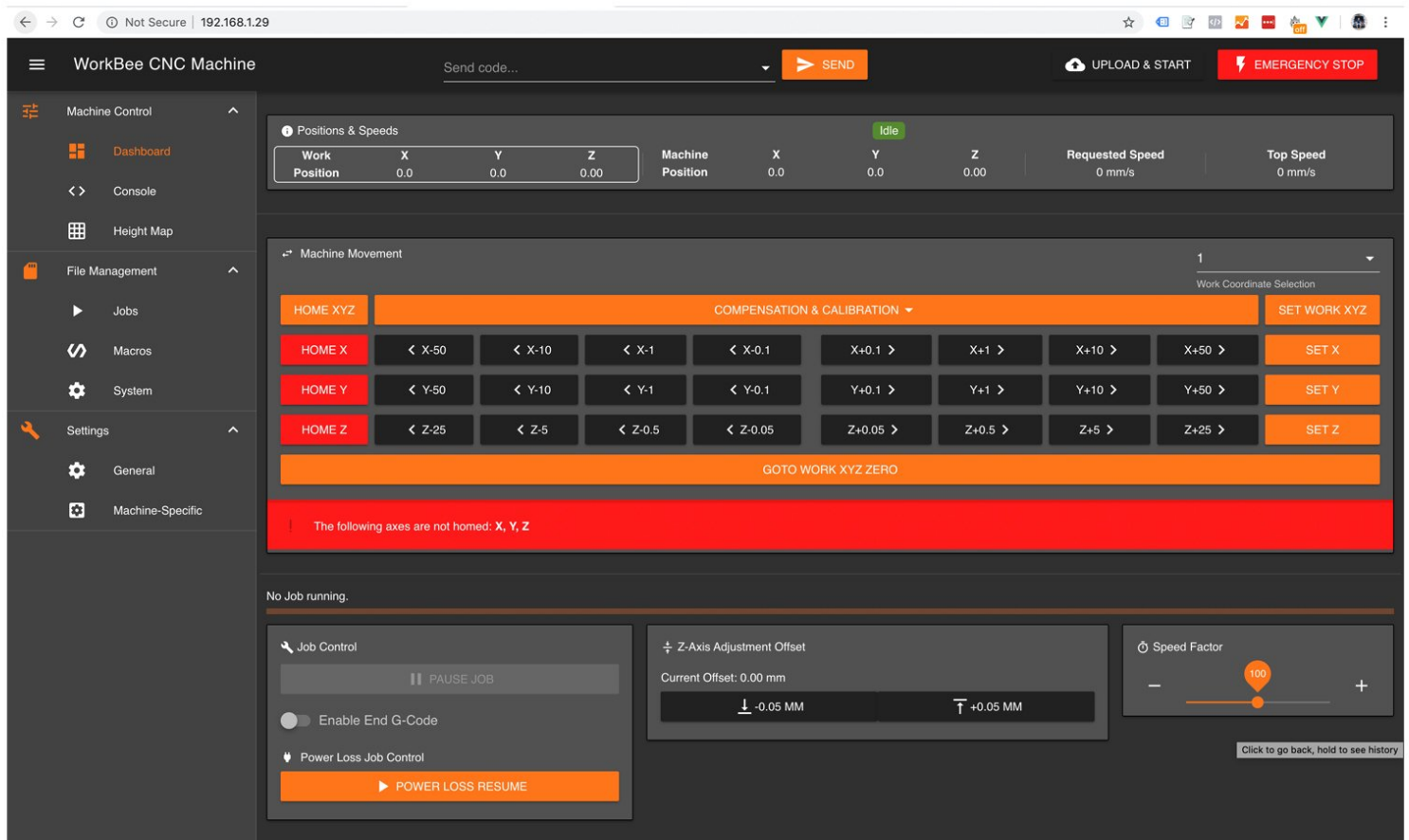




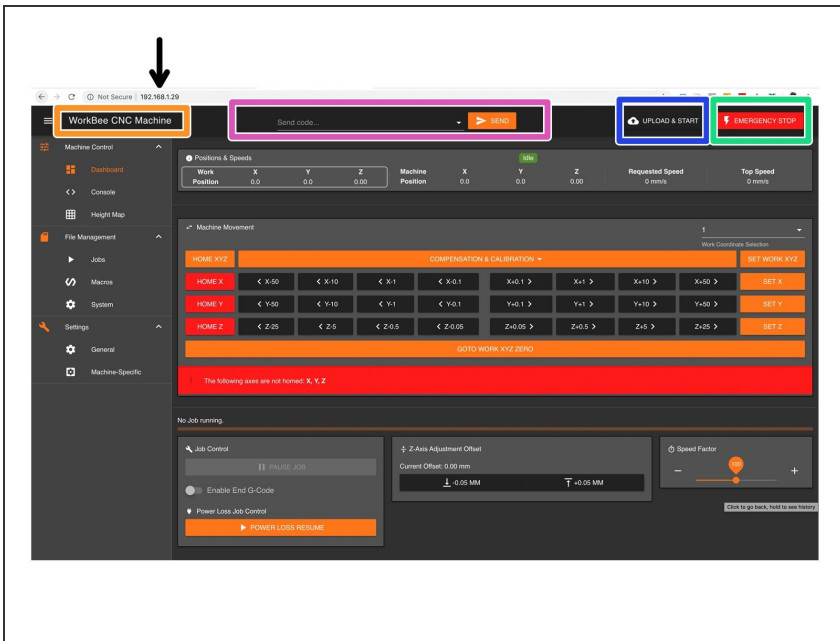
How To Use WorkBee Control

Follow this guide to learn all there is to know about WorkBee Control.

