

Ortur Laser Master 2 S2



Laser Master 2 **S2**

Firmware Update Instructions v1.87 15 December 2021

Ortur Laser Master 2 S2 Firmware

Your **Ortur Laser Master 2 S2** firmware is the operating system that resides inside the motherboard and controls all operations of the machine as well as the interactions between the motherboard and the host computer.

In some circumstances, a firmware update is required to improve the **Ortur Laser Master 2 S2** performance or fix discovered issues. In some less common situations, a firmware upgrade might be required to clear issues caused by user error. Please read the instructions below carefully.

General Recommendations

When **NOT** to upgrade or reinstall the firmware

- Not yet contacted support at <https://ortur.tech/support> to resolve an issue
- **Ortur Laser Master 2 S2** is working correctly and showing no problems

When **TO** upgrade the firmware

- Advised to do so by **Ortur** or **Ortur Customer Support**
- A new version of the firmware is posted at <https://ortur.tech/latest-firmware> advising a firmware update to fix a discovered problem or enhancing **Ortur Laser Master 2 S2** functionality

Requirements to upgrade the firmware safely

- This guide covers updating procedure on Microsoft Windows, MacOs and Linux. (This procedure was already validated in Windows 11)
- Direct Connection from the **Ortur Laser Master 2 S2** to your computer USB port. Note: *Some users reporting the use of USB Hubs may cause problems.*
- Have access to software that allows decompressing a .zip file. (Note: *Windows, MacOs and Linux will natively perform this operation. However 3rd party extractors are also usable*)
- Disable temporarily any 3rd party Antivirus Software. Although normally not required it is still a recommendation.

Basic Troubleshooting

There are a few rare circumstances on which applying a new firmware to your **Ortur Laser Master 2 S2** might lead to some problems. Below we will list a few of these known issues and how to best address them:

Firmware Write Fail

In some operating systems, specially Windows, security software as Anti-virus or AntiMalware can prevent the complete copy of the BIN firmware file to your **Ortur Laser Master 2 S2** motherboard, causing the machine to become unresponsive. These events are rare but can happen, specially on Pre Windows 8 Operating systems.

Solution:

1. Please temporarily disable the security software and attempt firmware upgrade procedures a second time;
2. Use a different computer. Many users that experience the above issue reported that simply using a different computer allowed for the firmware update process to finalize without problems.
3. If neither solution above was successful, please get in touch via our Ticketing system at <https://ortur.tech/support>. Ortur Support team will most likely suggest a remote session to your computer to allow an untouched file transfer to your **Ortur Laser Master 2 S2** motherboard.

Wrong Firmware file

Your **Ortur Laser Master 2 S2** is expecting a particularly type of file when you try a firmware update. If the motherboard identifies a wrong file format or type it will automatically reject this file and turn off. This will result in the following errors:

Windows: "Error 0x800701B1: A Device which does not exist was Specified"

Mac: "The operation can't be complete because an unexpected error occurred (error 100006)"

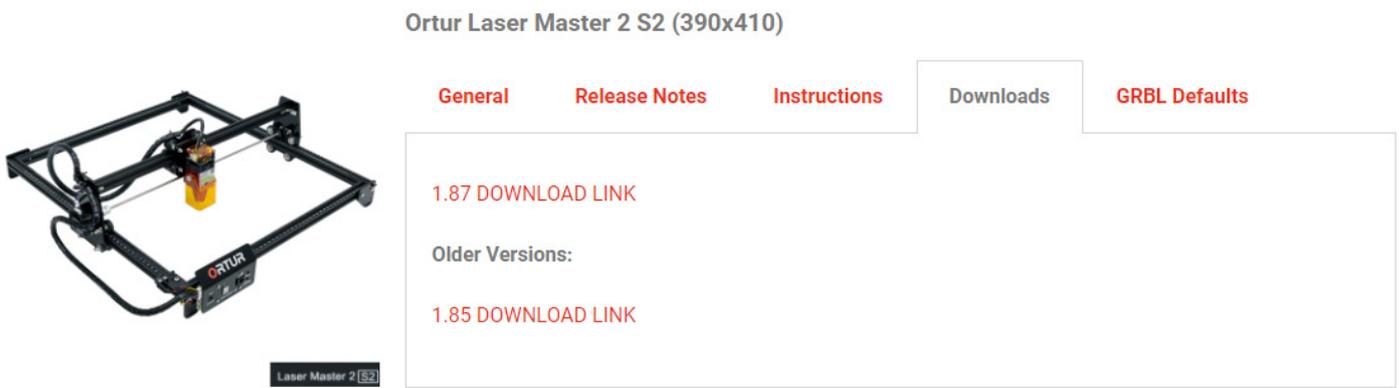
Linux: "Error While Copying. Error When getting information from file. No such file or directory"

