WorkBee Control Overview

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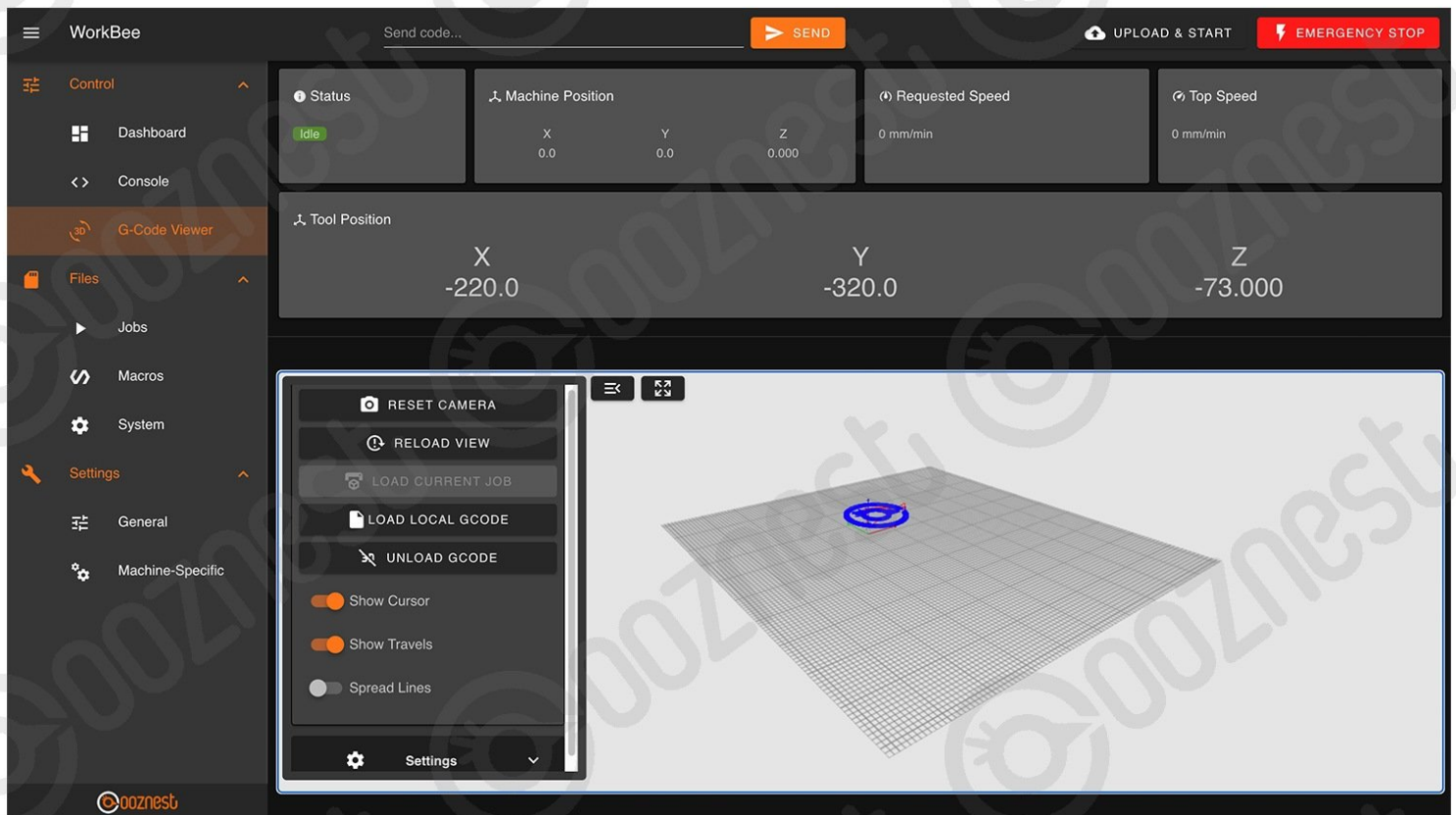
Step 1 — Header
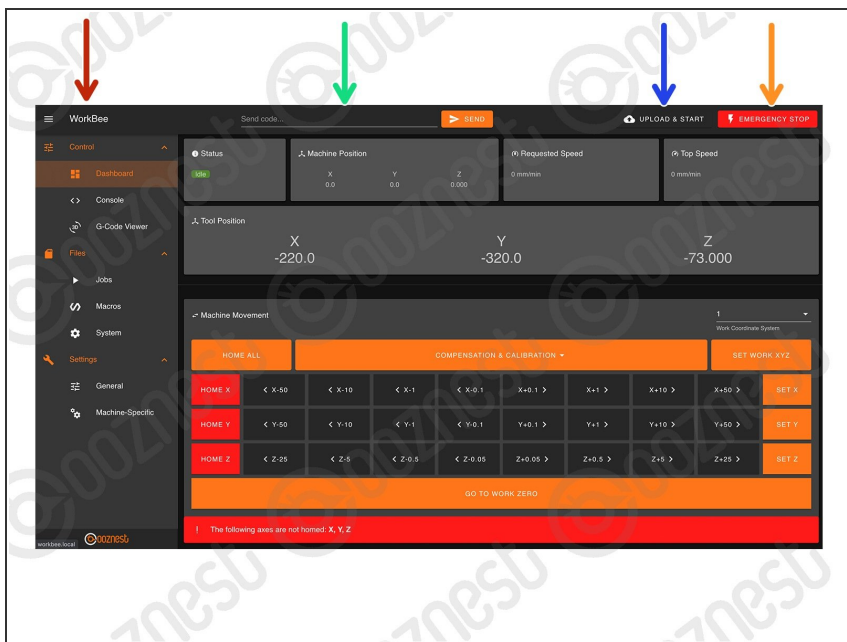
(i) WorkBee Control has only been tested on Google Chrome