Written By: Ryan Lock

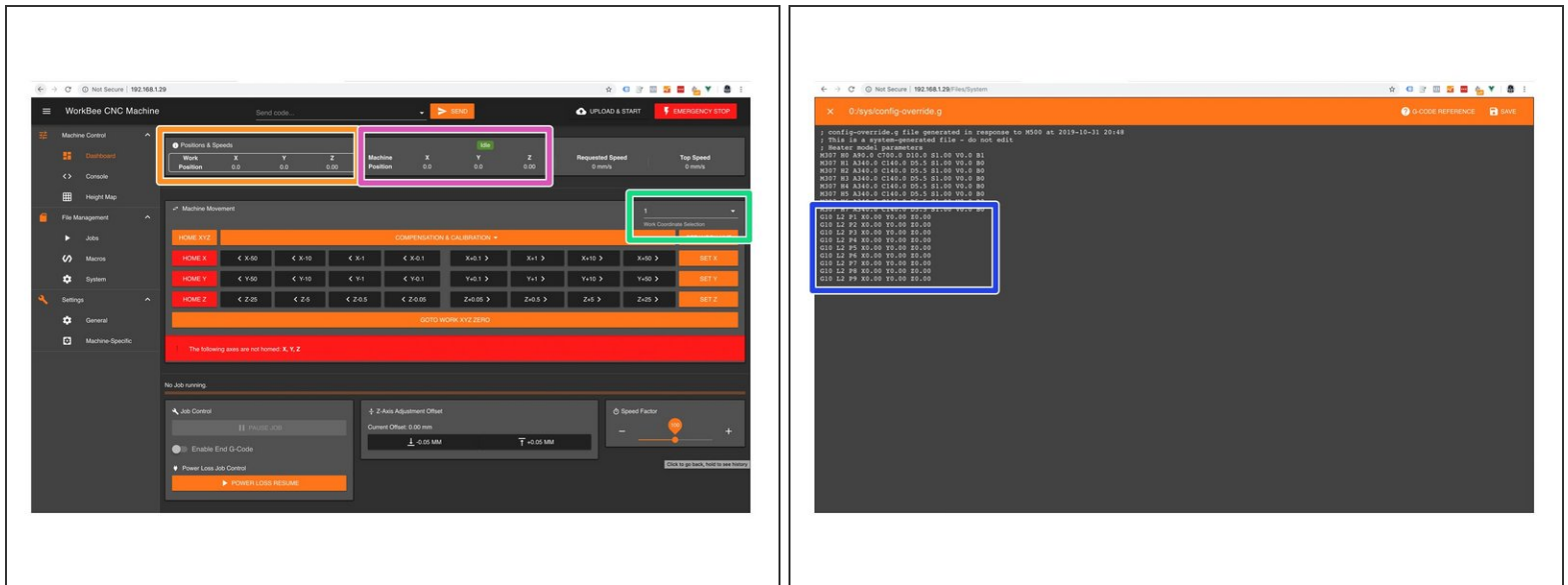


Step 1 — Header



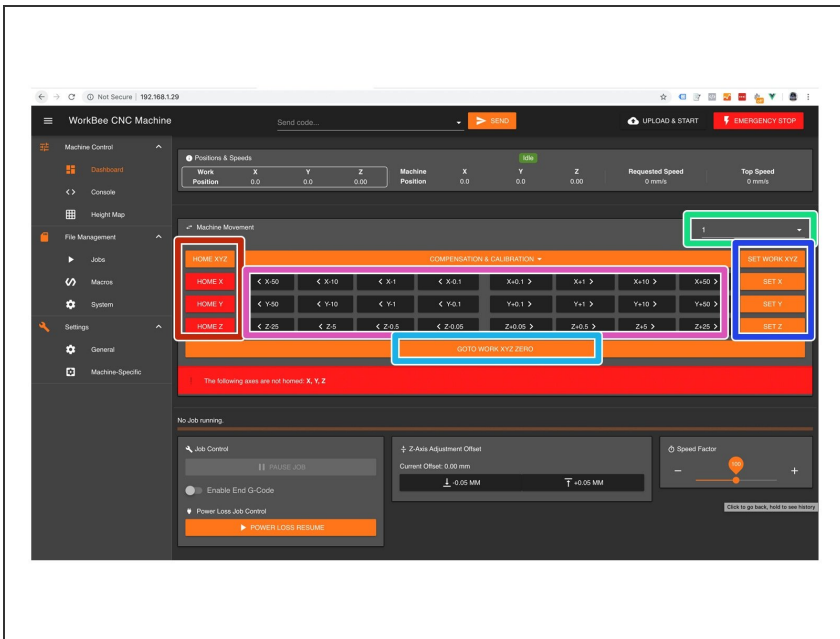
- Complete the following guides to get connected and setup WorkBee Control: [3. Connecting and Commissioning - V2.0](#)
- With the WorkBee turned on, in the address bar of your browser enter the ip address found from the guides above to open WorkBee Control. We recommend using Chrome Browser when using WorkBee Control.
- This displays the name of the machine currently connected to.
 - ⓘ Advanced Users: The machine name can be changed by adding the command M550 "Machine Name" to customconfig.g
- Manual G-Code commands can be sent to the machine here.
- Use this button to upload and start a job.
 - ⚠ Do not forget to home the machine and set the Work Zero position first.
- Use this button to trigger a software emergency stop. The machine will halt all operation and reboot. Follow this guide to connect this button to a physical switch: [How To Connect A Software Emergency Stop Button](#)

Step 2 — Position & Speeds Panel



- This displays the current head position in Work Coordinates.
 - The Work Coordinates displayed are determined by the Work Coordinate Selection Menu.
- ❗ Advanced Users: To find out the machine zero positions of all Work Coordinates go to File Management > System > config-override.g
 - ❗ Advanced Users: You can edit the positions of the Work Zero coordinates in config-override.g and save it.
- This displays the current head position in Machine Coordinates
 - ❗ Machine coordinates are always relative to the homed position. With the homed position being the maximum machine coordinates.
- ❗ The machine ALWAYS move within a Work Coordinate system. Machine coordinates are not a selectable coordinate system.
- ❗ Advanced Users: To make absolute G-Code command movements in machine coordinates, G53 has to be explicitly stated at the beginning of each line.

