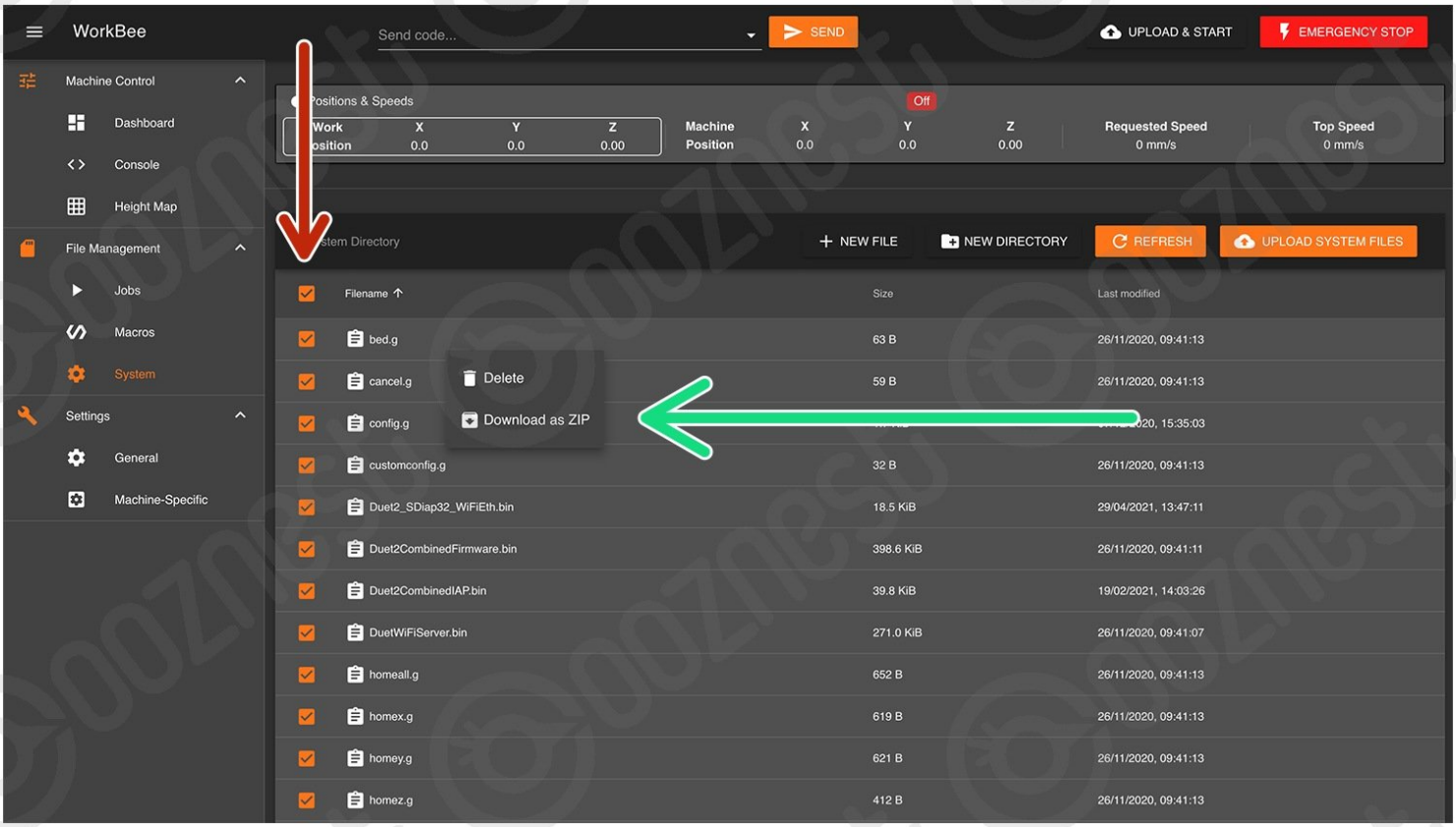
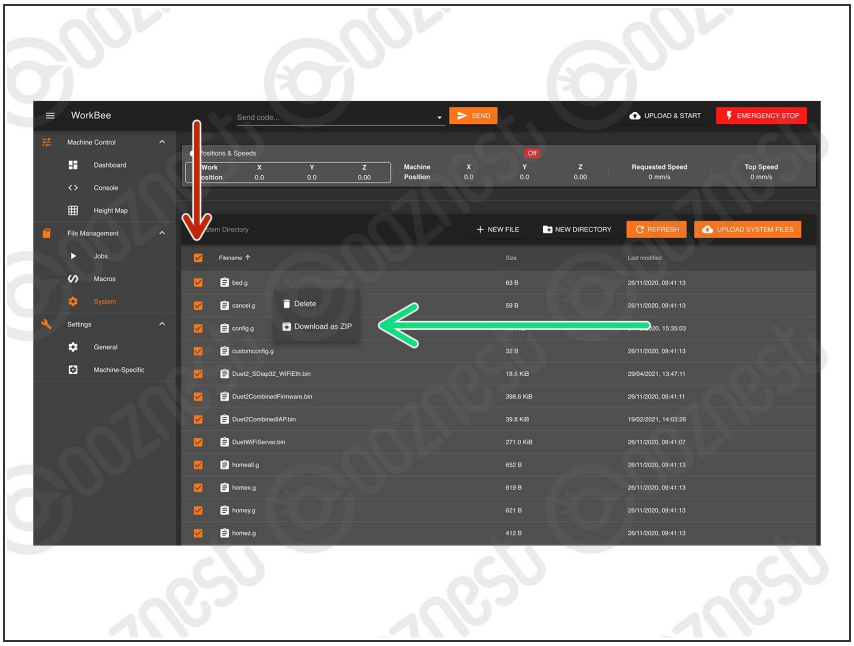
How To Update WorkBee Firmware V1.0.7 > V3.3.0-1.2

Written By: Robert



This document was generated on 2022-07-24 02:24:00 AM (MST).

Step 1 — Backup & Preparation



⚠ **Do not follow this guide if you have a Z1+ WorkBee. You are already on the latest version.**

⚠ Before proceeding you **must** backup your system settings.