- The Name of the machine.

  (i) Advanced Users: The machine name can be changed by adding the command M550 "Machine Name" to config-user-settings.g
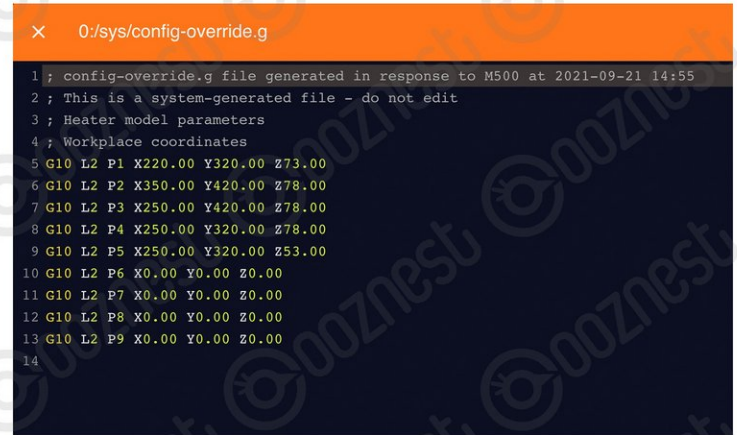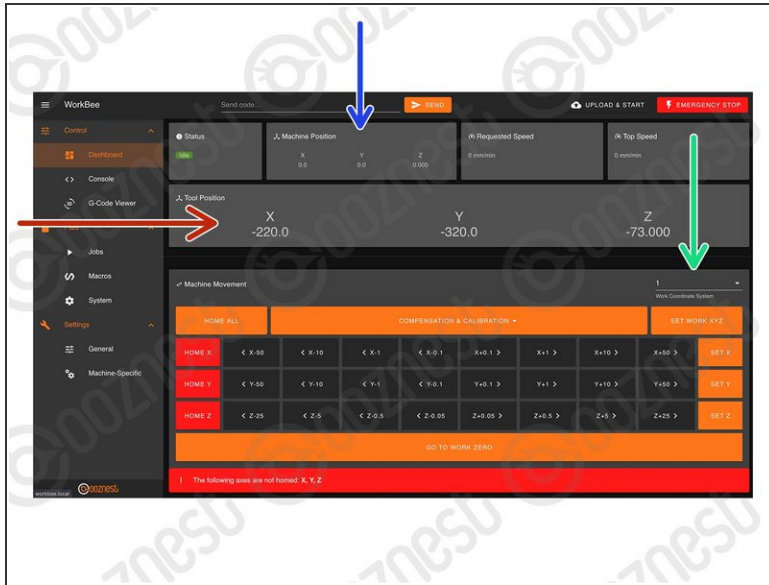
- Send Manual G-Code commands.