Solution: Please verify that the firmware file is the correct series for your **Ortur Laser Master 2 S2**. [Only 1.8x series firmware files are accepted.](#)

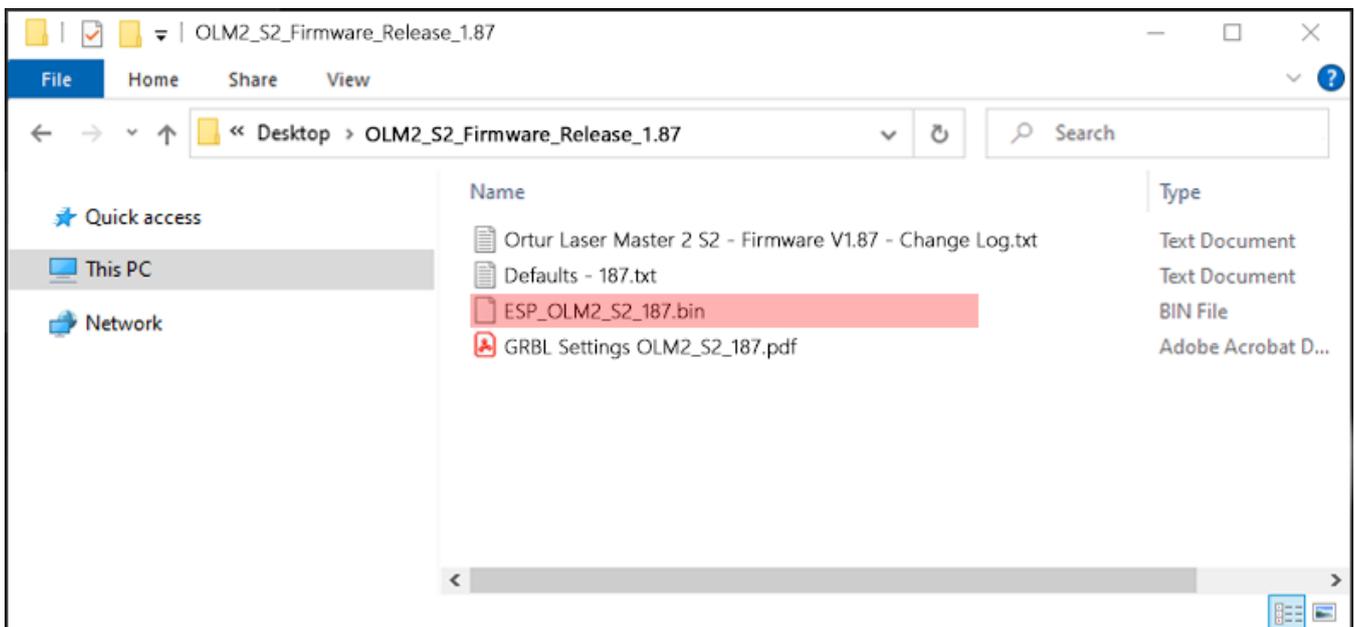
Update Procedure - Windows

Step 1 - Retrieve Firmware Files

1. Visit <https://ortur.tech/latest-firmware>
2. Browse through the web-page until you find **Ortur Laser Master 2 S2**;
3. Select the Download Tab and click **DOWNLOAD LINK**;
4. Save the .Zip file to your desktop;