- Go to File Management > System.
- Select All.
- Right Click on any file, and press 'Download as ZIP'

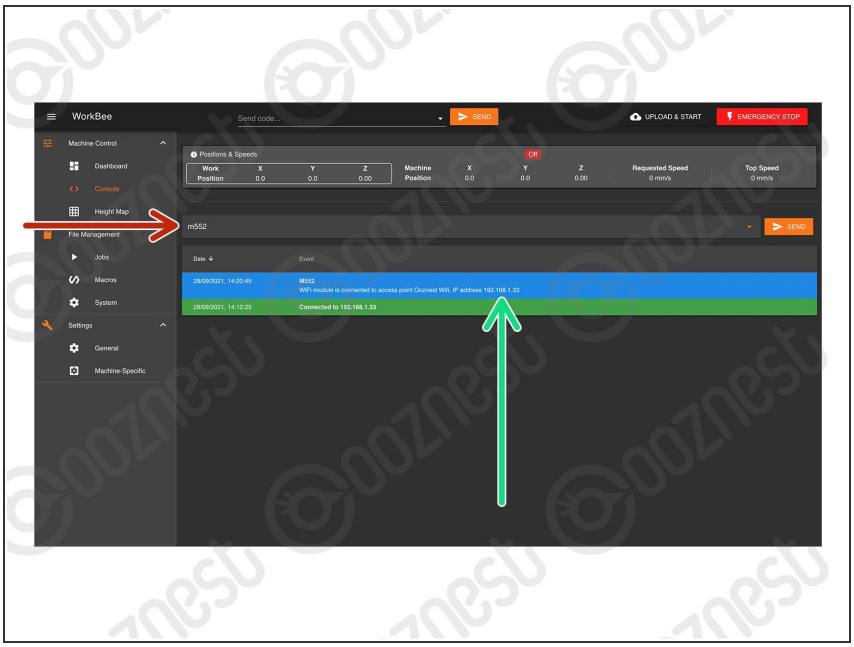
ⓘ You must unselect any folders (Sub-directories) for 'Download as ZIP' to appear.

⚠ Inside File Management > System, Right Click and Delete the file named 'DuetWiFiServer.bin'

⚠ You may not have the file 'DuetWiFiServer.bin' in your System folder. If not that is ok, nothing to delete.

© 2022

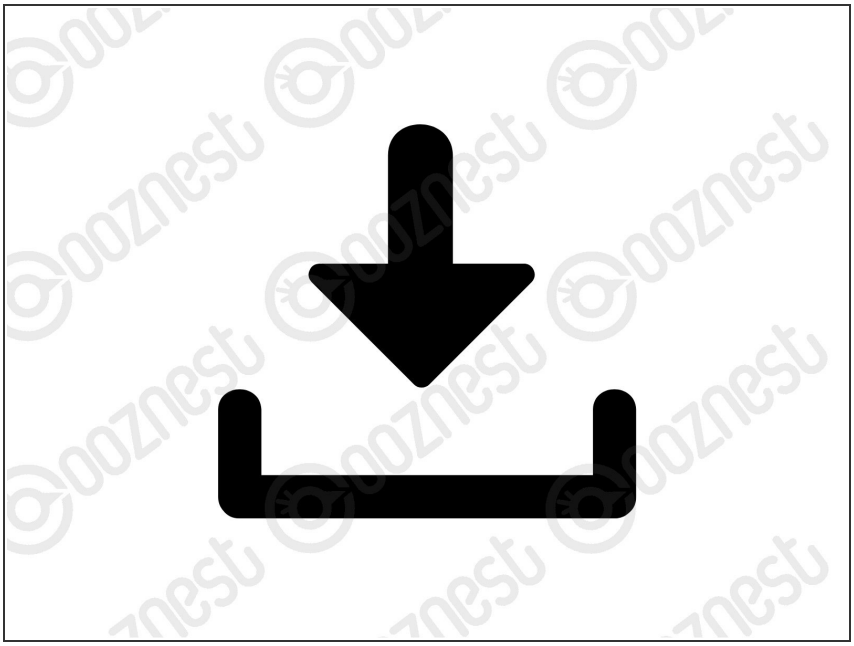
Step 2 — IP Address



⚠ We must make sure we know the IP Address the WorkBee is connected under.

- Go to Machine Control > Console.
- Input the command: M552 then press 'Send;
- It will return the IP Address. Note it down.

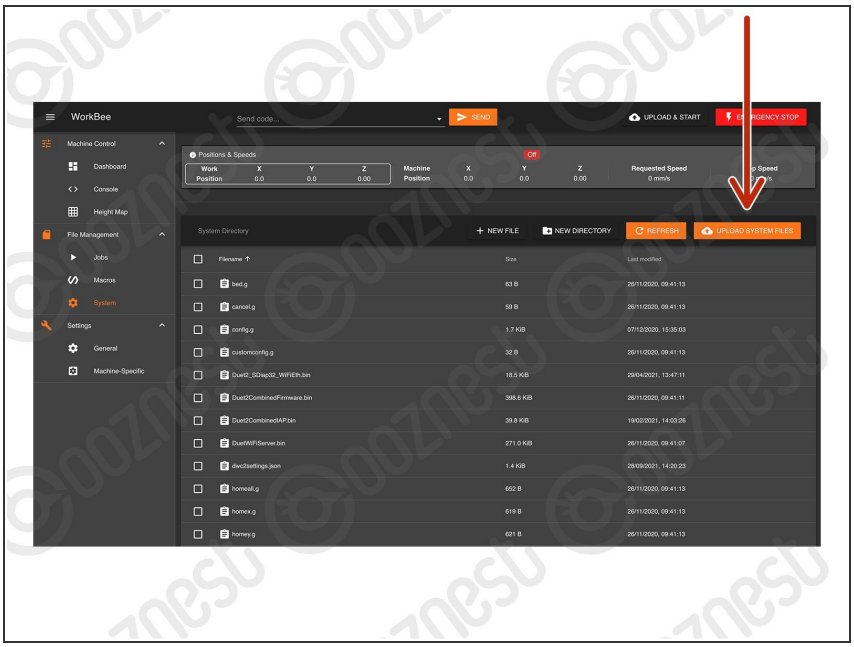
Step 3 — Download



- Download the Upgrade Files and extract the contents.