- To upload and start a job.

 ⚠ Make sure the machine has been Homed and Work Zero set.

- Triggers a software emergency stop.

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Step 2 — Positions

- Current position in Work Coordinates.

  - The Work Coordinates displayed are determined by the Work Coordinate Selection dropdown.

  - ⓘ Advanced Users: To find out the machine positions of all Work Coordinates open File Management > System > config-override.g

    - ⓘ Advanced Users: You can directly edit the machine positions of the Work Coordinates in config-override.g and save it.

- Current position in Machine Coordinates

  - ⓘ The machine **ALWAYS** moves 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
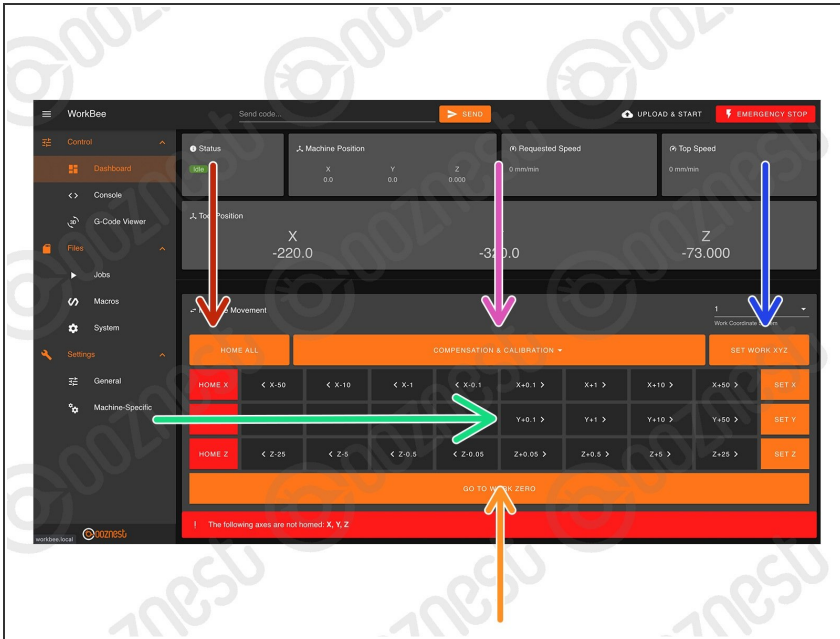
- Used to home the machine. You need to home the machine when it is turned on.

  (i) When homing an individual axis, it will always home the Z first to insure it is clear of any work piece.

- Used to jog the machine around the work area. Right-click to modify distance.

  (i) The jogging feedrate can be modified under Settings > Machine Specific > 'Feedrate for move buttons (mm/min)'

- Used to set the Work Zero position for the selected Work Coordinate System.

- Move the machine to the Work Zero position of the currently selected Work Coordinate System.

- The Compensation and Calibration buttons allows a probe to measure the overall work area flatness. 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...

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Step 4 — Job Control

- When running a job, the progress of the job will be displayed here along with the percentage complete and estimated time remaining.

- When running a job, pause, resume, & cancel buttons will show here. When pausing a job it will save the current position and home the machine.

  - A controlled power off can also be performed in the middle of a job. 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 after a controlled power off.

    - *(i)* This button can also be used to resume a job after an unexpected power loss.

- *(i)* Advanced Users: 'Enable End G-Code' allows a set of pre-defined commands to be run after a job is completed.

  - *(i)* These commands are defined under File Management > System > Sleep.g

Step 5 — Job Control Continued
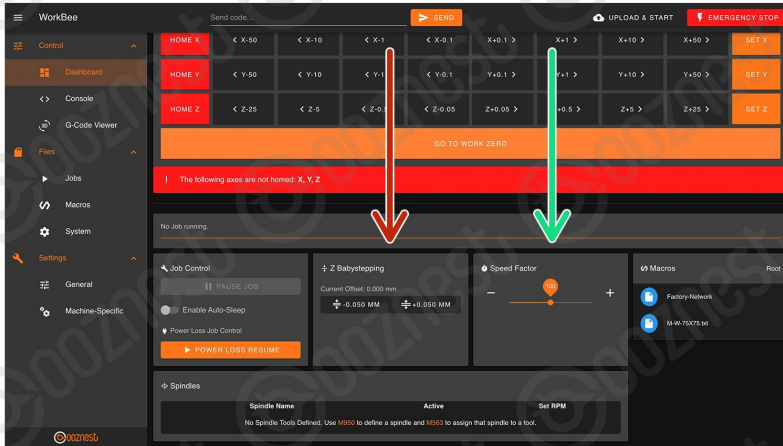
- When running a job these buttons allow micro-adjustment of the Z-Axis
  - For example if the job is not cutting deep enough, these buttons can be used to shift the job downwards.