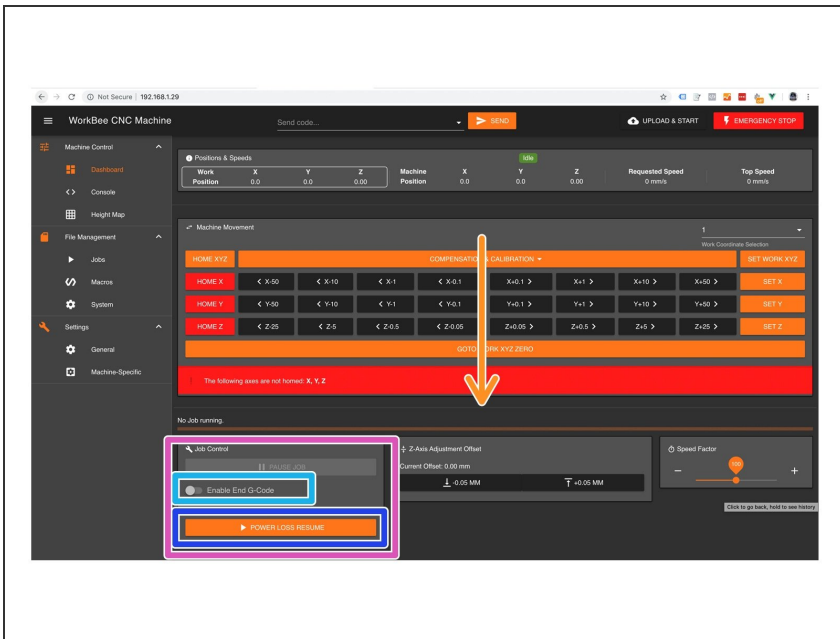
Step 3 — Movement Panel



- As mentioned in the previous step, the current Work Coordinates selected are determined by the Work Coordinate Selection Menu.
- Use these buttons to home the machine. It is normal practise to always home the machine before use.
 - ⓘ When homing an individual axis, it will always home the Z first to insure it is clear of any work piece.
- Use these buttons to jog the machine around the work area. Right clicking a button allows the jog distance to be modified.
 - ⓘ The jogging feedrate can be modified under Settings > Machine Specific > Feedrate for move buttons (mm/min)
- Use these buttons to set the Work Zero position for the selected Work Coordinate System.
- This will move the head of the machine to the Work Zero position of the currently selected Work Coordinate System.

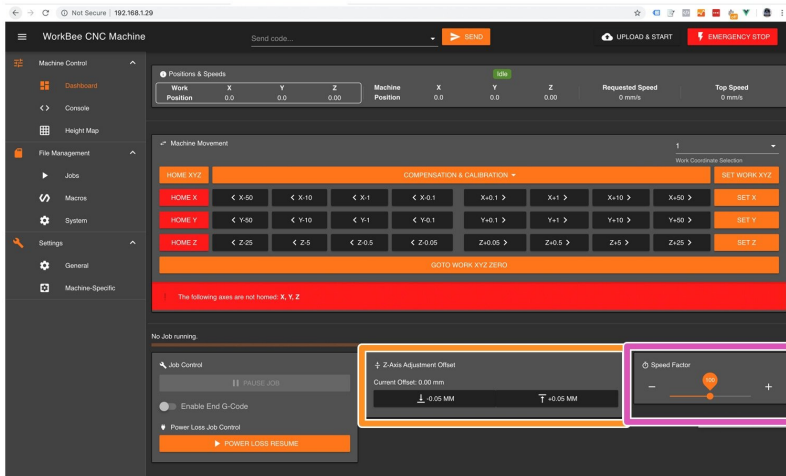
- ① The Compensation and Calibration buttons allows a probe to measure the overall work area flatness. The height map is displayed under the height map in the left menu. Height maps are useful for milling PCB's. More information on using these buttons can be found here:
https://duet3d.dozuki.com/Wiki/Using_mes...