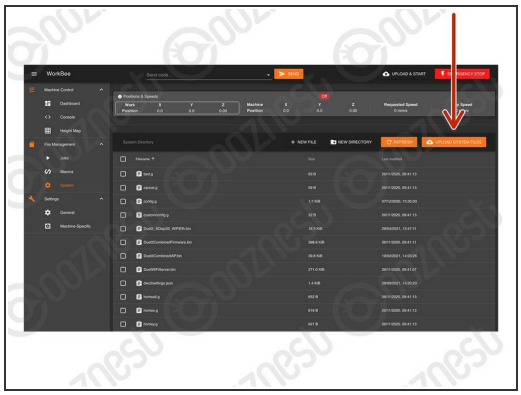
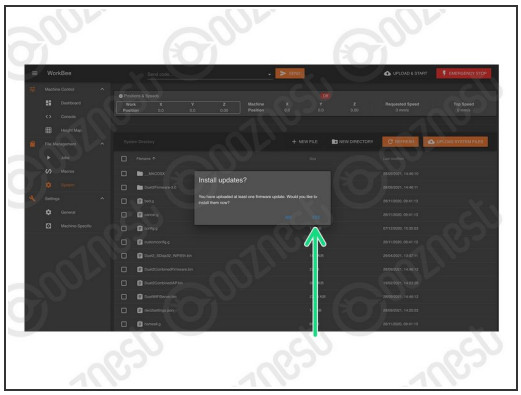
© 2022

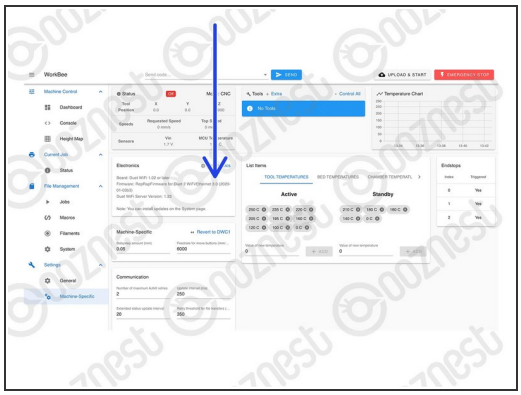
Step 4 — Upload IAPS



- Go to File Management > System and press 'Upload System Files'
- Navigate to where you extracted the download.
  - Inside, select Step4.zip
  - Wait until the upload is complete and then press 'Close'

Step 5 — Update to 3.0

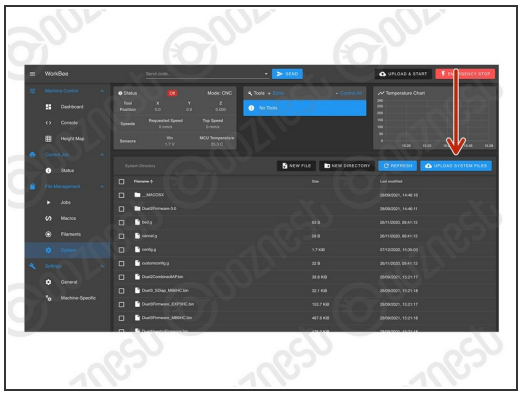



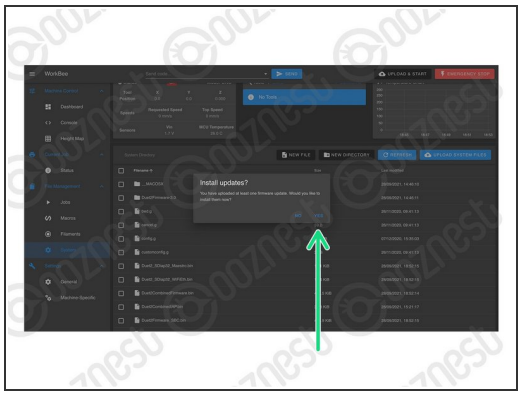


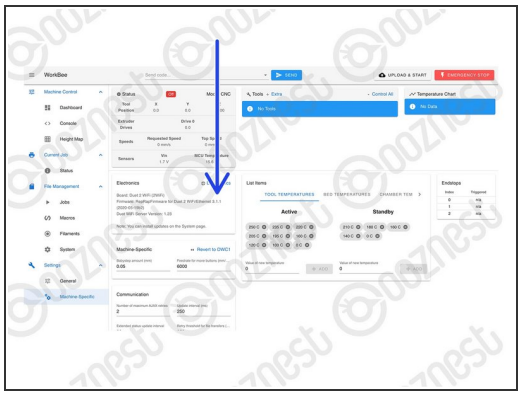
- Go to File Management > System and press 'Upload System Files'
- Navigate to where you extracted the download.
  - Inside, select Step5.zip
  - Confirm the installation.
  - The WorkBee will disconnect, be patient and wait until it reconnects.
  - Go To System > Machine-Specific. It should now say 3.0.

⚠ If it does not say 3.0. Repeat this Step. If it still does not change to 3.0 Contact Us

Step 6 — Update to 3.1.1



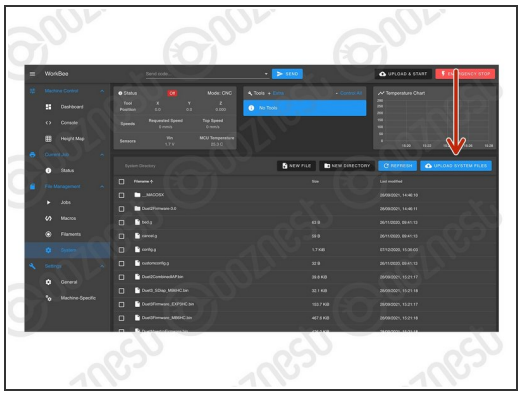


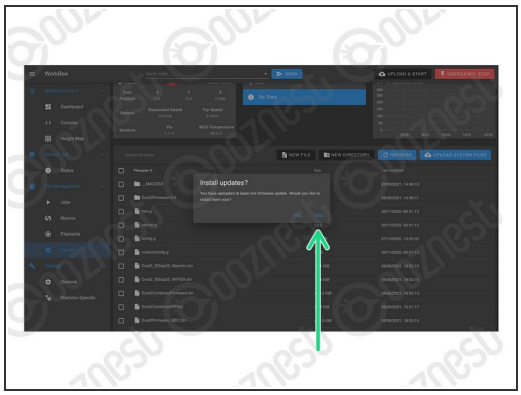


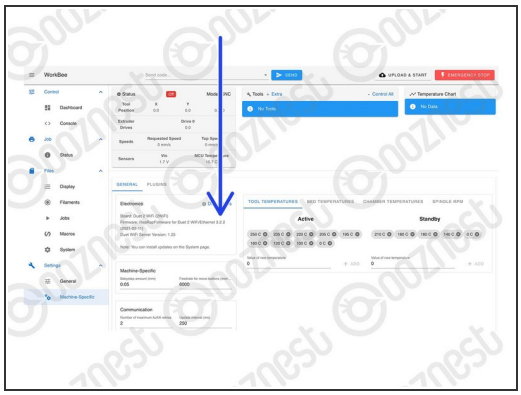
- Go to File Management > System and press 'Upload System Files'
- Navigate to where you extracted the download.
  - Inside, select Step6.zip
  - Confirm the installation. Wait until it reconnects.
  - Go To System > Machine-Specific. It should now say 3.1.1.

