not move right of left.

If locked proceed…

PRX=4000 ↩

BG X ↩ Wait for the move to complete.

Arm will move to the right.

BG X ↩ Wait for the move to complete.

Arm will move to the right again.

FE X ↩

BG X ↩ Wait for the move to complete.

Arm will move to the left until the X-Home switch is tripped.

To shut off the X-axis…

MO X ↩

CB 3 ↩

Testing the Y-Axis: every line is followed by the Enter Key ↩.

CB 2 ↩

SB 3 ↩

SH Y ↩

SB 6 ↩

Check to verify that the Y-carriage will not move up the arm.

If locked proceed…

PRY=4000 ↩

BG Y ↩ Wait for the move to complete.

The Y-carriage will move up the arm.

BG Y ↩ Wait for the move to complete.

The Y-carriage will move up the arm again.

FE Y ↩

BG Y ↩ Wait for the move to complete.

The Y-carriage move down until the Y-Home switch is tripped.

To shut off the Y-axis…

CB 6 ↩

MO Y ↩

CB 3 ↩

To shut down the machine….

MO ↩

CB 3 ↩

Turn the Power Switch to the OFF position.

Exit the WSDK or SmartTerm software.

Shut down the PC.

All of the functions above must work for the machine work using the Eclipse Create & Cut software.

To simulate a full reset of the Eclipse, similar to how the Cut software initializes the machine….

Turn the machine on and start the WDSK or SmartTerm following the steps at the top of page 1.

In the terminal type the following sequence of commands….

CB 2 ↩

SB 3 ↩

SH XY ↩

SB 6 ↩

PR 4000,4000 ↩

BG XY ↩ Wait for the move to complete.

FE XY ↩

BG XY ↩ Wait for the move to complete.

SH Z ↩

PRZ=4000 ↩

BG Z ↩ Wait for the move to complete.

SPZ=500 ↩

FE Z ↩

BG Z ↩ Wait for the move to complete.

SPZ=8000 ↩

DP 0,0,0 ↩

This sequence of commands will emulate the initialization procedure for the Eclipse CUT software. This process will not put the foot housing straight up and down. The foot housing will be directly on the Z-Axis home switch. An additional move is needed to get it straight up and down. Do to this you need to look up the hook correction in the Eclipse Cut software BEFORE starting this process. Pretend your hook correction is -500. After DP 0,0,0 above type the following.

PRZ=-500 ↩ Use your machine's hook setting in place of -500 in this example.

BG Z ↩ Wait for the move to complete.

DP 0,0,0 ↩

That's it. Shut down the machine using the process described on the bottom of page 3.