

SK40 Cabinet Modifications - Part 1

The SK40 is the Swinks Upgraded Version of a K40.

Since I am taking the current machine and upgrading it to a much larger process area the stock K40 Cabinet needs to be modified in a number of areas.

Photo 1 - Stock Cabinet



Remove the Main Door and Controls Door - take lots of photos of electrical connections, but leave all the wires connected to the power supply and only remove the black wire from the laser from the meter. Disconnect the control board and the power supply and all power points and earth point and push up in the corner of the controls side of the K40 box and cover up.

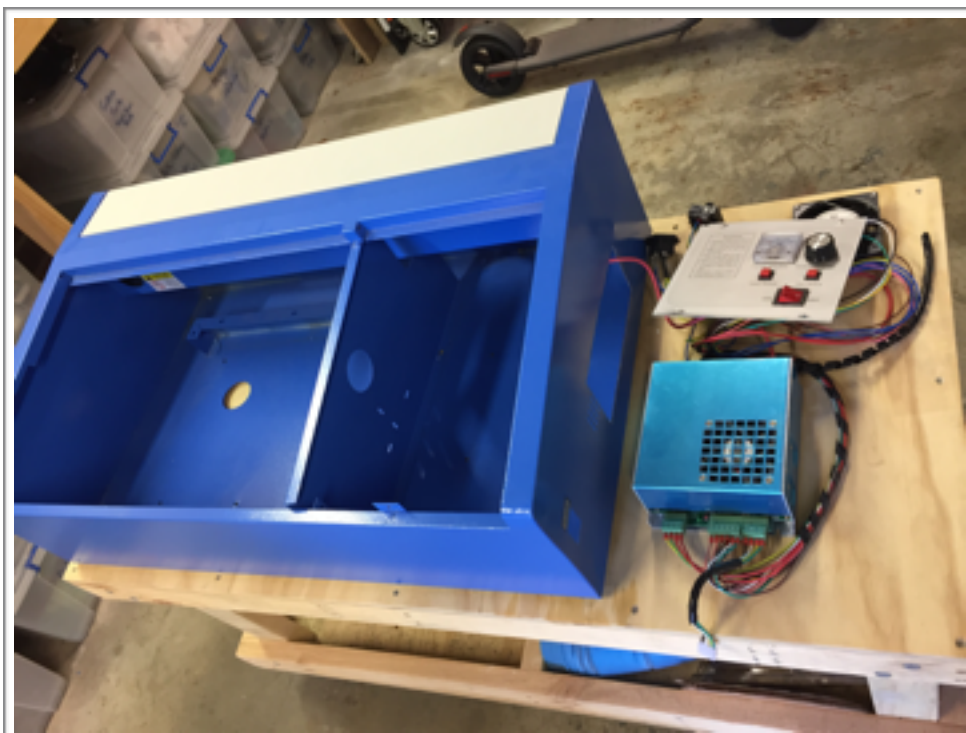
Then refer to SK40 Cabinet Modifications - Part 2 for where to cut the hole in the RHS of the K40 Cabinet and cut out the hole.

Photo 2 - Hole roughly cut out but did not capture the cable slot at this stage but cut it out at this stage.