⚠ If it does not say 3.1.1. Repeat this Step. If it still does not change to 3.1.1 Contact Us

Step 7 — Update to 3.2.2



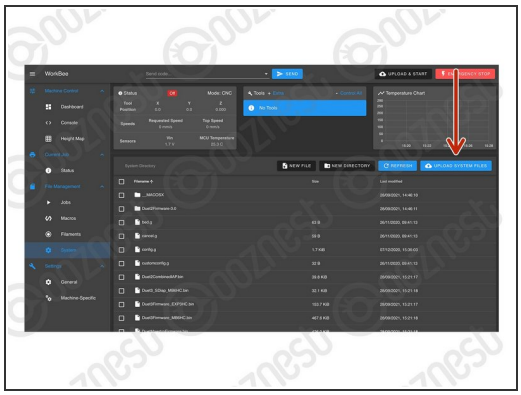


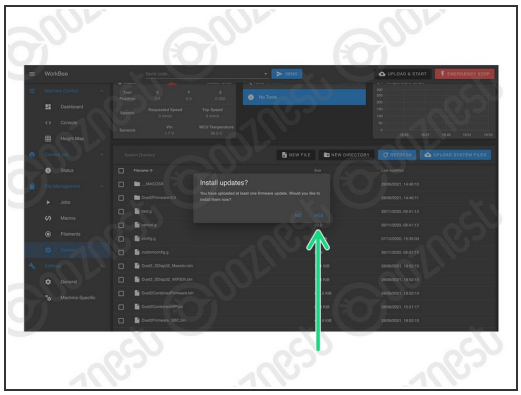


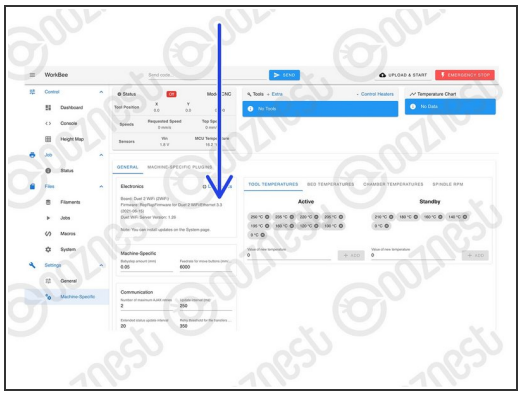
- Go to File Management > System and press 'Upload System Files'
- Navigate to where you extracted the download.
  - Inside, select Step7.zip
  - Confirm the installation. Wait until it reconnects.
  - Go To System > Machine-Specific. It should now say 3.2.2.

⚠ If it does not say 3.2.2. Repeat this Step. If it still does not change to 3.2.2 Contact Us

Step 8 — Update to 3.3



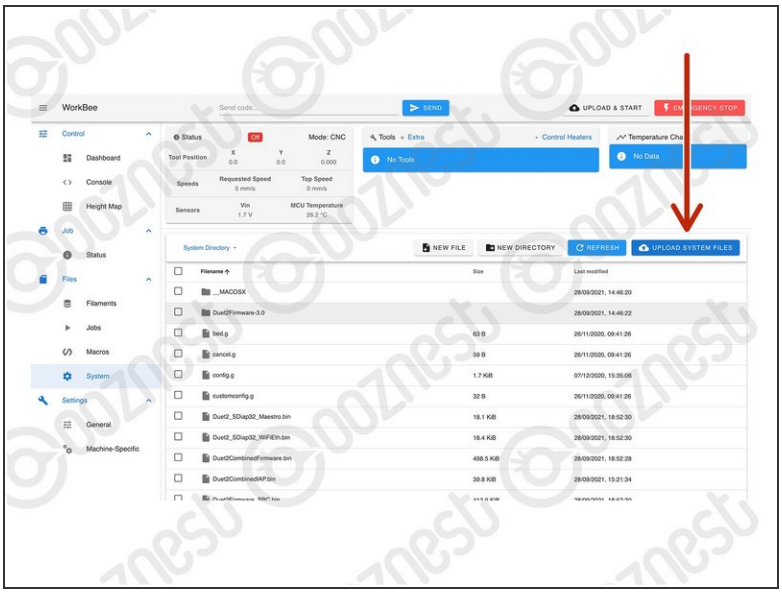


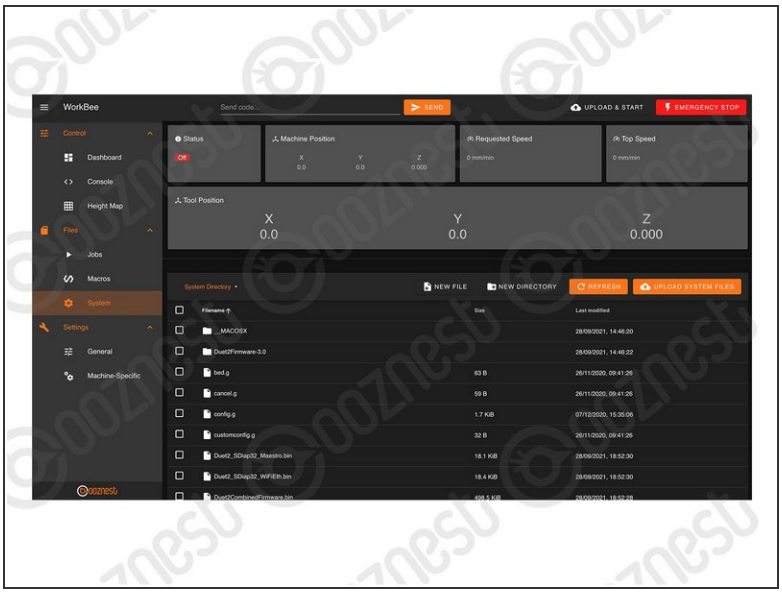


- Go to File Management > System and press 'Upload System Files'
- Navigate to where you extracted the download.
  - Inside, select Step8.zip
  - Confirm the installation. Wait until it reconnects.
  - Go To System > Machine-Specific. It should now say 3.3.

