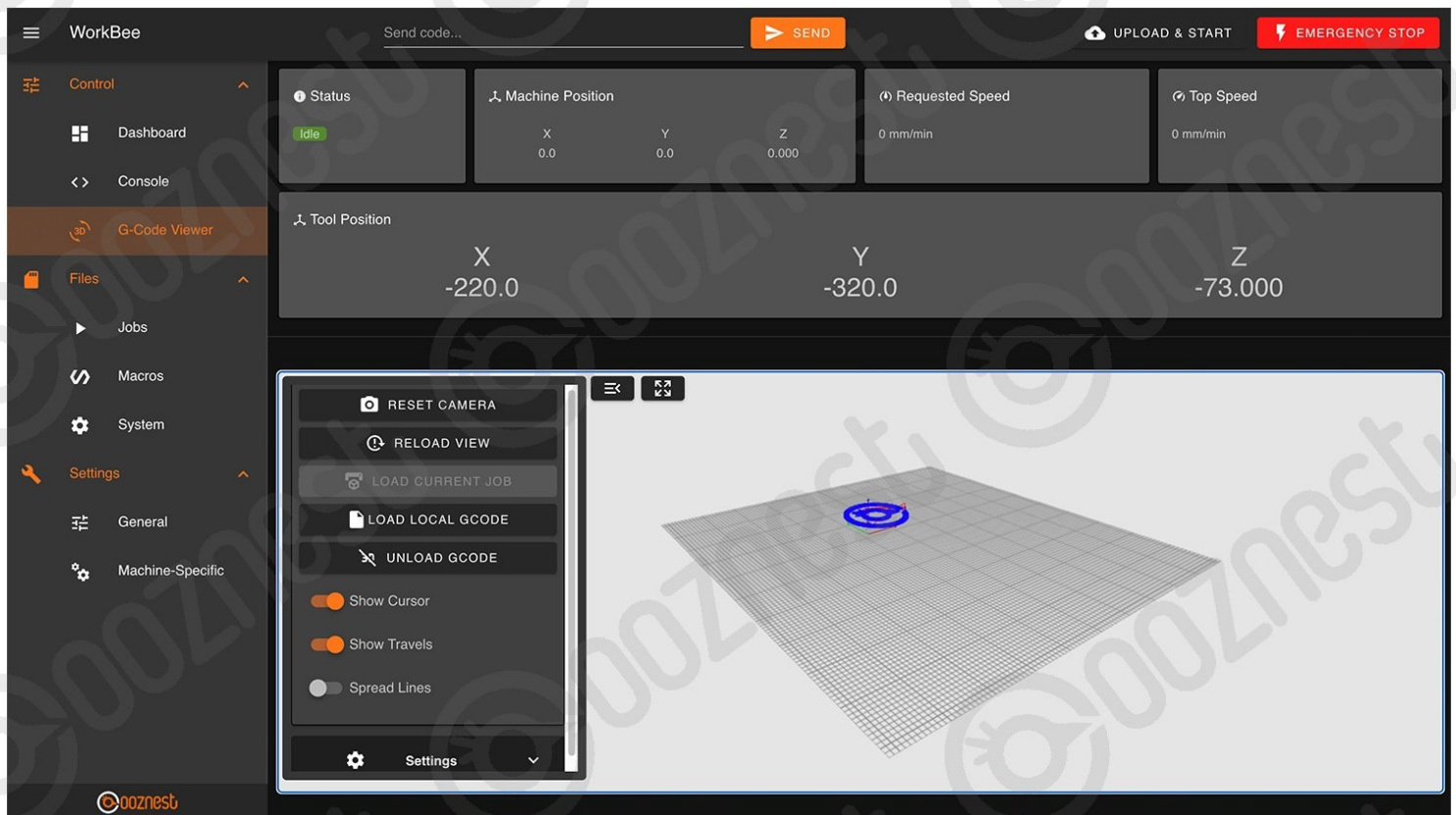


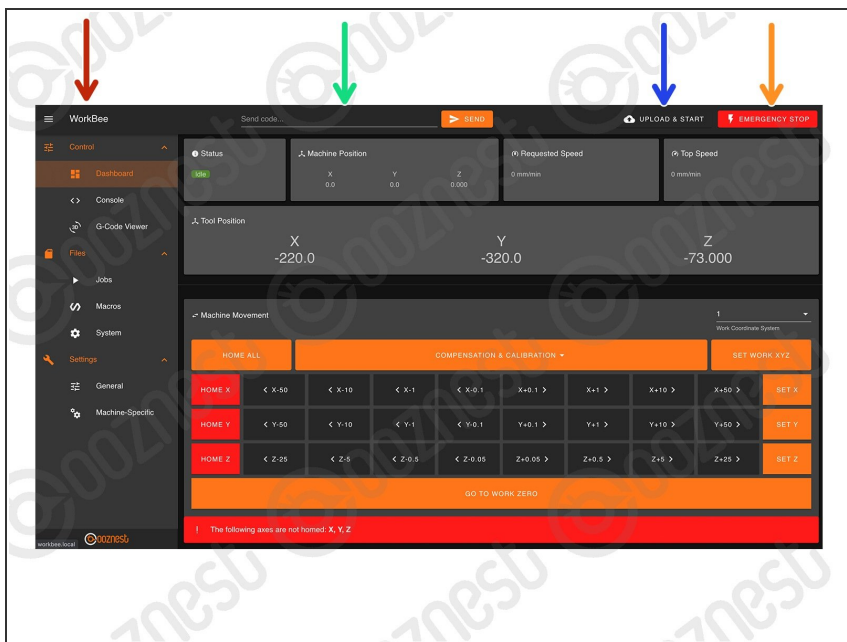


# WorkBee Control Overview

Written By: Ryan Lock



## Step 1 — Header

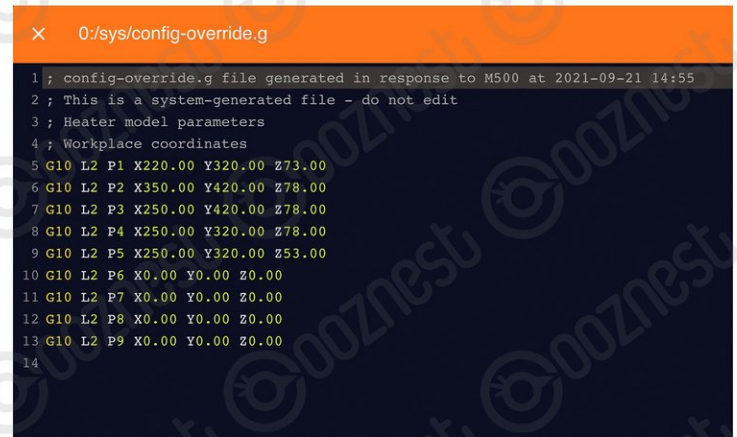