5. Unzip the downloaded file using Windows, WinRar, 7-zip, WinZip or any unpacker program compatible with your computer;



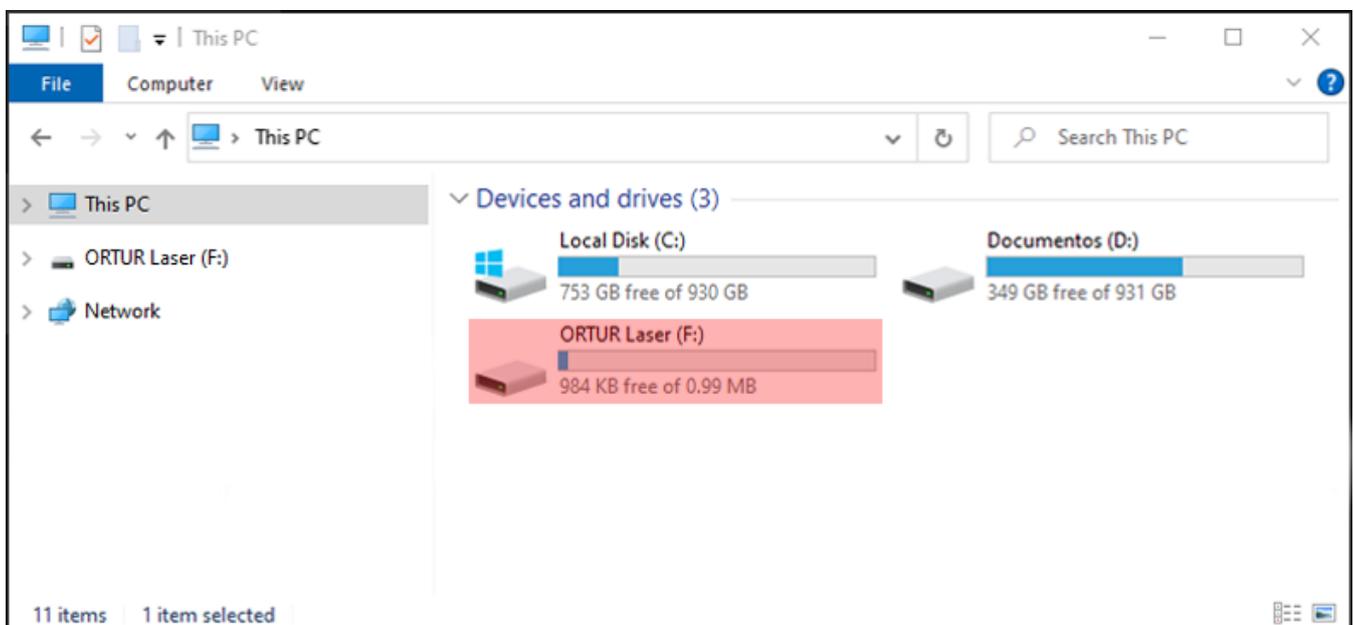
Step 2 - Enable Firmware mode on your Ortur

1. Connect your **Ortur Laser Master 2 S2** via USB directly to your computer - do not use USB Hubs. Keep the **Ortur Laser Master 2 S2** in Off and confirm the emergency switch is NOT engaged;
2. On the front of your **Ortur Laser Master 2 S2** motherboard press the following sequence of buttons:
 - Press and Hold the POWER button for 5 seconds
 - Without releasing the held POWER button, after 5 seconds elapse, tap RESET button for 1 second.



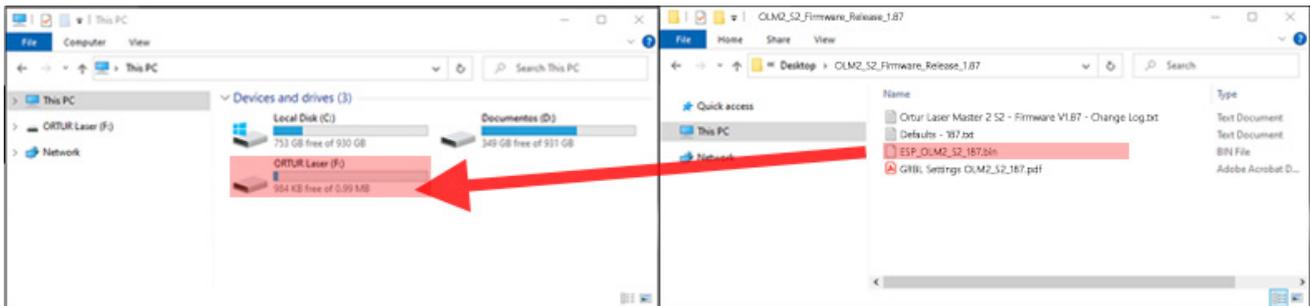
OLM-ESP-V1.2 Motherboard

3. Depending on how accurate the button presses are performed, this operation might need to be repeated.
4. The press buttons are successful when “**ORTUR LASER**” device appears in “This PC” as a drive. *(The drive letter might be different than F:)*