⚠ If it does not say 3.3. Repeat this Step. If it still does not change to 3.3 Contact Us

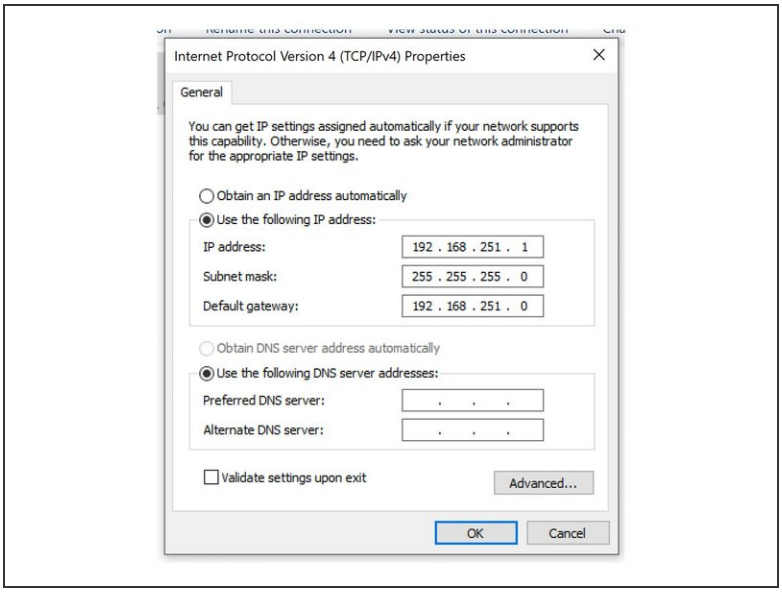
Step 9 — Install WorkBee Control

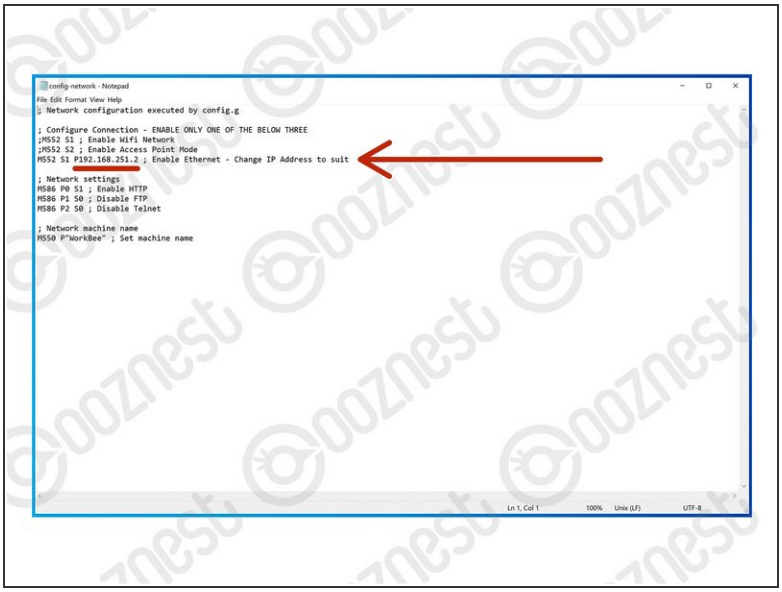




- We can now install WorkBee Control
  - Go to File Management > System.
  - Press 'Upload System Files'
    - Navigate to where you extracted the download.
    - Inside, select Step9.zip and Confirm the installation.
    - It should now look like Image 2. If it does not, refresh your Browser.

Step 10 — Ethernet Users



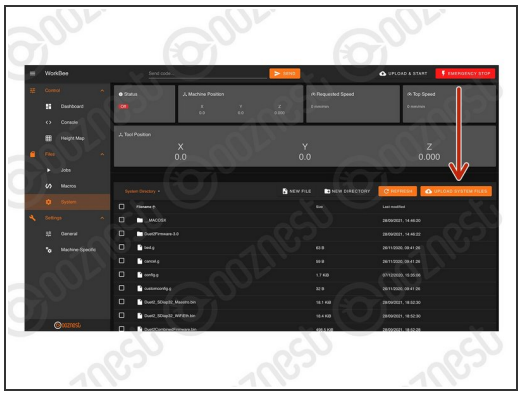
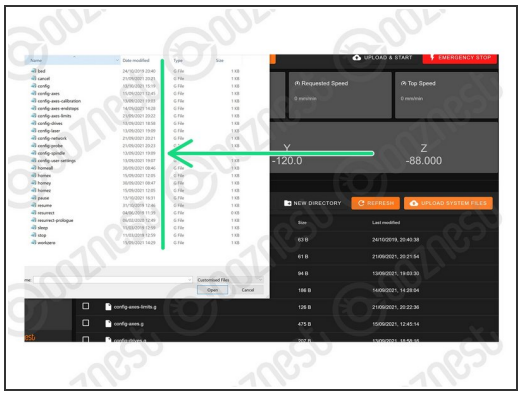
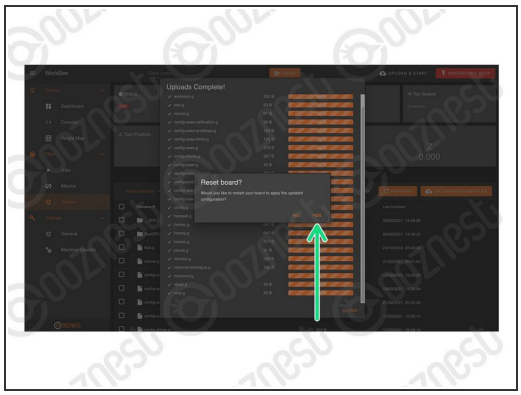


⚠ If you have the Wifi version, skip this step.

⚠ If the IP Address found in Step 2 is 192.168.251.2 skip this step.

- If the IP Address found in Step 2 is different from 192.168.251.2 then complete this step.
- You can either configure your Ethernet Port as per Image 1. If not follow the points below.
- On your computer, navigate to the extracted files, then to Step 11 > Ethernet.
  - Open config-network.g with notepad.
  - Change the IP Address to that found in Step 2.
  - Save and close.