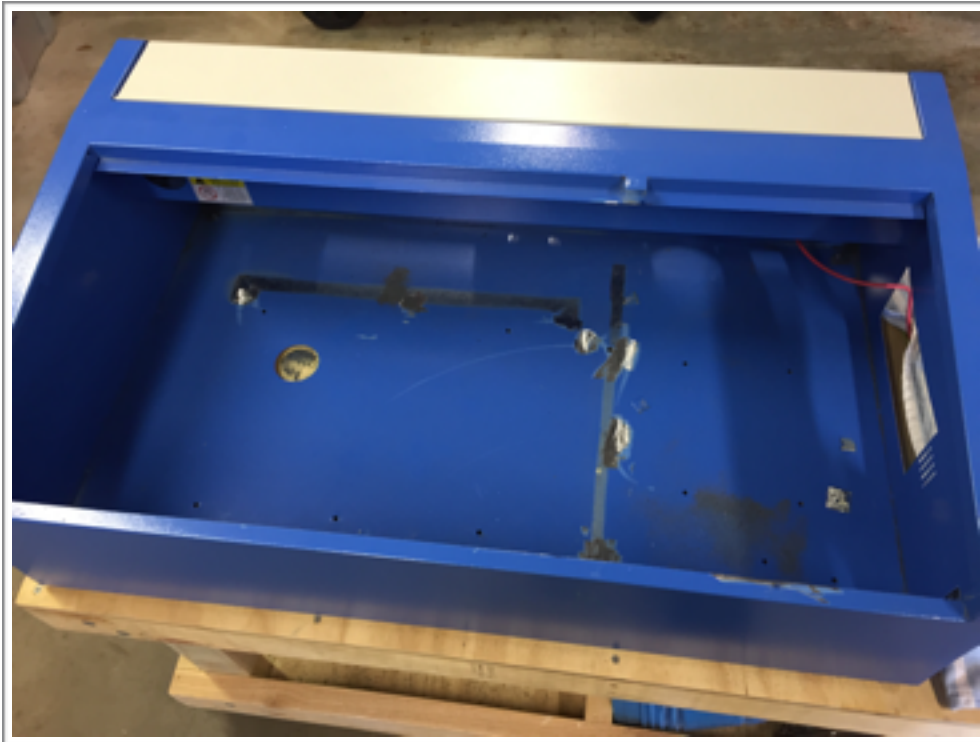
Now feed the power supply and power points etc out of the hole so the K40 can undergo other changes.

Photo 3 - Power Supply and control Panel still connected but outside the box.



Now remove the centre panel and some of the other supports.

Photo 4 - all unwanted gear removed.



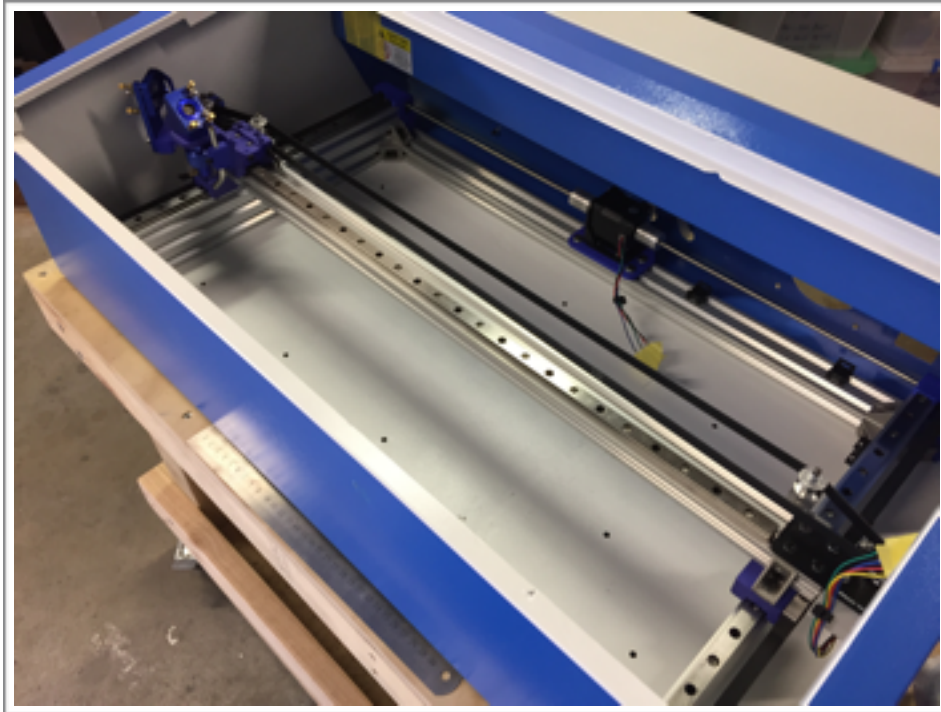
Since I am wanting a much larger viewing window as well as relocating the controls I opted to remove the right of centre pivot bracket as well.

Photo 5 - Remove 2 plates so a large door can go into place.



Then grind areas smooth and mask up and paint if you want to make it look cleaner and more stock.

Photo 6 - I had some undercoat and white paint so went this direction. You will notice my upgrade frame and gantry, this will be detailed more later on.



Since my design has Cloundray Mirrors on it and I am trying to get the maximum process area I had to chop a small section from the front left corner of the door recess.

Photo 7 - Section cut out so the second mirror has clearance.