Step 4 — Job Control



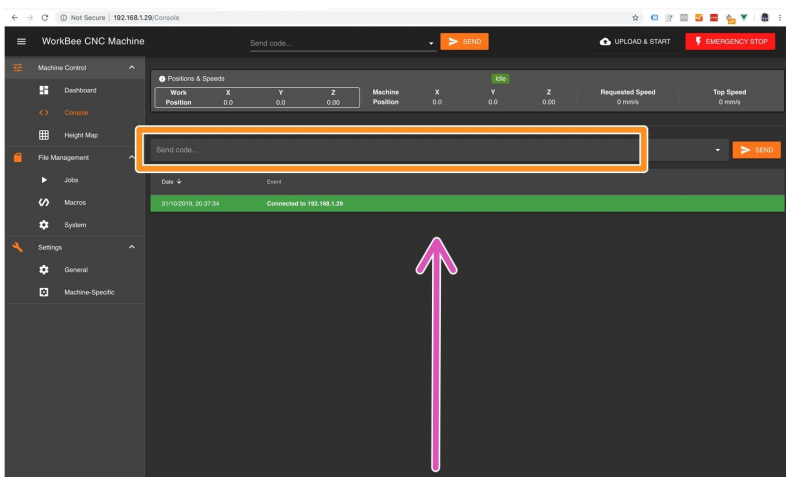
- When running a job, the progress of the job will be displayed here along with a percentage complete and estimated time remaining.
- When running a job, pause, resume, & cancel commands will show here. When pausing a job it will save the current position and home the machine.
- With the WorkBee a controlled power off can also be performed. This will pause, home and save the current job position, allowing it to be continued at a later time.
 - Use this button to resume a job offer a controlled power off.
 - ⓘ This button can also be used to resume a job after an unexpected power loss.
- Advanced Users: 'Enable End G-Code' allows a set of pre-defined commands to be run after a job is completed.
 - ⓘ These commands are defined under File Management > System > Sleep.g

Step 5 — Job Control Continued



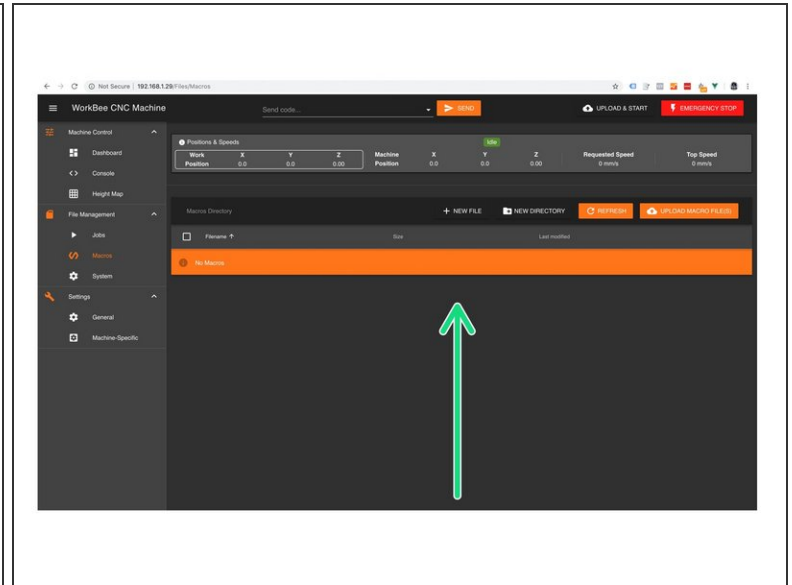
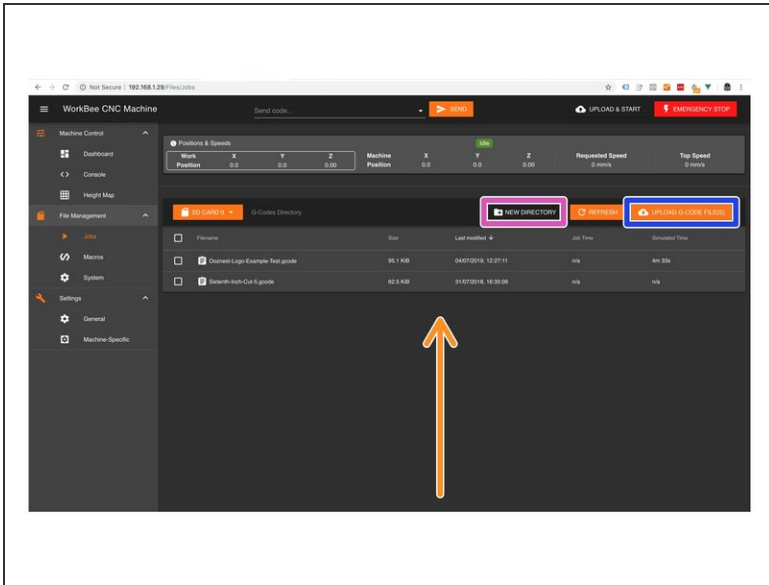
- When running a job these commands allow micro adjustment of the Z position of the job.
- For example if the job is not cutting deep enough, these buttons can be used to shift the job downwards.
- ⚠ Be warned it will move the whole job downwards by same amount, including Z Safe Heights.**
- Use the slider to speed up or slow down a job. The factor is represented by a percentage, with 100 being normal speed.