Step 11 — System Settings

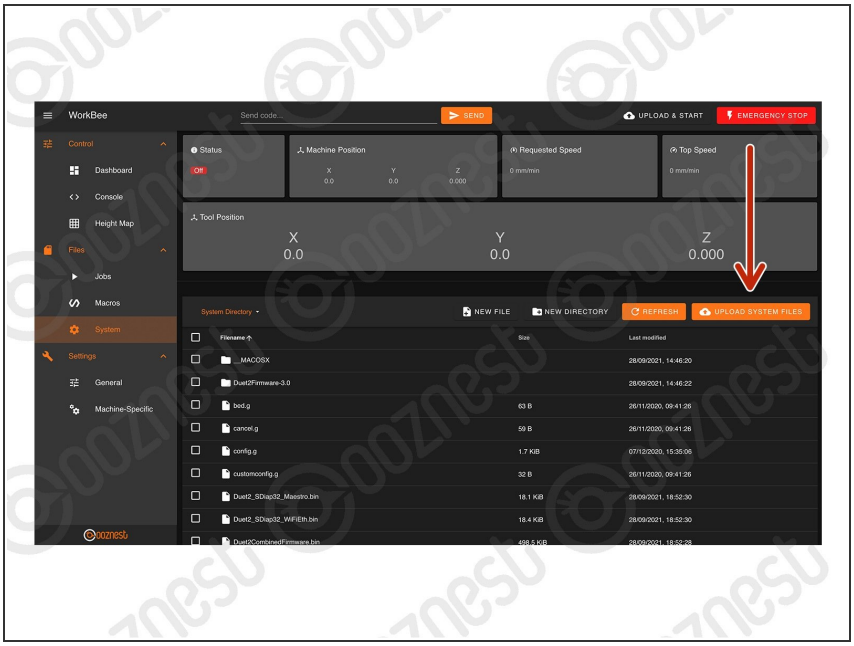
- Go to Files > System and press 'Upload System Files'
- Navigate to where you extracted the download.

⚠ Make sure you follow the steps below **exactly**. Upload the files inside the folder matching your connection method. **Do not upload the folders**

  - Double-click on the 'Step 11' folder.
  - Double-click on the folder matching your connection method.
  - Select & upload all the files inside.
  - Confirm the board restart.

⚠ If it does not restart press the software emergency stop in the top right corner.

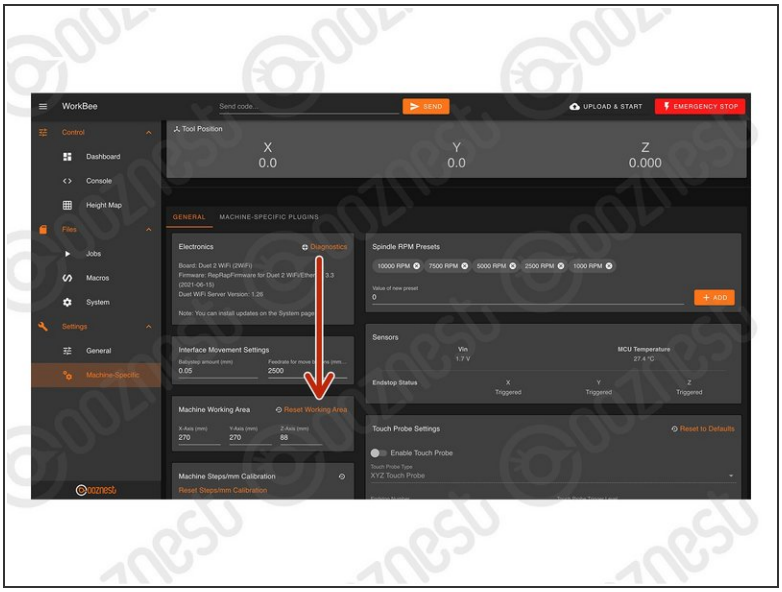
Step 12 — Belt / Belt & Screw Drive Users

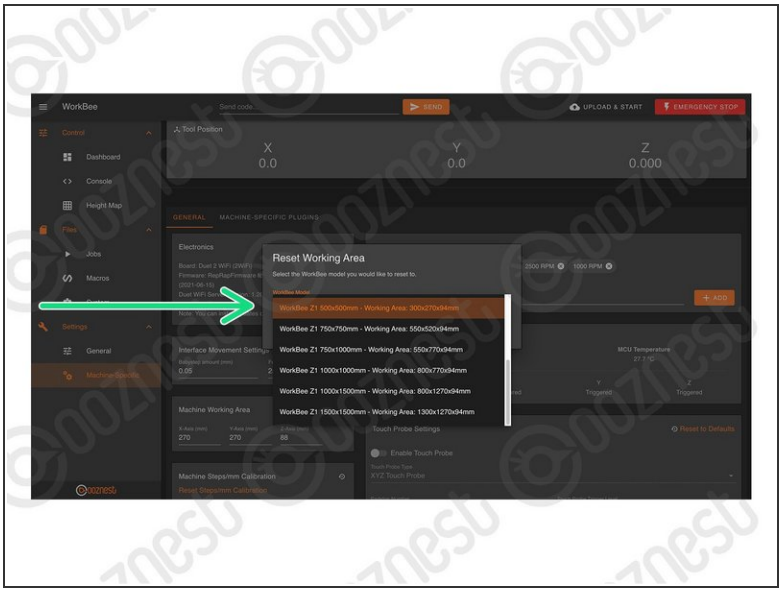


⚠ If your machine is all Screw Drive skip this step.

- If your machine is all Belt Drive complete the point below.
  - Upload all the files inside 'Step12' > 'Belt-Drive'. **Do Not Upload the folder itself, just what is inside.**
- If your machine is all Belt & Screw Drive complete the point below.
  - Upload all the files inside 'Step12' > 'Belt-&-Screw-Drive'. **Do Not Upload the folder itself, just what is inside.**