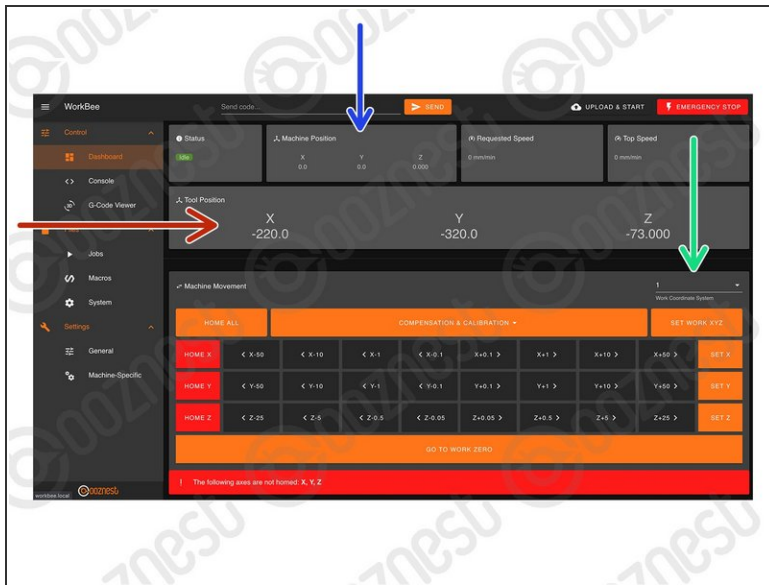


- i** WorkBee Control has only been tested on Google Chrome
- The Name of the machine.

  - 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.

