

railcore

R) Firmware, Config, and Smoke Test

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Step 1 — A Word of Warning



- ⚠ It can be tempting to rush ahead - you're almost done, after all, and you want to see your printer print. Don't rush these steps.
- ⚠ Read each step carefully, and follow the instructions closely, you'll save yourself a lot of time and headache.
- ⚠ If at any point you feel over your head here, stop and ask questions in the RailCore Discord (Best option) or RailCore Facebook group.
- ⚠ Be very careful near your electronics with the cover off. You can install the cover first, but it can be difficult to adjust things, so I install it after the smoke test.
- ⚠ NEVER UNPLUG ANYTHING FROM YOUR DUET WITH THE POWER ON, ESPECIALLY STEPPERS.

Step 2 — Default Config Files



- Your Duet comes with an SD Card pre-loaded with configuration files. We need to change those to the RailCore default files.
- Remove the SD card and put it in your PC. On it you'll find a series of folders.
- Make a copy of the "sys" folder, and call it "sys_original".

⚠ If your Kit came with RRFv2 installed: Copy all of the files from here into your sys folder, overwriting the original files: <https://www.dropbox.com/sh/dmguq264vp7aw...>

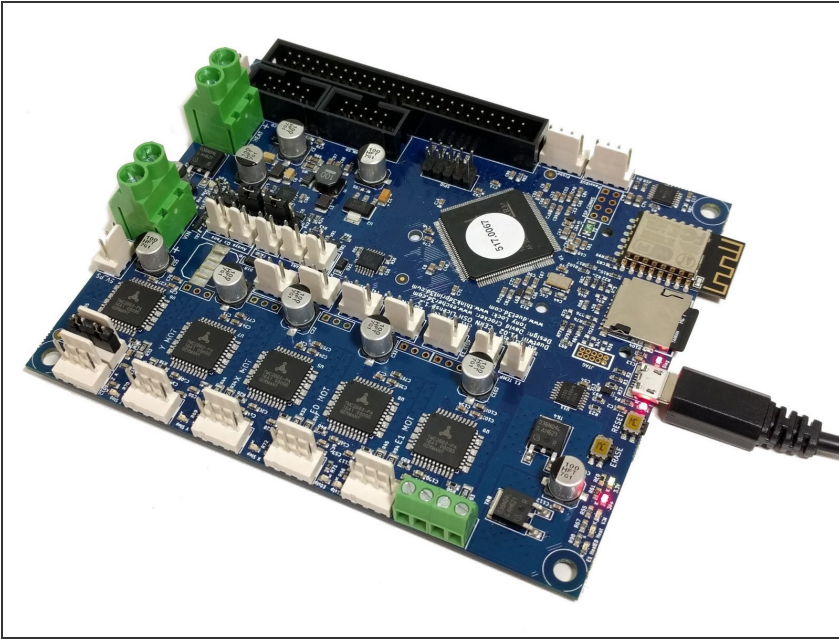
⚠ If your Kit came with RRFv2 installed: Copy the files here into the /macros folder: <https://www.dropbox.com/sh/gp2ur784zapus...>

⚠ If your Kit came with RRFv3 installed: Copy all of the files from here into your sys folder, overwriting the original files: <https://www.dropbox.com/sh/6hvt9u44logql...>

⚠ If your Kit came with RRFv3 installed: Copy the files here into the /macros folder: <https://www.dropbox.com/sh/rnumrdwvmmmqo...>

- Eject the SD card from your PC, and put it back in the Duet.

Step 3 — Connecting to your Duet



- Before powering-on the first time, You need to connect to your duet with a microUSB cable.
- Follow the instructions here for getting connected to your Duet: https://docs.duet3d.com/en/How_to_guides... You can use YAT as suggested, or any other serial console program.
- Don't worry about upgrading your firmware yet, but take note of the version installed.
- Send an M115 command to your Duet, be sure you see "Duet 2 WiFi + Duex 5" in the output.
 - If you do not see Duex 5, STOP. Your Duet to Duex5 ribbon connector is not working. Disconnect the USB to shut off the Duet and fix it before proceeding.
- Continue following the instructions to get the Duet connected to your network.
- Ensure that you can reach your Duet via Duet Web Control before disconnecting the USB. When you unplug the USB the duet will lose power.

Step 4 — Smoke Test



- Double check all your connections.
- Double check them again.
- Once the printer is powered, do not work on the electronics until you power it off. Keep your fingers entirely away from the electronics area while the printer is on.
- Connect the power cord to the IEC inlet plug.
- Power on the printer.
- You should be able to connect to the web interface you set up earlier.

Step 5 — Updating the Duet Firmware



- Connect to your Duet via the web interface.
- Navigate to the *Settings, Machine Specific* and look under *Electronics* to see your Firmware version. Under *Settings, General* you can see the Duet Web Control (DWC) version. If you're not at *Reprap Firmware 2.05.1*, *DuetWebControl 2.0.7*, and *DuetWiFiServer-1.23* (for WiFi versions), follow the steps below to upgrade.
 - Download Duet2Firmware-2.05.1.zip and aip4e.bin from <https://github.com/Duet3D/RepRapFirmware...>
 - In the Duet Web Control GUI, navigate to the "System" section and select **UPLOAD SYSTEM FILES**.
 - Upload iap4e.bin into System files. (It might be there already.)
 - Upload Duet2Firmware-2.05.1.zip and reboot when prompted. Note that the .zip file should be sent as-is, and not extracted on your PC.
 - Check your firmware versions in the GUI to make sure they match the expected versions.

Step 6



- Now is a good time to install your top and left panels. Each gets (4) M3 x 16mm button head bolts, (4) m3 washers, and (4) m3 nuts.
- Install your Ebox Cover using (4) M3 x 8mm button head bolts.