Step 13 — Configure Machine Size

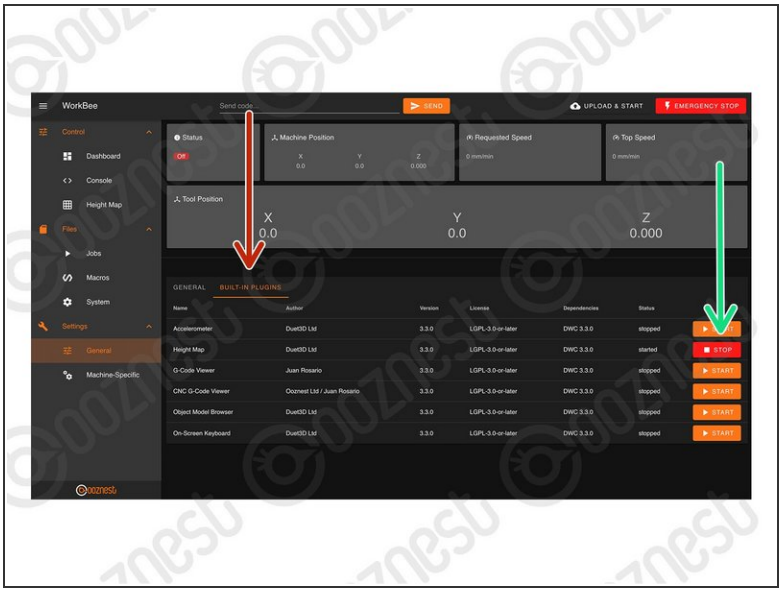


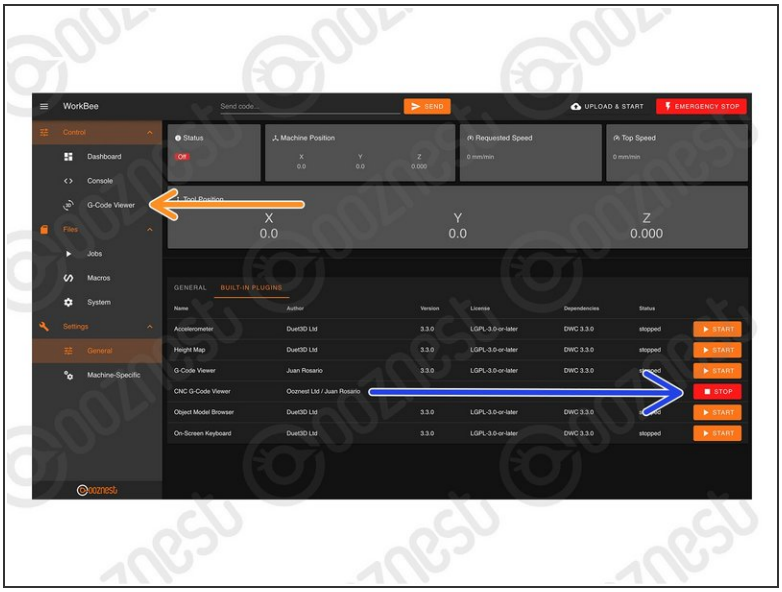


- Go to Settings > Machine Specific
- Under the Panel called 'Machine Working Area' press 'Reset Working Area'
  - Under the 'WorkBee Model' dropdown select your model and machine size.
    - ⓘ If your WorkBee was received before 27/09/2021, then it is a Z1.
  - Confirm by pressing 'Yes'

ⓘ The machine size is now configured. No restart required.

Step 14 — Configure Plugins

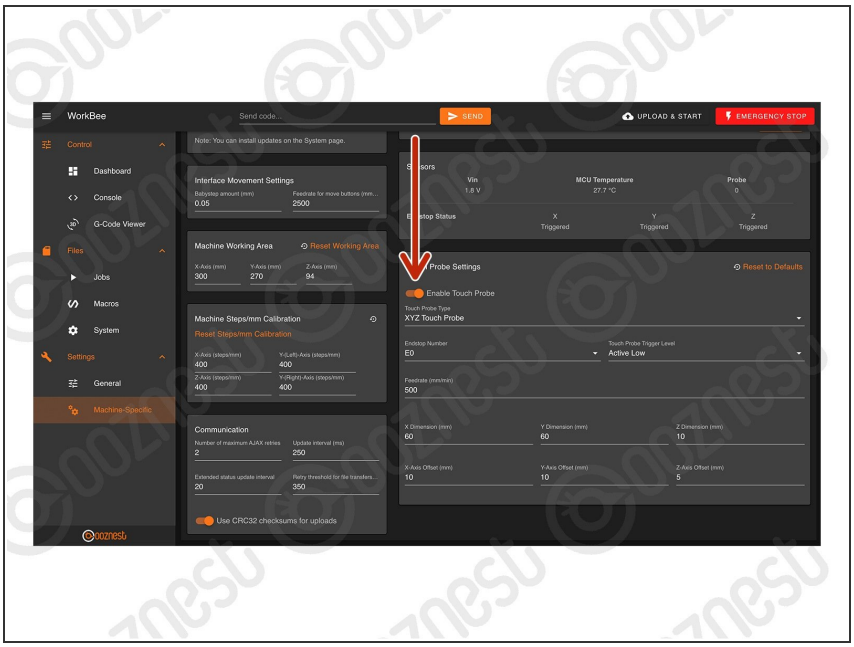




- Go to Settings > General > Built-In Plugins
  - If you don't use the 'Height Map' plugin, press 'Stop'
  - Refresh your browser.
- Go back to Settings > General > Built-In Plugins
  - Start 'CNC G-Code Viewer' plugin.
  - A G-Code Viewer will now show in the Navigation Menu.

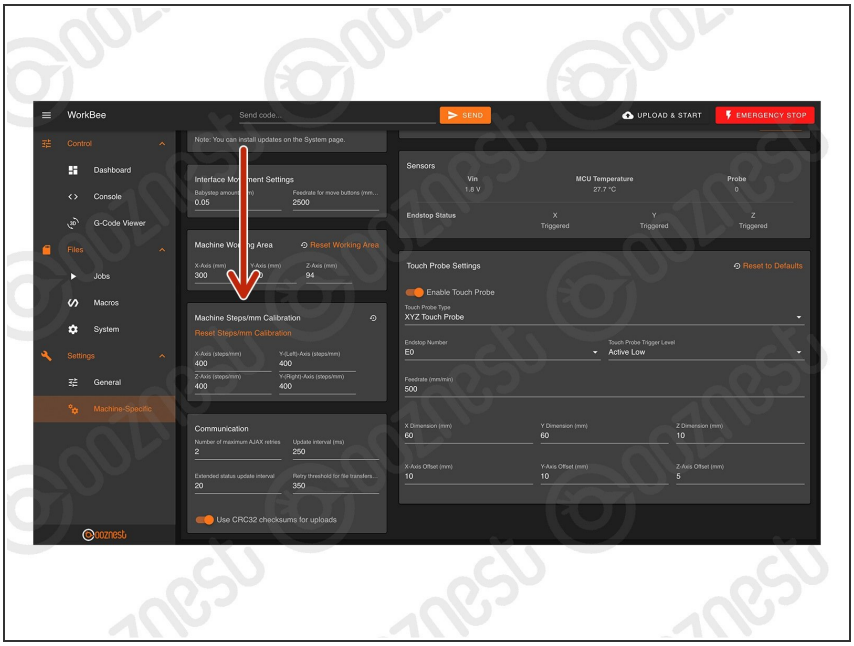
⚠ If you have used previous versions of the Duet G-Code Viewer, you will need to clear your browser cache for it to look correct.