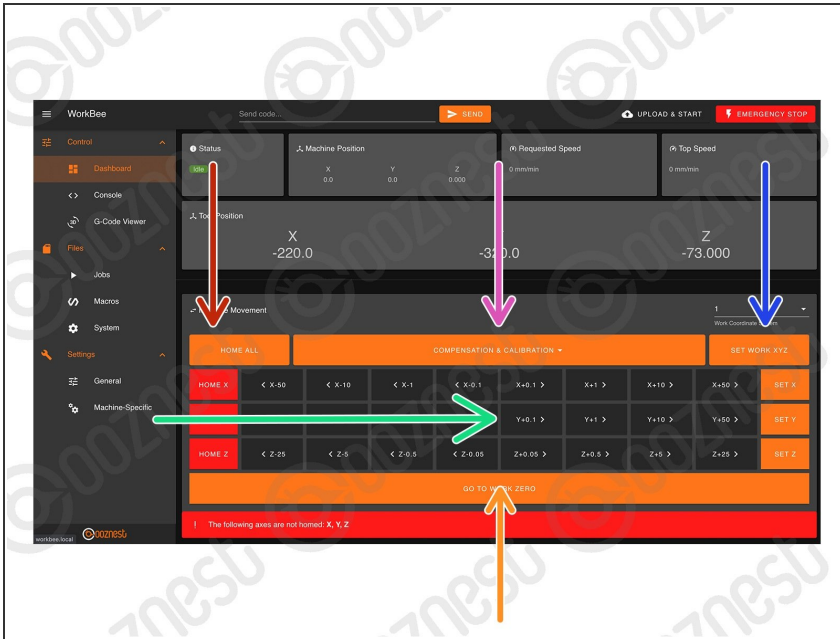
  - ⚠** Make sure the machine has been Homed and Work Zero set.
- Triggers a software emergency stop.

## Step 2 — Positions



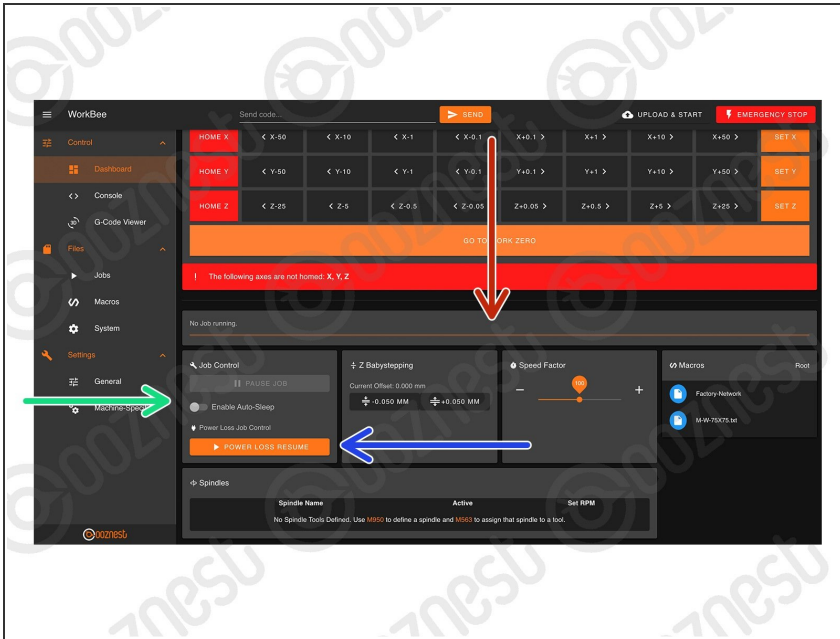
- Current position in Work Coordinates.
  - The Work Coordinates displayed are determined by the Work Coordinate Selection dropdown.
  - ① Advanced Users: To find out the machine positions of all Work Coordinates open File Management > System > config-override.g
  - ① Advanced Users: You can directly edit the machine positions of the Work Coordinates in config-override.g and save it.
- Current position in Machine Coordinates
  - ① The machine **ALWAYS** moves within a Work Coordinate system. Machine coordinates are not a selectable coordinate system.
  - ① 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