- From the extracted/unzipped folder drag and drop onto the “**ORTUR LASER**” drive the file ESP_OLM2_S2_187.bin. Alternatively, right click the ESP_OLM2_S2_187.bin file and press copy. Navigate to “**ORTUR LASER**” drive and right click and press paste; (Ctrl + C and Ctrl + V will also work)

Note: The file will have the version number. At the time of writing of this guide is ESP_OLM2_S2_187.bin. Any other files included in the ZIP file should be ignored unless advised by Ortur Support otherwise



- Wait a few moments to be sure the file is copied properly;
- Wait 5 seconds. **Ortur Laser Master 2 S2** will power off automatically;
- Confirm that your Power Adapter is plugged in and its receiving Mains Power;
- Power on your **Ortur Laser Master 2 S2** by pressing Power Button for 5 seconds;
- Monitor your **Ortur Laser Master 2 S2**, making sure it performs the homing cycle correctly.

Step 3 - Confirm Firmware was written correctly

In order to confirm the Firmware was written successfully to your **Ortur Laser Master 2 S2** Motherboard, is necessary to connect your machine to one of the following software: **LaserGRBL** or **Lightburn**.

Additionally is required to restore Factory Default settings on the Motherboard to clear the EEPROM (Electrically Erasable Programmable Read-Only Memory) - internal motherboard memory.

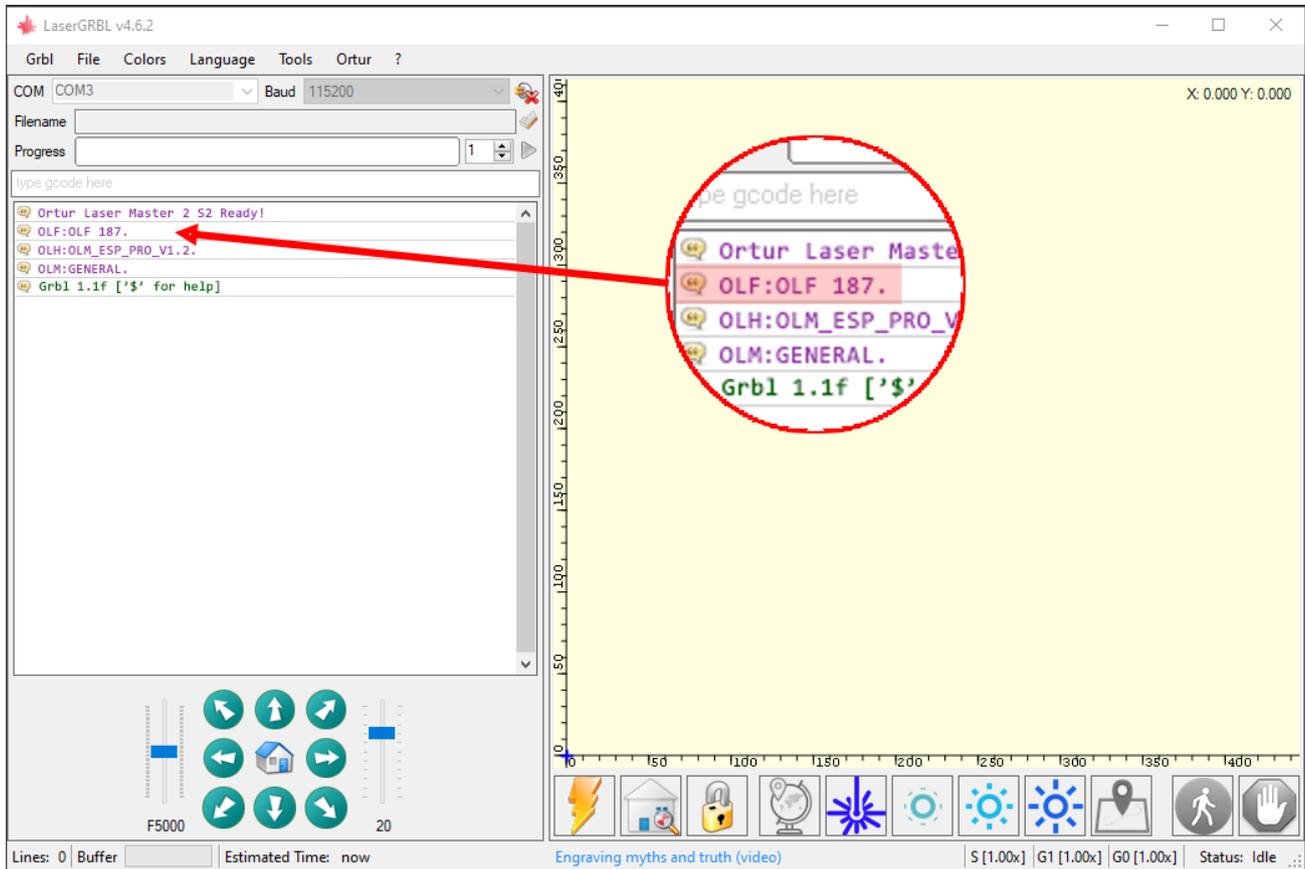
Important to NOTE: any customization on the GRBL settings will be overwritten.