Step 15 — Touch Probe



- If you have our WorkBee Touch Probe, go to Settings > Machine Specific
  - Under the Panel called 'Touch Probe Settings' press 'Enable Touch Probe'

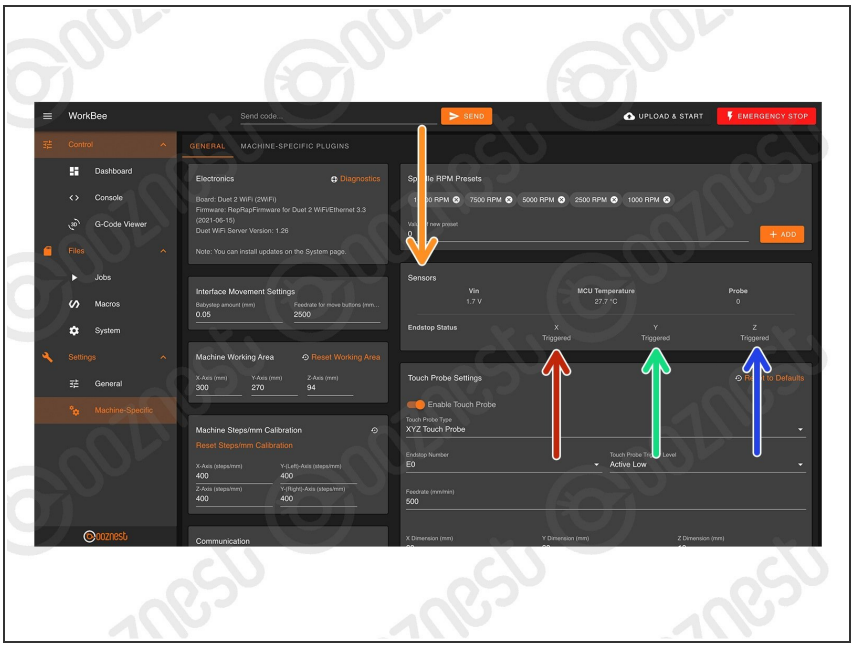
Step 16 — Steps/mm Calibration



- Custom Steps/mm Calibration can be entered inside Settings > Machine Specific
  - Under the Panel called 'Machine Steps/mm Calibration'

ⓘ The two Y-Axis Lead Screws can now be calibrated individually.

Step 17 — Test Limit Switches



- In Settings > Machine Specific, under the Panel called 'Sensors' we can test the Limit Switches.
  - Activate the X-Axis limit switch with your finger and hold.
  - The Endstop Status should change to 'Triggered'

    ⚠ It is normal for there to be a delay between pressing the limit switch and the status being updated. Please do not be concerned, the board will stop the motor instantaneously.
  - Repeat this procedure for the Y-Axis Limit Switch.
  - Repeat this procedure for the Z-Axis Limit Switch.

⚠ If any behave the opposite way round following this guide to invert them How To Invert Limit Switches

Step 18 — Custom Settings

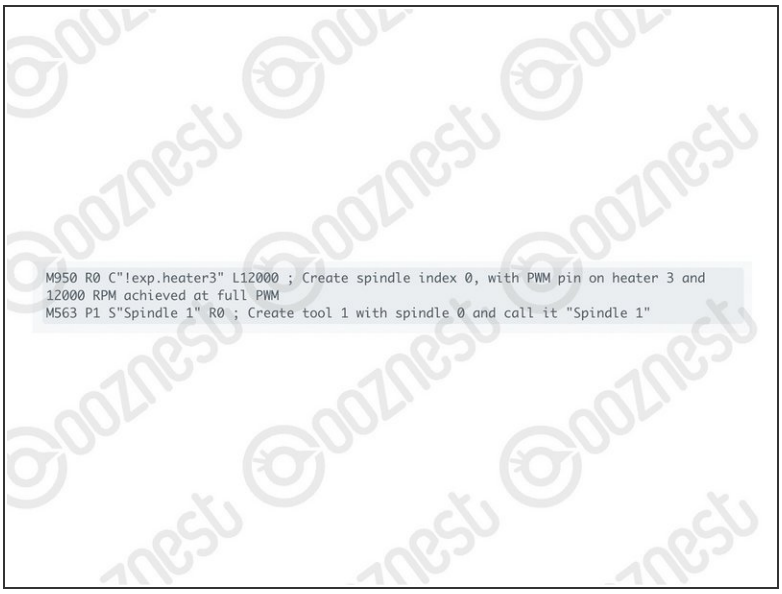


- Under File Management > System. Spindle Settings go in 'config-spindle.g'
  - Laser Settings go in 'config-laser.g'
    - Please note by default the machine will boot into CNC Mode.
    - Upload these two Macros to switch into Laser Mode and Vice Versa. These will show on the Dashboard and can be used to switch between CNC Mode and Laser Mode.
  - Other custom settings go in 'config-user-settings.g'

The old customconfig.g file can be deleted.

Remember after editing any of the files above, press the software emergency stop in the top right corner.

Step 19 — 3.3.0 Firmware Differences





- 3.3.0 Firmware uses GPIO Names (General-Purpose Input/Output) rather than pin numbers.
  - Any custom settings that use pin numbers, will need changing to pin names
  - More info on the changes can be found on Duet's Dozuki
- For any custom Spindle/Laser or other settings, you will need to convert the commands.
  - For a Spindle you would use M950 with M563. See Image 1 for an example.
  - For a Laser you would use M452, but use the Pin Name, instead of the Pin Number. See Image 2 for an example. For an OptLaser 6W wired as their guide the C Parameter would be: C"!exp.heater3"
- If you are unsure about any of the above please Contact Us.

ⓘ We have made all the required changes for our standard operation of the machine.

Thanks for following the guide. Any issues, please contact us!