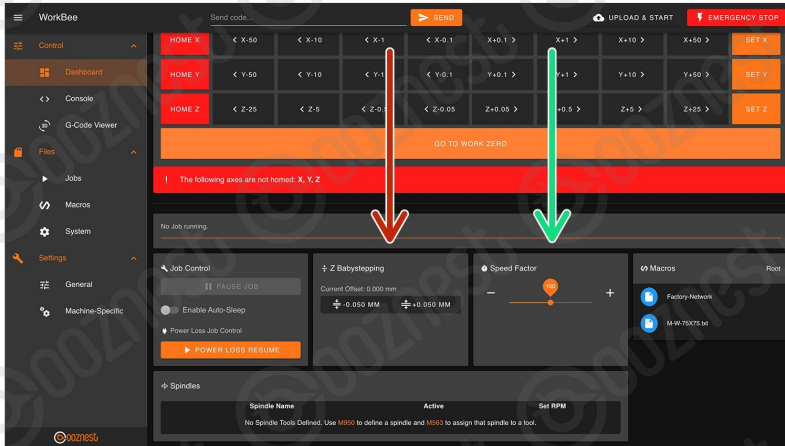
- Used to home the machine. You need to home the machine when it is turned on.
  - ⓘ When homing an individual axis, it will always home the Z first to insure it is clear of any work piece.
- Used to jog the machine around the work area. Right-click to modify distance.
  - ⓘ The jogging feedrate can 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://docs.duet3d.com/meshbed>

## Step 4 — Job Control



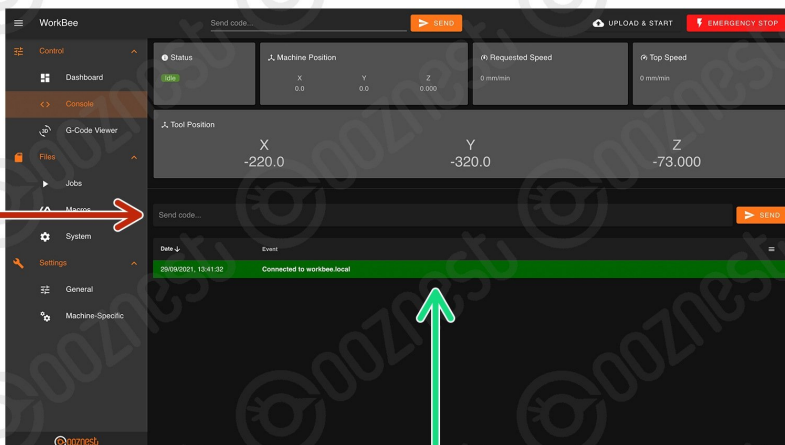
- When running a job, the progress of the job will be displayed here along with the percentage complete and estimated time remaining.
- When running a job, pause, resume, & cancel buttons will show here. When pausing a job it will save the current position and home the machine.
- A controlled power off 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.
  - ⓘ 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



