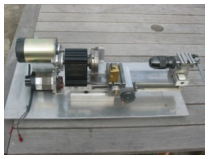
Below are a number of images showing my lathe CNC conversion. It is still "In-progress" and will be for a while. I'm still having a battle over what to do with the X-axis.

Initially I thought about just using a Sherline leadscrew and stepper mount to drive the Z axis. If I use the Sherline stepper mount and leadscrew it will be a pain to use the lathe in manual mode. I'm currently thinking of using a couple of timing pulleys and mounting the stepper to the left of the carriage. That way, by removing the timing belt I can use the lathe manually.



The lathe is mounted on to a 1/4" aluminium plate 24" x 10.5". The dimensions were as I found the plate in the cut-off bin at Alcan. The riser block beneath the lathe is 5.5" x 2.5" x 1"

The leadscrew I chose is from Knaell I only purchased the leadscrew with2 timing pulleys, not the whole threading kit. The QC tool post is from TS Engineering

I purchased mine from the
Little Machine Shop

The spindle motor is a 180V 400W DC motor that is used in an Asian 12x7 lathe. It's mount is fabricated out of aluminium. The tension adjustment is similar to that used on the mill.

The stepper motor is a Pacific Scientific Powermax II, rated at 3.3A, 62W. About 214 oz/in.

Rear view of the lathe and motors.

[illegible] ebay for around five bucks. The height is

Another view showing the back plate, and general setup.

Enclosure from the top. I'm not sure that the knob at the rear of the stepper is going to get

Another view from the top.

[illegible] Sherline Mill spare part. Also shown is