



SHAPEOKO/MAKITA CNC ROUTER USER QUICK REFERENCE

DONE		
	Power On and Initialize Machine	
	A. MEASURE material thickness with caliper * <i>ADJUST PROGRAM SETTINGS NOW IF NEEDED</i> <ul style="list-style-type: none"> • Review cut depth in program; Review XY starting point • Check that feeds/speeds are appropriate for machine/bit/material • Recalculate all toolpaths and save .gcode file to your user directory on the CNC PC. 	
	B. INSERT BIT for Toolpath #1	
	C. Mark the X/Y start point on your material if needed. Be sure it is consistent with X/Y zero on your design. Mount Material to spoil board using 2-sided tape or other hold-down system	
	D. Zero the program X/Y axis on Carbide Motion by manually jogging (moving) the bit to the X/Y zero point and clicking the boxes for X and Y and then click Zero.	
	E. Start the Exhaust Vacuum – switch is in the under the work table on the left side. If the exhaust vacuum does not turn on with the switch, check that it is plugged in.	
	F. ZERO the Z-AXIS (do this with EVERY bit change) <ul style="list-style-type: none"> • Assumption: Z axis zero is top surface of material • Jog the router carriage until the bit is directly over the material • Lower Z until the bit just barely touches the top of the material • Micro adjust until paper can just barely slip out from in between bit and material • Click 'Zero Z' then raise the router to make room to attach shroud brush. 	
	G. Install Vacuum Brush/Shroud (magnetic attach) then rapid position to Z+.6	
	H. RUN the toolpath program <ul style="list-style-type: none"> • Click start job; check spindle speed setting, turn on spindle and click through the on-screen prompts • Monitor job carefully as it follows the toolpath; pause if it does not run as expected • Time remaining will display on screen Run until program stops (or is paused/aborted) • Use jog controls to raise spindle at the end so you can remove the shroud/brush. 	
	<u>IF MORE PROGRAMS TO RUN:</u> <ul style="list-style-type: none"> • Change Bit to next toolpath if needed • Repeat steps F, G, H again. 	<u>IF PROJECT IS COMPLETE:</u> <ul style="list-style-type: none"> • Power off CNC and vacuum system • Remove Bit and put away • Remove Material • DELETE YOUR PROGRAM(s) and .CRV files from the CNC PC if desired • Remove your thumb drive • Put all tools away/clean up work space
JOB NOTES: <ul style="list-style-type: none"> • Project/Filename: • Material: • Bit(s) used: • Feeds/Speeds: • Job duration: 		