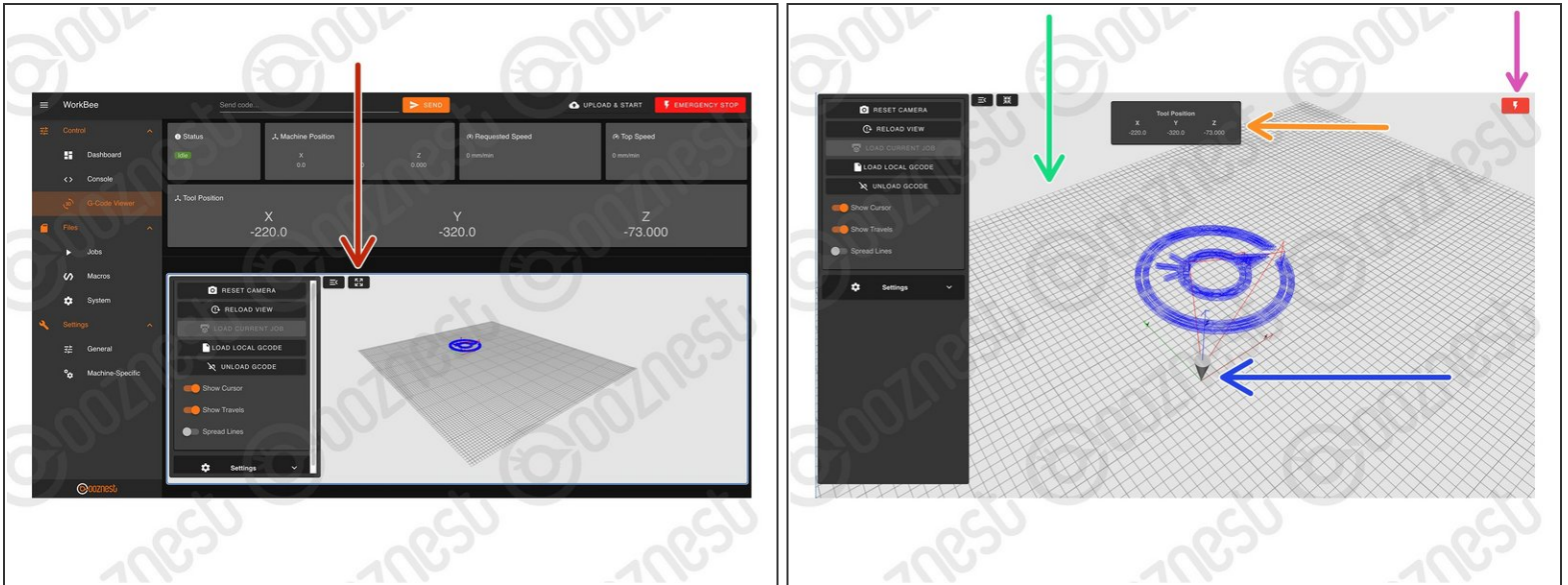
- When running a job these buttons allow micro-adjustment of the Z-Axis
- For example if the job is not cutting deep enough, these buttons can be used to shift the job downwards.
- ⚠ Be warned it will move the whole job downwards by same amount, including Z-Axis Safe Heights.
- A slider to speed up or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

## Step 6 — Console



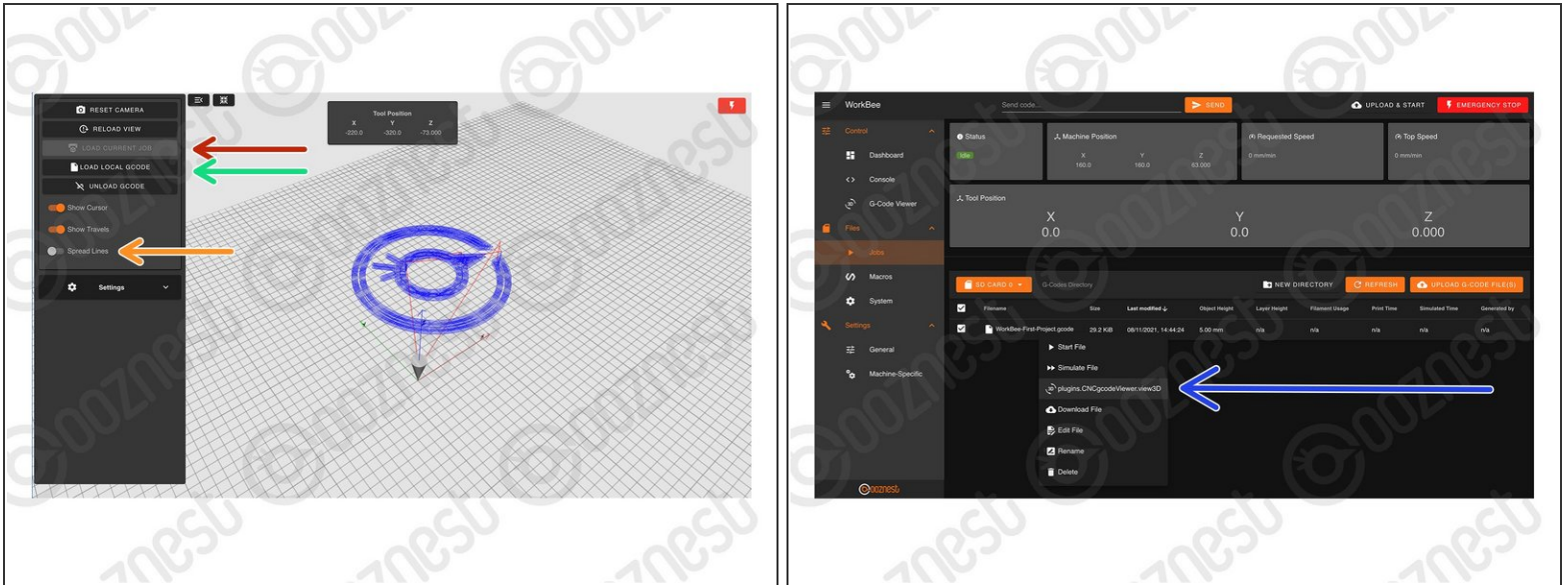
- Send Manual G-Code commands.
- Important information outputted from the WorkBee will be displayed here.