LaserGRBL

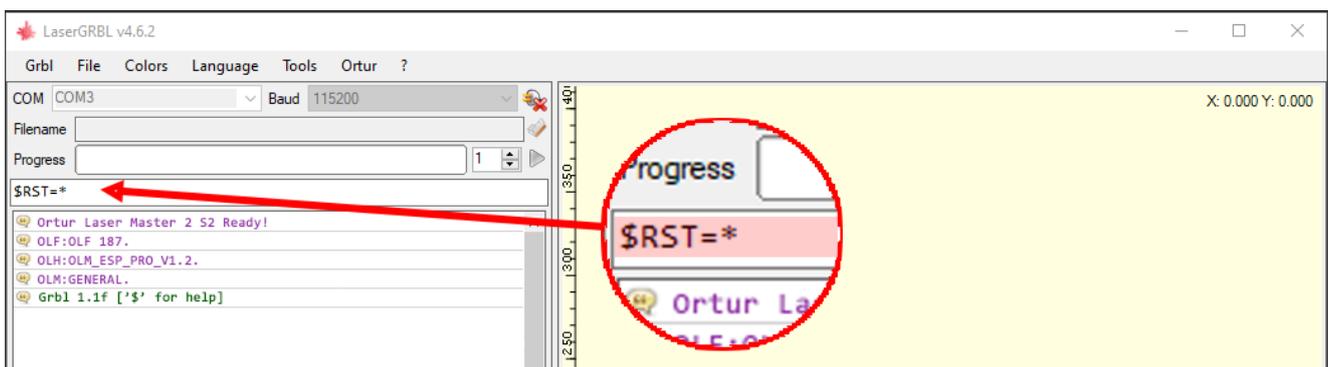
1. Launch **LaserGRBL** software;

Note: We would recommend updating to the latest version as well. LaserGRBL 4.6.2 is the latest version at the time of writing of this guide

