

Level 1 Training: Overview

Day One

- A. Introduction (9:00)**
 - a. Welcome to Shopbot
 - b. Who are you and what do you do
- B. Safety (9:45)**
 - a. Basic shop safety
- C. What is (10:05)**
 - a. Terms of Shopbot
 - b. ShopBot 3
 - c. Cad/Cam
 - d. PartWorks
 - e. PartWorks 3D
- D. Shopbot 3 (SB3) (12:00)**
 - a. Starting Software
 - b. Basic commands
 - c. Axes orientation
 - d. Moving an axes
 - e. Viewing a part file (sbp)
 - f. Previewing and running a part file

--Lunch--

Discussion about CNC (1:00)

- E. Tuning and Troubleshooting (1:45)**
 - a. Cut a file
 - b. Hold down
 - c. Bits, collets and routers
 - d. Mechanicals
 - e. Software Values
 - i. Unit Values
 - ii. Move speed/Jog speed
- F. Part Works (4:05)**
 - a. Material setup
 - b. Create vector
 - c. Vector editing
 - d. 2D viewing
 - e. Align vectors
 - f. ToolPath
- G. Probe**
 - a. Copy Machine
- H. Questions and Answers**
- I. Discussion Topic**

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Day One

B. Safety

- a. Basic shop safety
- b. Eye Protection
 - i. Side Shields
 - ii. Ear Protection
- c. Optional
 - i. Steel Toed Shoes
- d. Caution
 - i. Use your Sixth Sense
 - ii. Loose clothing
 - iii. Long Hair
 - iv. Jewelry
 - v. Read all Safety Information and have available for your Employees

C. What is

- a. Terms of Shopbot
 - i. Review basic of the terms
- b. ShopBot 3
 - i. Control Software (link from computer to the control box)
- c. Cad/Cam
 - i. Cad (computer aided design) / Cam(computer aided machining)
- d. PartWorks
 - i. 2D Cad/Cam software supplied with a ShopBot
- e. PartWorks 3D
 - i. 3D Cam software supplied with a ShopBot

D. Shopbot 3 (SB3)

- a. Starting Software
 - i. Preview / Move cut
 - ii. Alpha reset button
- b. Basic commands
 - i. Review the menu and two letter commands
- c. Axes orientation
 - i. Axis location where is 0,0
 - ii. Zero commands (ZZ ,Z2, Z3)
 - iii. C2 zeroing Z axis. Explain switch #1
 - iv. C3 zeroing X and Y. Explain switch #2 and #
- d. Moving an axes
 - i. Move/Jog (Moves are cutting and Jogs are rapid)

- ii. [MX],[MY],[MZ]
 - iii. [JX],[JY],[JZ]
 - e. Viewing a part file (sbp)
 - i. SBlogo.sbp
 - f. Previewing and running a part file
 - i. Verify the part file
 - ii. Zero X, Y and Z
 - iii. Cut sblogo.sbp

E. Tuning and Troubleshooting

- a. Mechanicals
 - i. What to do
 - b. Hold down
 - i. Vacuum
 - 1. High volume low pressure
 - 2. Low volume high pressure
 - ii. Clamps
 - iii. Screws
- #### **F. Bits, collets and routers**
- a. The right bit for the job
 - b. Collets and nuts
 - i. Assemble collet and collet nut
 - ii. Collets are Consumables (400 to 600 hours)
 - iii. Cutter installation

Level 1 Training: Overview

Day Two

A. Introduction

- a. Review of first day
- b. Basic commands in a Part File (.sbp)
- c. 3D Machining

B. From Idea to Cutting file with Part Works

- a. Material Setup
- b. PartWorks file (.crv)
- c. Design
- d. Toolpath
- e. Generate ShopBot code (.sbp)
- f. Cut part produced

C. Advanced Part File Editing

- a. 2d Offset
- b. Advanced Programming (Loops, If statements)

D. Part Works 3D

- a. Create 3D Toolpath (.v3d)
- b. Combine 3D with PartWorks
- c. Toolpath in PartWorks
- d. Cut 3D Model

E. Individual Assistance

- a. Design your files (PartWorks)

F. Question and Answer