⚠ Be warned it will move the whole job downwards by same amount, including Z-Axis Safe Heights.

- A slider to speed up or slow down the job. The speed is represented by a percentage, with 100% being the normal speed.

Step 6 — Console
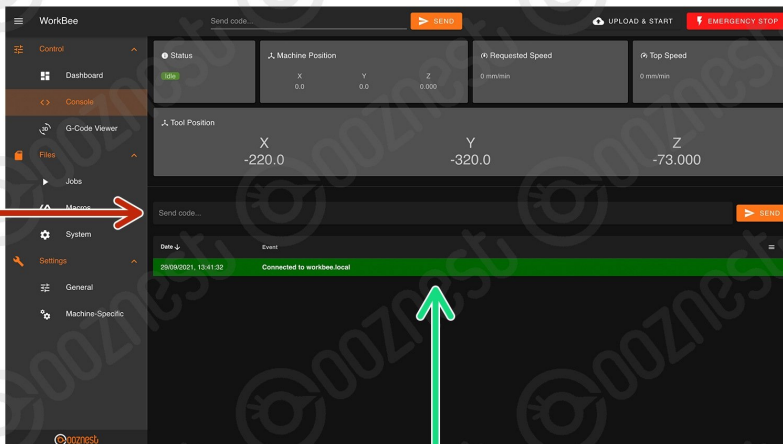
- Send Manual G-Code commands.
- Important information outputted from the WorkBee will be displayed here.

Step 7 — G-Code Viewer - Part 1
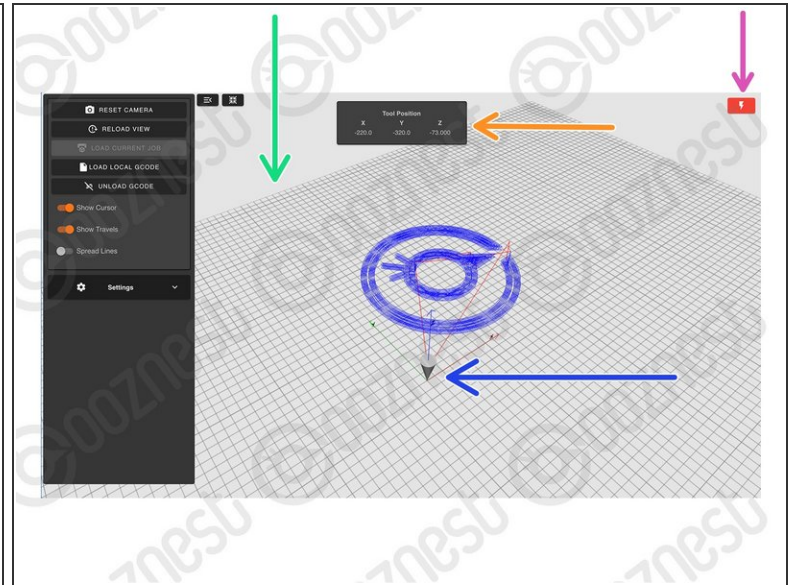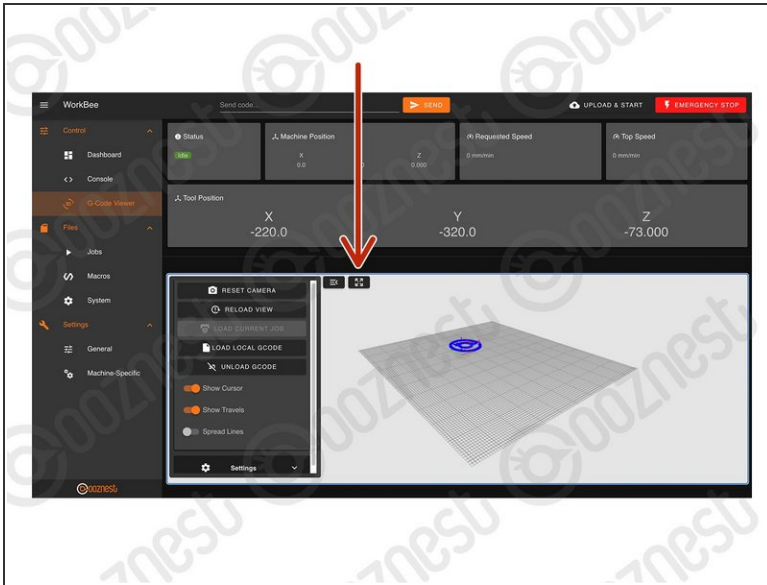
- Makes the G-Code Viewer Fullscreen.