Step 6 — Console



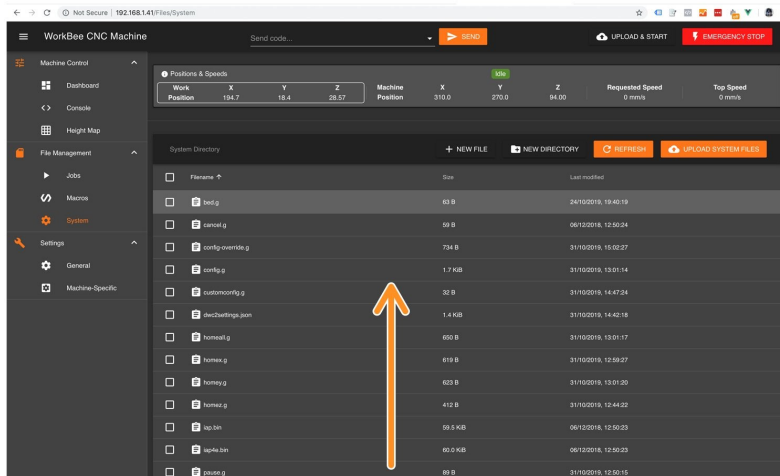
- Manual G-Code commands can be sent to the machine here.
- Important information outputted from the WorkBee will be displayed here.

Step 7 — Jobs & Macros



- Under Jobs is where all the jobs files are stored on the SD Card.
- Clicking on a Job will run the Job.
- Right clicking on a job will also allow the file to be run, and in addition: Simulate, Download, Edit, Rename, and Delete.
- Use this button to create sub folders within the Jobs folder.
- Click here to upload a Job to current folder.
- The Macros page is similar the Jobs page.
 - Macros are different to jobs in that they are a sequence of commands which are regularly run.
 - For example a macro could be created that would move the head to the machine center instead of typing manual commands each time.

Step 8 — System Settings



- Similar to Jobs, this is where all the system setting files are stored on the SD Card.
- Clicking on a file will edit it. Right clicking on a file will also allow the file to be edited, and in addition: Download, Rename, and Delete.

i config.g is run at startup and is where all the important machine settings are stored.

⚠ Apart from network settings, do not make any changes in this file.

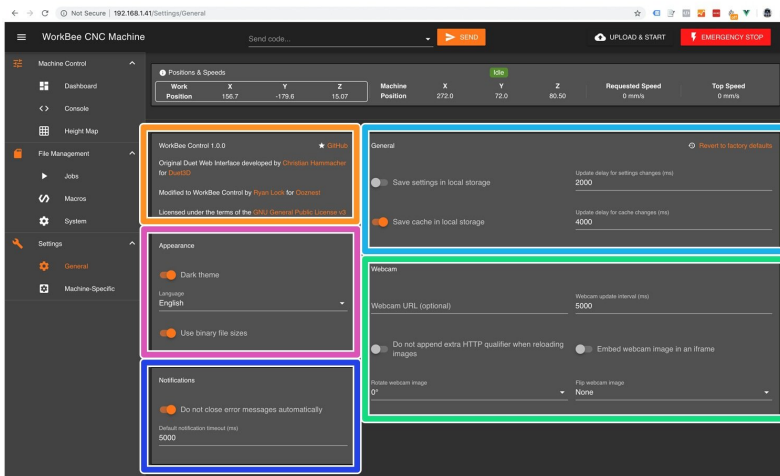
i customconfig.g is run at startup after config.g. Any changes or new settings should be added here.

