Engineering

CNC Router - Gears

1. Secure the workpiece in the CNC using the wedge technique, or other suitable method

2. Ensure that the correct router bit is installed. 1/8" End Mill.

3. Load your program from the USB:
    a. Press the 'menu' button, then select '2. USB Files'
    b. Navigate to your file using the up/down arrow keys
    c. Select your file by pressing 'OK' (check mark will appear)
    d. Press '1' to load

menu

4. Home the router:
   a. Press the 'menu' button
   b. Select – '3. Operations'
   c. Choose – '1. Back to Reference Point'
   d. Choose – '1. All Home'
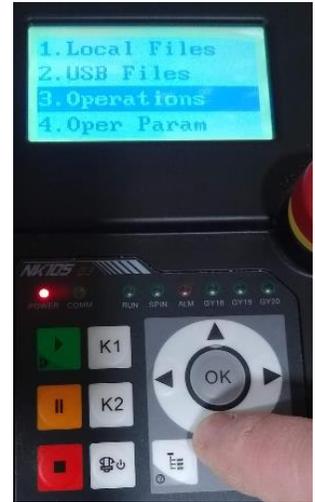
5. Zero X,Y

6. Set Z height for an 'air pass'
   a. Use the Z- and Z+ buttons to position the tool bit a safe distance above the work to run test run, or 'air pass'.
   b. Press Z=0 when satisfied this height will be OK
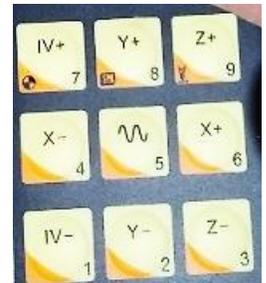
7. Switch off the router (switch on side of router) – '0'

**Have your teacher check your setup to this point BEFORE you run your 'Air Pass'!**

8. Press Start, or 'Play', and carefully observe the toolpath
   a. If as expected, proceed
   b. If unexpected, resolve before moving to the next step

9. Using the brass 'puck' and the auto detect Z height key combo, set Z zero to the 'machine's bed', or 'spoil board'.
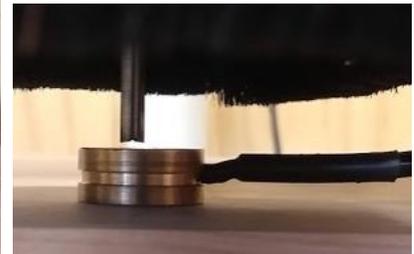
DO NOT PRESS 'Z=0' after using puck!

10. Switch the router back on – 'I'

11. Double check all steps (mentally walk through the steps again)
    a. Router was 'homed' and zeroed
    b. Z height set using brass 'puck' and auto height detect feature
    c. Material secured
    d. Air pass was observed and was successful
    e. Router is switched on

Have your teacher check your setup to this point BEFORE you run you run the router!

12. Turn on the dust collection unit (switch is on the unit's motor)

13. Start the machine – press 'play' – and monitor the process. Be ready with the emergency stop!

Press 'Emergency Stop' if needed!
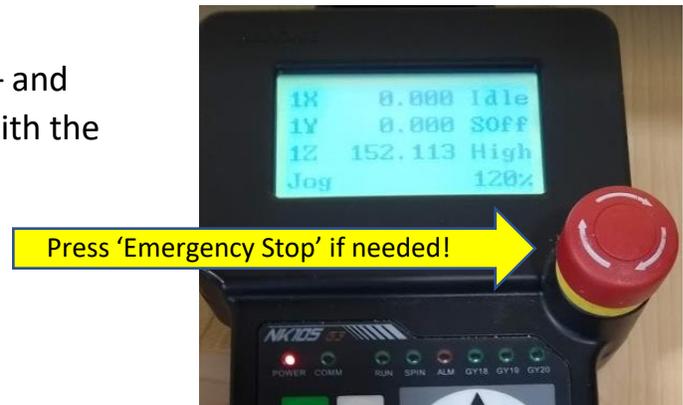
14. Upon completion of the program the router will return 'home' and then 'park' itself at the back left corner of the machine bed. You can interrupt this by pressing the stop button on the handset.