

## Terminology

### Equipment

Gantry- the mechanicals, wheels and steel.

Electronics- control box, motors and devices.

Proximity switch- [prox switch, limit switch] - the X and Y axis of the ShopBot each have a switch and two targets. The switch is triggered when the target and the switch line up and the machine stops. The most common use of the prox switch is in the ShopBot homing routine. The homing routine {C3} is a program that uses the switch to keep up with your working zero.

Z zero plate- A device used as a switch in the z zero routine to locate a surface, reference it as zero (for up and down movement) and pull the cutter up to a safe parking height. [C2]

VFD - variable frequency drive, or spindle controller.

Indexer- turning device

Powerstick- allows extended work area on Shopbot Buddies.

Shopbot Buddy- small unit with moving table.

**Probe- 3D Digitizing Probe - You will see.**

ShopBot Gantry tool- large tool (no moving table).

Operation:

Chip load (or how you measure it) the size of the chip the tool is making. Correct chip load gives efficient machining and the best edge quality on your parts.

Tolerance build up is the cumulative error measured from a number of mechanical sources.

Hold down- any device or method being used to hold a part (or spoil material).

Vacuum hold down systems:

Plenum- The layer of your vacuum table with the grid of channels cut into it, typically the second layer on top of the base plate.

Spoil Board- any board under the material you are cutting that you might cut into (slightly).

Software:

CAD computer aided drawing or design.

CAM computer aided machining. Your CAM software looks at the drawing calculates tool offsets and generates an offset path for the cutter to follow. Your CAM software takes you toolpath and converts it into ShopBot code with a post processor

CAD/CAM software - Part Works. Saves designs and virtual toolpaths as a .crv file  
Software: Vector- A line on your design screen, all text lines and drawings are vectors.

Art work - your design lines (remember to save them).

Toolpath - the path that the center of the bit will follow. Your CAM software looks at the drawing calculates tool offsets and generates an offset path for the cutter to follow.

Post Processor - a software robot that converts virtual toolpaths from the CAD/CAM software into machine code for the ShopBot Control software to read. Save as an .sbp file. NOTE if you pick the wrong one you will get the wrong file!!!!

Part file - the file that cuts your part, this is no more than a list of instructions. A Part file behaves much like a word document (because it is) but the file extension must be changed to .sbp

Cut file - (Another name for part file) A list of commands (the machine code that is your part). Ends in .sbp (ShopBot Part)

Control software (SB3) - the software that runs the ShopBot, reads the code and moves the machine.