## Step 7 — G-Code Viewer - Part 1



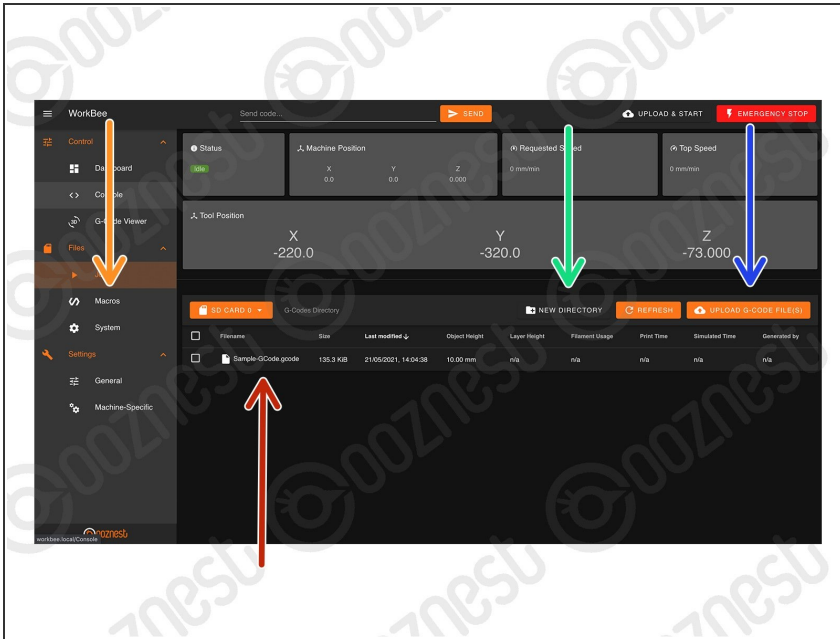
- Makes the G-Code Viewer Fullscreen.
- ① Use the mouse scroll wheel to zoom in and out.
- ① Mouse Left-click to Orbit.
- ① Ctrl + Mouse Left-click to Pan.
- The grid shows the machines working area.
- The X, Y, and Z-Axis markers show where the selected Work Zero is located in the machines working area.
- 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

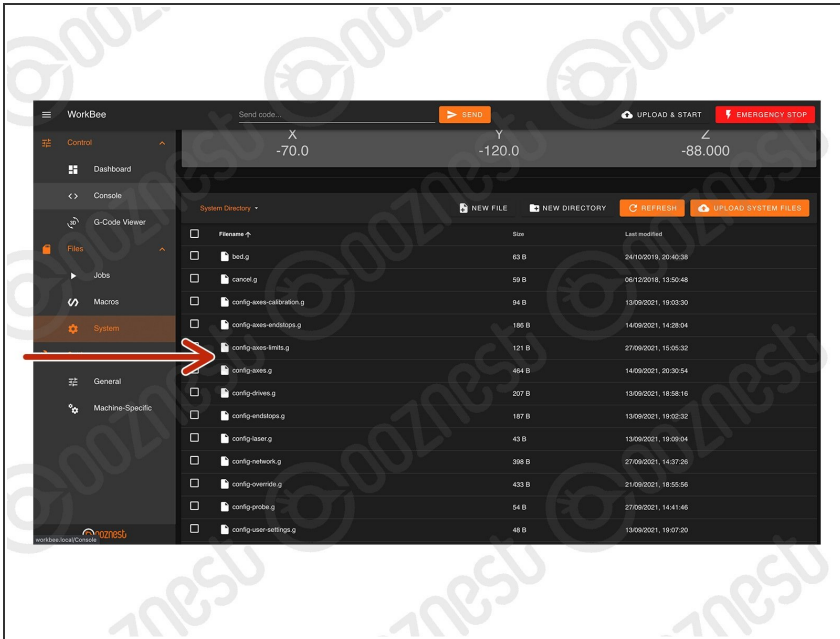


- i** This is where all the Jobs are stored.

