# SHOPBOT Automatic Tool Changer (ATC) CHECK LIST: DAILY OPERATION

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| **BEGINNING OF WORK DAY ROUTINE** | |
| ○ Turn on the compressor for the ATC and allow tank to fill<br>○ Turn on Control Box. If PRS alpha, hit the **Reset** on the pendant<br>○ Open **SB3** Control Software on the ShopBot computer | ◦ 100+ PSI at pneumatic assist for gantry tool<br>◦ 90+ PSI for Desktop MAX<br>◦ Remember to warm up the spindle: **C,5** for gantry tool |
| ○ Zero the bits in the tool rack with **CN, 72**<br>○ You only need to zero the bits being used for the day | ◦ Start **CN, 72** w/ no toolholder in the spindle<br>◦ Run **C3** to Zero X, Y and Z before running CN, 72 |
| **SHOPBOT PART (.SBP) FILE CHECK** | |
| ○ Do the bit #'s in the .sbp file match bit locations in the tool rack?<br>○ Has the Z been zeroed at Z location set in the .sbp file?<br>○ Is the material in the same location/orientation as the CAD/CAM file? | ◦ **FE** to read the .sbp file for tool # & check Z location<br>◦ **C3** to Zero Z at table surface<br>◦ If the .sbp file has Z Zero at material surface, use the Z Zero Plate routine **(C2)** AFTER running C3. Turn on vacuum hold down pump before running **C2** |
| **READY TO RUN A .SBP FILE** | |
| ○ Has the Vacuum Hold Down Pump been engaged? | ◦ See Becker Sheet for info on turning on zones/pump |
| ○ Are X & Y axes Zeroed at location set in CAD/CAM file?<br>**C3** sets Z Zero to Table surface using Z Proximity Switch, then uses X and Y Proximity Switches to set XY 0,0 at lower left corner of table | **JH** or **MH** lifts Z to safe height, then sends the bit back to current 0,0 location without affecting Z Zero location |
| ○ Does the face of the VFD show power to the spindle/router on? | ◦ If no, check interlock key on Control Box or pendant |
| ○ Is the correct file loaded?<br>○ **FP** button from menu or **Cut Part** button on screen<br>○ When asked to, **Start the Spindle**<br>▪ Gantry tool: Press Green Start button on pendant, then **OK**<br>▪ Desktop Max: Click **OK** to start spindle | **To Preview file on screen before cutting:**<br>◦ Set ShopBot to **Preview** mode and review toolpath on screen (material size set by tool path)<br>◦ Remember to return ShopBot to **Move/Cut** mode after previewing file on screen |
| ○ Turn on Dust Collection | |

**If you need to PAUSE or STOP a file: PRESS the SPACE BAR**

**Suggested End of Work Day Routine because Z axis will drop without Control Box and compressor on:** 1. Empty spindle of toolholder **(C1, 0)** 2. Remove Dust skirt 3. Park spindle in a good location (example: **M2, 5,5)** 4. If available, place block under spindle 5. Shut down ShopBot Control Software 6. Turn off Control Box and compressor.

# SHOPBOT Automatic Tool Changer (ATC): SET UP COMMANDS

## PICK UP/DROP OFF A BIT IN THE TOOL RACK

- **C1** to pick up a different bit in the Tool Rack
  - If there is currently a tool holder in the spindle, make sure that its spot in the tool rack is open so the bit change routine can drop off the old bit before picking up the new bit
  - **C1, 0** will drop off a bit, then leave the spindle empty of a tool holder

## REPLACE A BIT IN THE TOOL RACK (BROKEN BIT OR DIFFERENT BIT)

- Remove the tool holder from the spindle or tool rack (gantry ShopBot)
  - To manually remove a tool holder from the spindle, grab ahold of tool holder and press the green button on the spindle to release tool holder
  - To remove a tool holder from the tool rack, grab the tool holder with both hands and pull firmly straight back

- Change the bit using the collet wrench and the chuck
- Replace the tool holder in the spindle or tool rack
- Run **CN, 72** to zero the Z of the new bit and calibrate with the other bits in the tool rack
- NOTE: verify that the .sbp file has the correct Tool # for the new bit (**FE**)

## RUN THE PLATE OFFSET ROUTINE AFTER RE-SURFACING THE SHOPBOT SPOIL BOARD/BLEEDER BOARD

- Whenever the location of the Table Surface has changed, such as after the spoil board has been re-surfaced or replaced, run the Plate Offset Routine **CN, 73**. Step-by-step instructions are displayed when running the routine

## CALIBRATE THE LOCATION OF THE TOOL CLIPS IN THE TOOL RACK

- The routine to determine the location of the Tool Clips in the Tool Rack should only have to be run during initial set up. Step-by-step instructions are displayed when running the routine. Refer to the assembly documentation of the ATC (Gantry ShopBot or Desktop ShopBot) for which routine to run.
- Keep track of the calibration clips and drill rod used for the gantry tool routine in case new tool clips are added to the rack, the location of the 0,0 home is changed, or the computer that runs the ShopBot is replaced

**TROUBLESHOOTING:** Not having enough air pressure at pneumatic assist is a major cause of bits not being picked up or dropped off correctly. PSI should read 100 – 110 for gantry, 90-100 for Desktop

More information on running the ATC can be found in the documents
https://www.shopbottools.com/ShopBotDocs/files/SBG00140%20ATC%20Installation%20Guide.pdf