i homeall.g, homex.g, homey.g, and homez.g are the commands run when pressing the homing buttons on the machine control panel. Advanced Users can customise these files to suit their workflow better.

i workzero.g is run when pressing 'GOTO WORK XYZ ZERO' on the machine control panel. Advanced Users can customise this file to suit their workflow better.

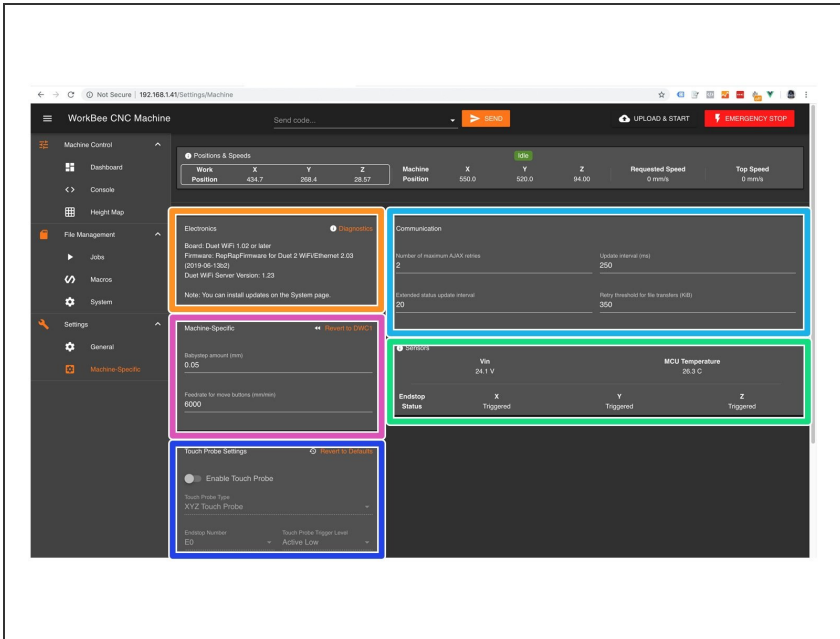
- i** Various other files are stored here which customise the behaviour of the machine. These are: pause.g, resume.g, resurrect-prologue.g, sleep.g, stop.g. Advanced Users can customise all these files to suit their workflow better.

Step 9 — General Settings



- This panel displays general information about the web control currently in use.
- In the Appearance Panel you can change the colour scheme of the interface, language, and change how the files sizes are displayed.
- In the Notifications Panel you can set the notifications to auto close, and if so after how long.
- In the General Panel you can change how the settings are stored for your machine. We recommend leaving these as the defaults.
- In the Webcam Panel you can setup a webcam. If enabled, the output can be found under Webcam in the left hand menu. For more information on setting up a Webcam can be found here:
https://duet3d.dozuki.com/Wiki/How_to_in...

Step 10 — Machine-Specific Settings



- The Electronics Panel displays information about the electronics the web control is currently connected to.
- In the Machine-Specific Panel you can change the baby step amount which is used in Job Control. You can also change the feedrate used by the jog commands on the movement panel.
- i The feedrate will always conform to the maximum feedrates set in config.g.
- In the Touch Probe Settings Panel you can setup a touch probe to use with your machine. More information on this can be found here: [Assembling Your Original WorkBee XYZ Touch Probe](#)
- In the Communication Panel you can customise how the web control talks to the machine. We recommend leaving these as the defaults.
- In the Sensors Panel you can view the outputs of the machine sensors, including the limit switches.

Thanks for following the guide. As mentioned this was just a brief outline of using WorkBee Control. Please visit our YouTube channel for more in-depth tutorials on operating a CNC Machine. Even though some of the videos on our YouTube channel use an older version of the WorkBee the concepts still apply!

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