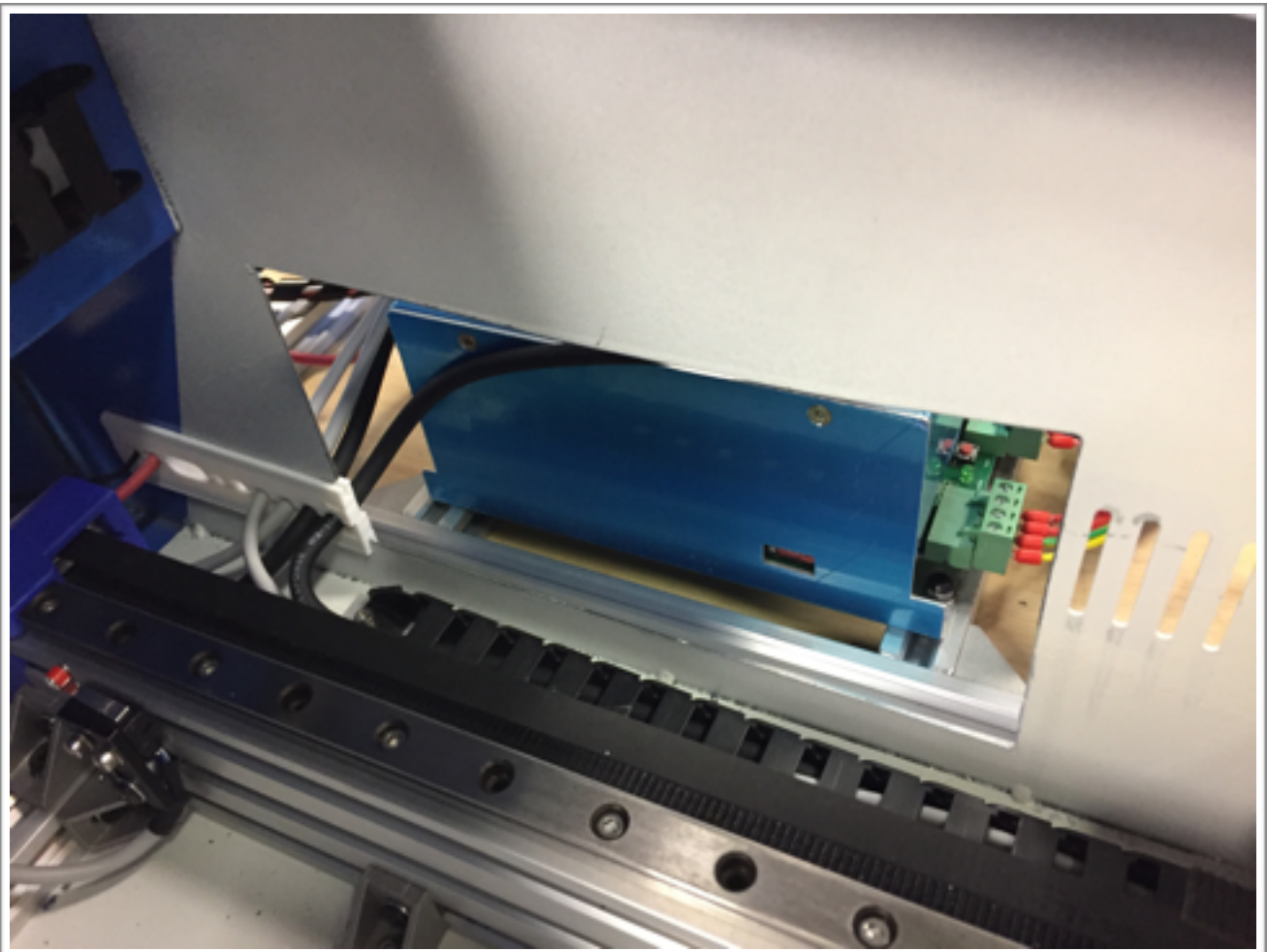


Lastly once the cabinet is done and parts go into place I designed a cable guide to protect the cables and it has 2 identical halves which slot over the cabinet and you push into the slot.

There are spots for the following:

- laser power
- laser ground
- cabinet / power ground
- 2 airlines in the longer slot
- laser dot
- X homing
- Y Homing
- X Motor
- Y Motor

Photo 8 - Cable Guide Detail



Refer to the other documents to see what I did for the control box and main cabinet lid.

<https://swinks.com.au/k40-upgrades>