  - 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.

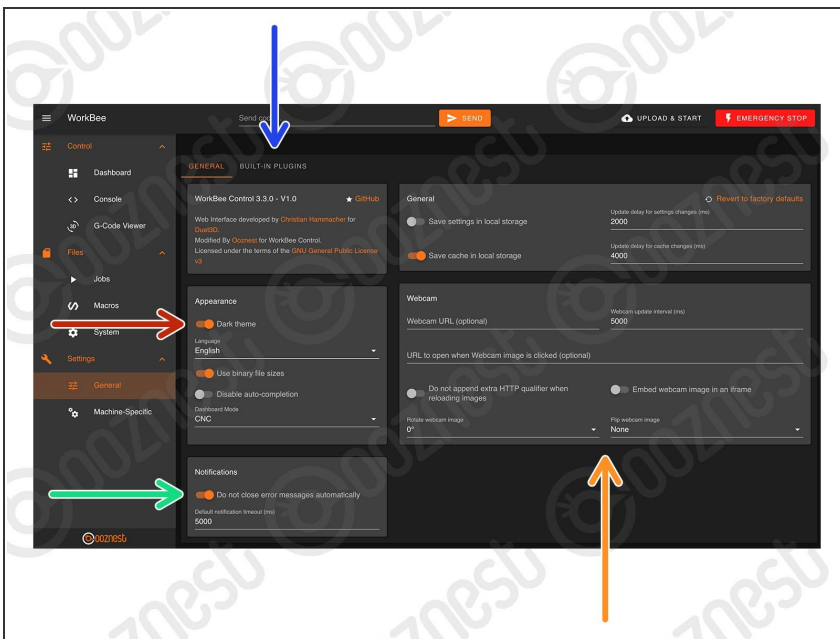
  - Create a sub-folder
  - Upload a job to the current folder
- The Macros page is similar the Jobs page.
  - i** Macros are different to jobs in that they are a sequence of commands which are regularly run.
  - i** For example a macro could be created that would move the head to the machine center instead of typing manual commands each time.

## Step 10 — System



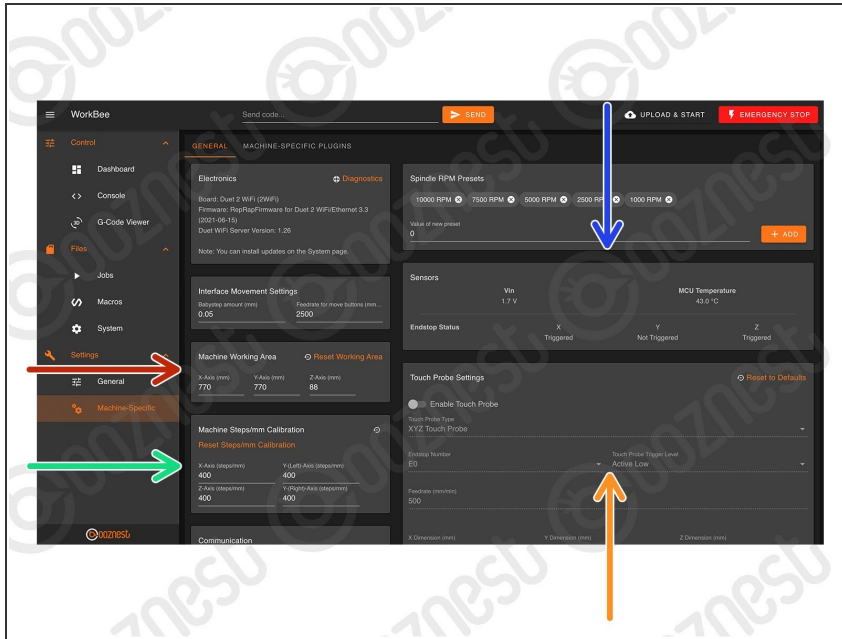
- This contains all the System files.
  - Anything with 'config' in the name is run at startup.
  - We advise putting any custom settings in 'config-user-settings.g'
- ⓘ homeall.g, homex.g, homey.g, and homez.g contain the commands that are executed when the homing buttons are pressed.
- ⓘ workzero.g 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](#).

## 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!