- ⓘ Use the mouse scroll wheel to zoom in and out.

    - ⓘ Mouse Left-click to Orbit.

    - ⓘ Ctrl + Mouse Left-click to Pan.

- The grid shows the machines working area.

    - The X, Y, and Z-Axis markers show where the selected Work Zero is located in the machines working area.

- Current position in Work Coordinates.

- Software emergency stop.

Step 8 — G-Code Viewer - Part 2
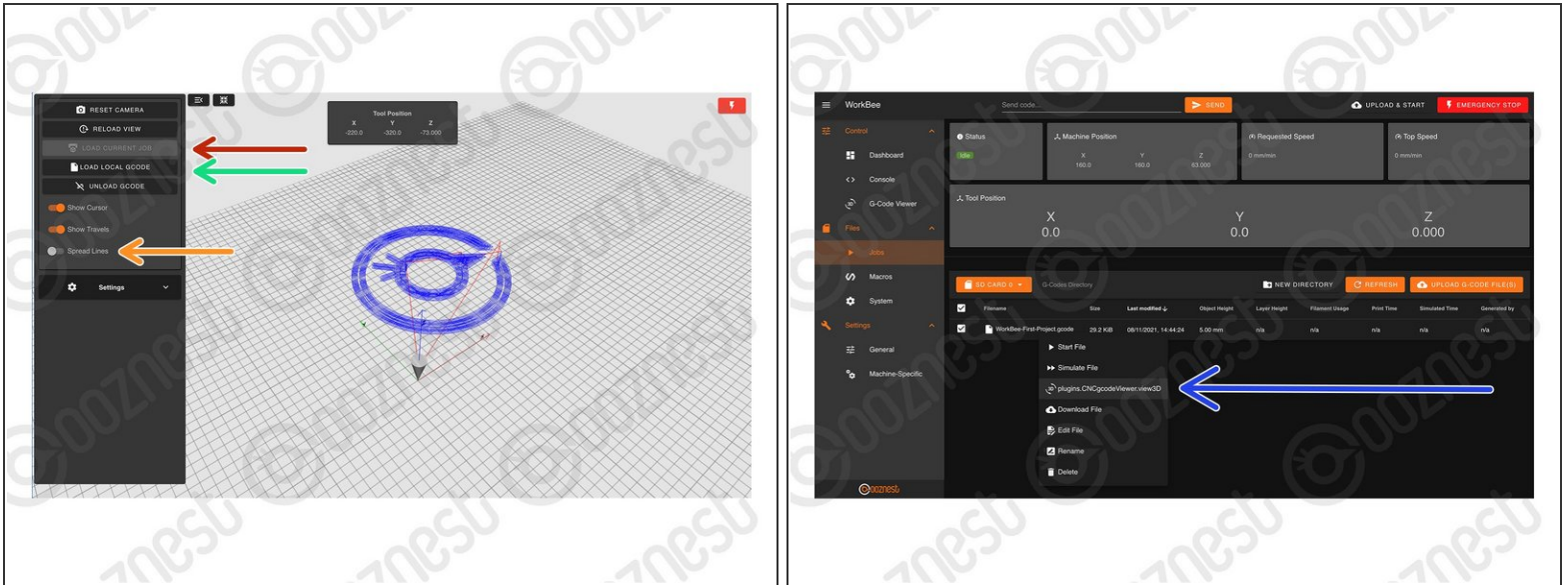
- ● Loads the current Job.

    - ⓘ In this mode it will only display progress thus far.

- ● Loads a local file from your computer.

    - ● If a job is running, you can load it locally by right clicking the file under File Management > Jobs and press 'plugins.CNCgcodeViewer.view3D'

        - ⓘ This will display the whole job.

        - ⓘ It will show the progress in green if you load it once the job is already running.

- ● This will elongate the spaces between passes. It can make files much easier to view.

Step 9 — Jobs & Macros
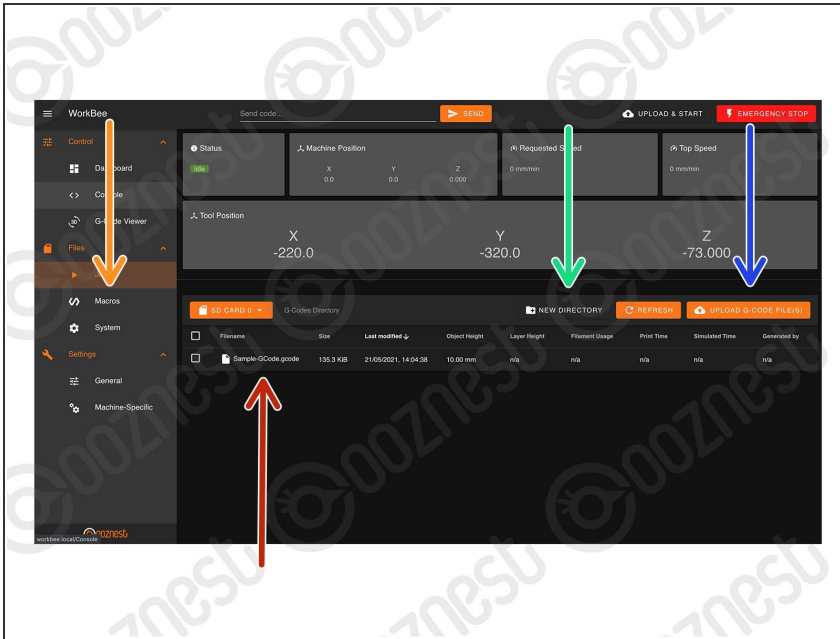
- *(i)* This is where all the Jobs are stored.
  - Clicking on a Job will run the Job.
  - *(i)* Right clicking on a Job will also allow the file to be run, and in addition: Simulate, Download, Edit, Rename, and Delete.
  - Create a sub-folder
  - Upload a job to the current folder
- The Macros page is similar the Jobs page.
  - *(i)* Macros are different to jobs in that they are a sequence of commands which are regularly run.
  - *(i)* For example a macro could be created that would move the head to the machine center instead of typing manual commands each time.

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Step 10 — System
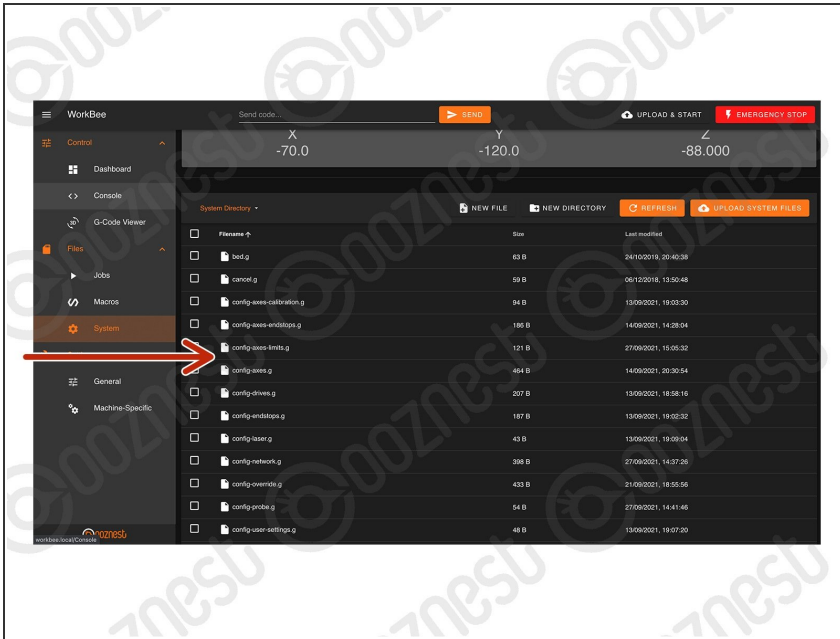
- This contains all the System files.

- Anything with 'config' in the name is run at startup.

  - We advise putting any custom settings in 'config-user-settings.g'

- (i) homeall.g, homex.g, homey.g, and homez.g contain the commands that are executed when the homing buttons are pressed.

- (i) workzero.g contains the commands that are executed when 'Go To Work Zero' is pressed.

Step 11 — General Settings
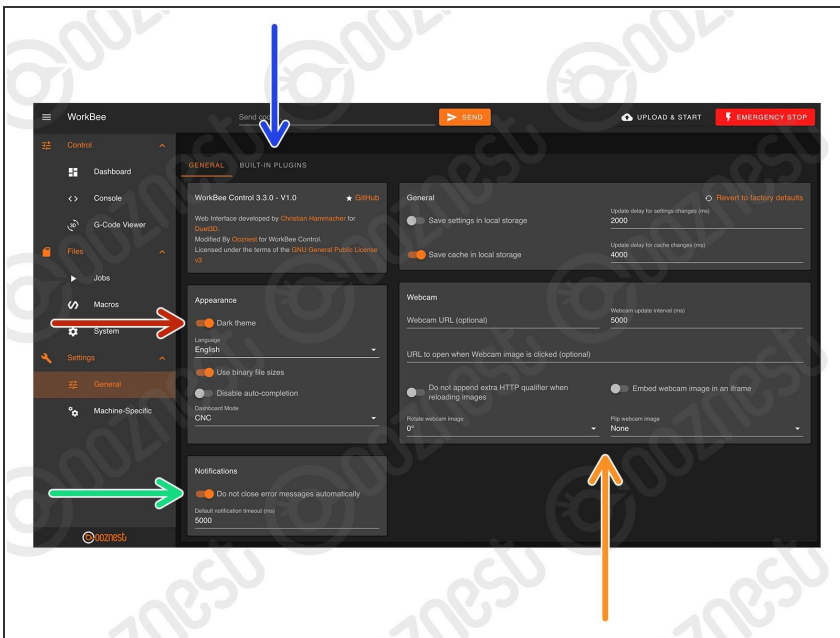
- Change Theme Colour

- Autoclose Notifications

- Manage plugins packaged within WorkBee Control.

- Congifure Webcam. See [Duet's Dozuki.](#)

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Step 12 — Machine Settings
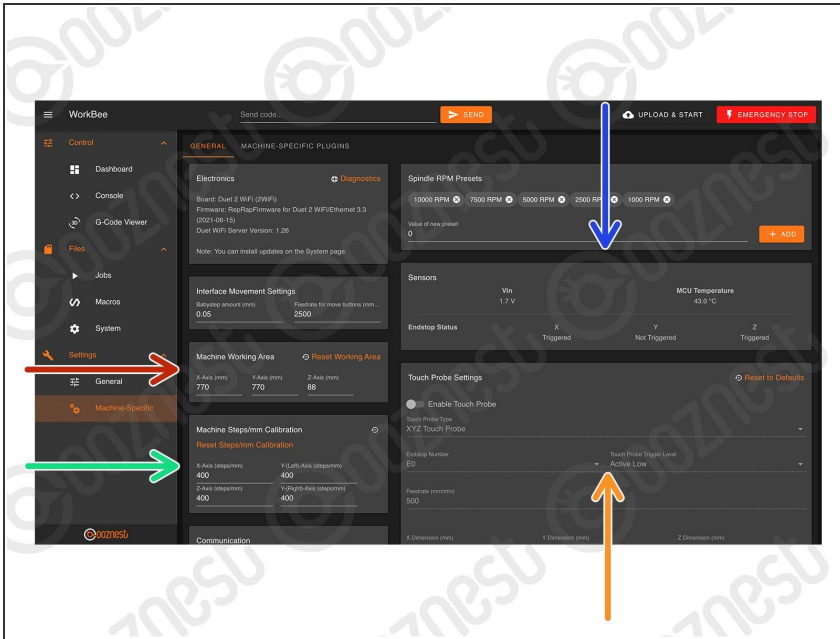
- ● Change machine working area (No restart required)

- ● Change machine Steps/mm (No restart required)

- ● Sensor statuses

- ● Touch probe settings. See [Assembling Your Original WorkBee XYZ Touch Probe](#)

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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