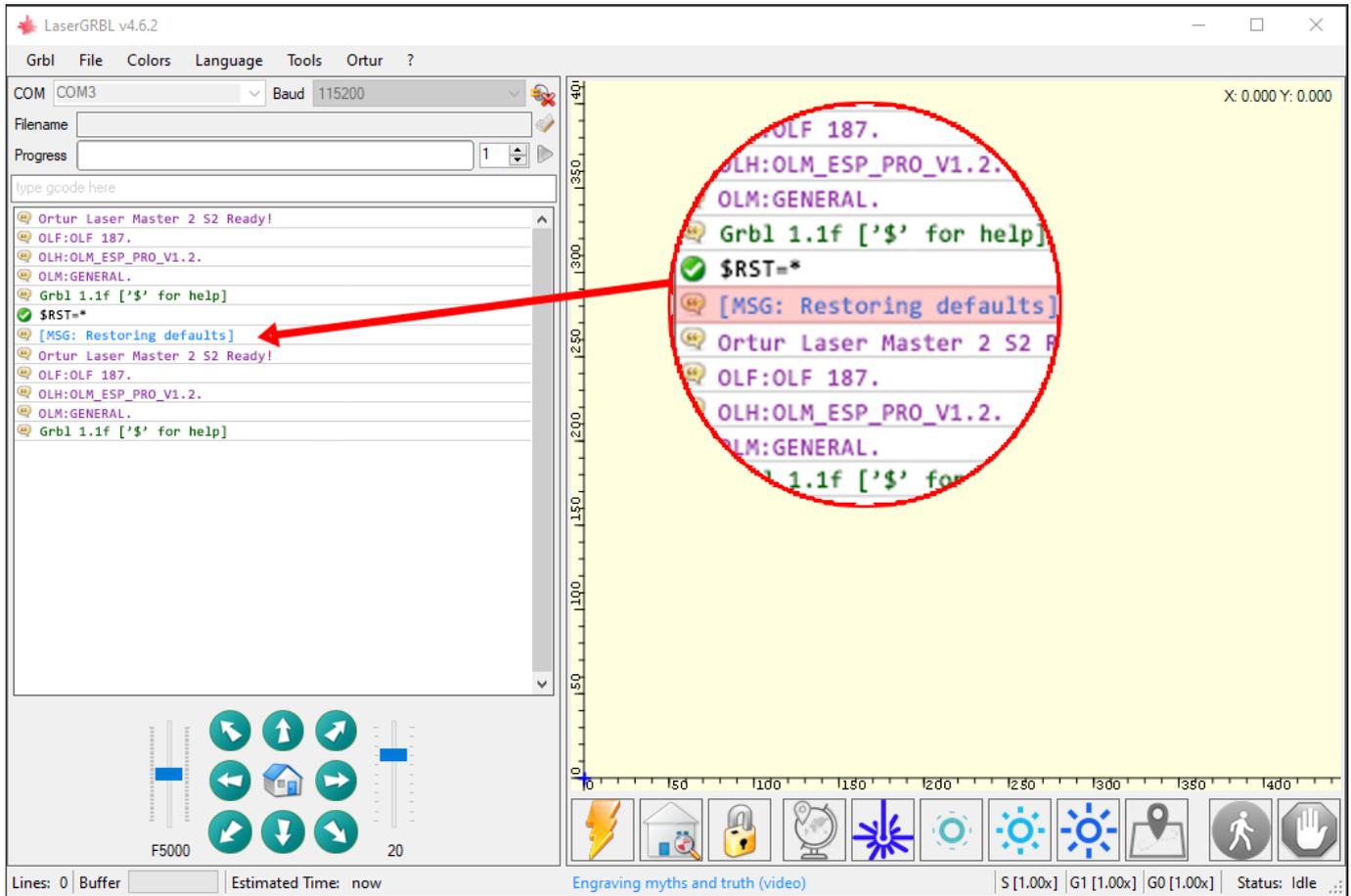
2. Select the appropriate COM port for your **Ortur Laser Master 2 S2** and press **Connect** button;



3. Once connection is established, console window will show the welcome message;
4. Confirm that the welcome message shows **OLF 187** as latest firmware. This confirms the update procedure was successful.
5. Although probably not necessary, click the “Padlock” button to clear any possible errors and set the motherboard into listening mode;
6. Above console window, where **LaserGRBL** has a input box saying (Type Gcode Here) enter the following command: **\$RST=*** and press the **Enter** key;



7. A response is given by the **Ortur Laser Master 2 S2** motherboard, acknowledging the command by sending a **[MSG: Restoring defaults]**



The firmware update procedure is now complete!

The **Ortur Laser Master 2 S2** is ready to be used normally.

Important Note:

Any customization of the GRBL settings prior to firmware update was overwritten. If they are necessary by any reason they should be introduced again.

Possible reminders for GRBL settings customizations:

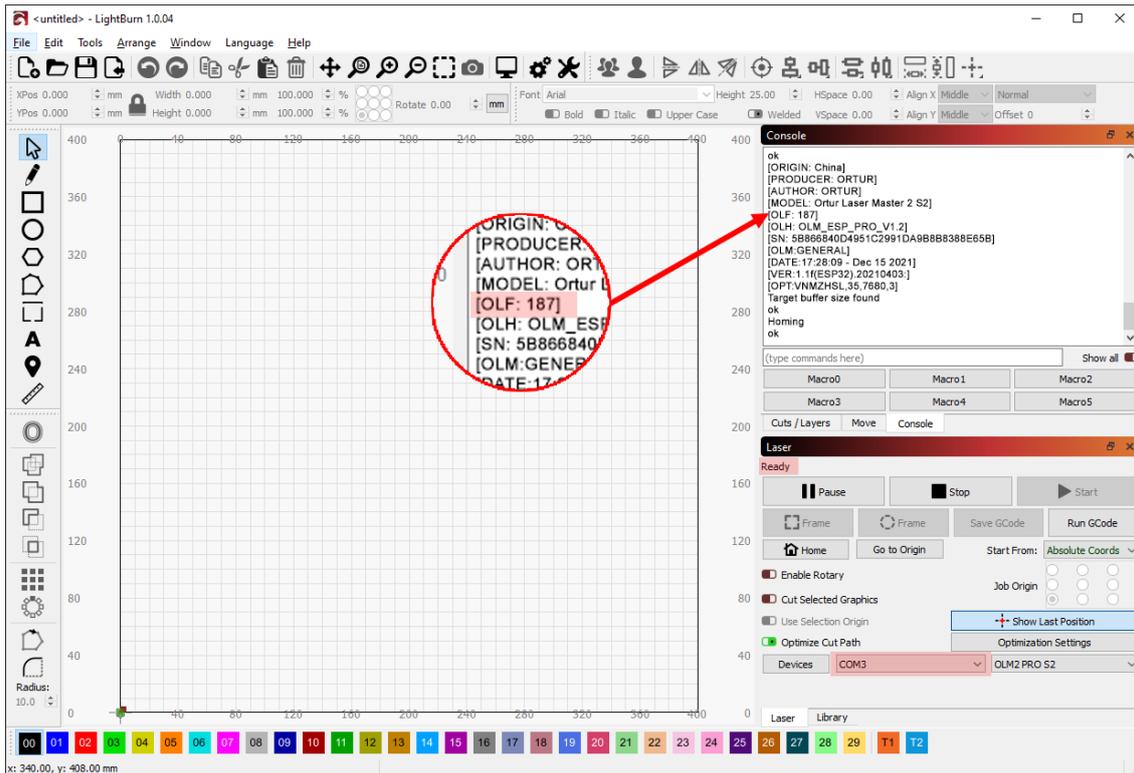
- For the use of the **Ortur YRR** and **Ortur YRR 2.0**;
- Installation of a 3rd party Z-axis adjuster (Y Max Travel setting);
- Flame sensor Disable or optimization;
- Gshock Sensor sensitivity changes;
- Any other GRBL setting personalization;

LightBurn

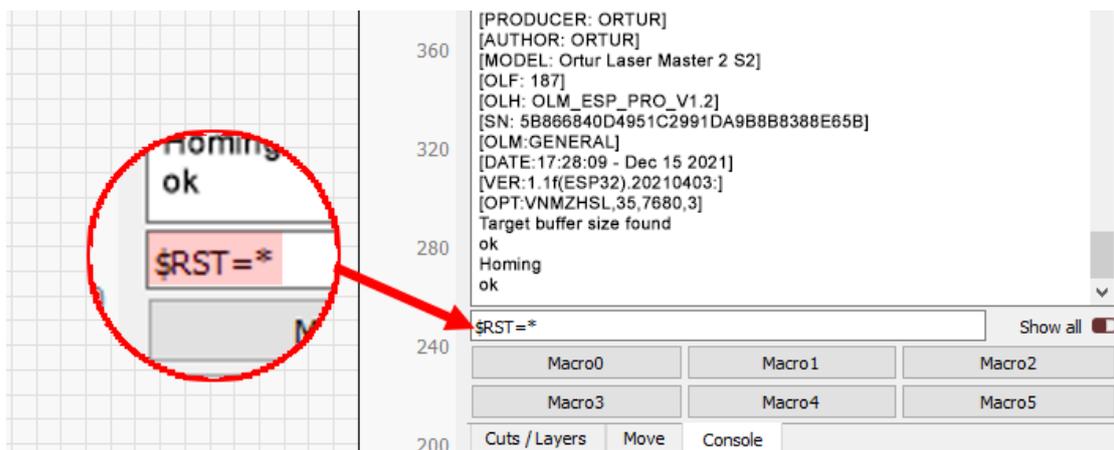
1. Launch **LightBurn** software;

Note: We would recommend updating to the latest version as well. Lightburn 1.0.04 is the latest version at the time of writing of this guide

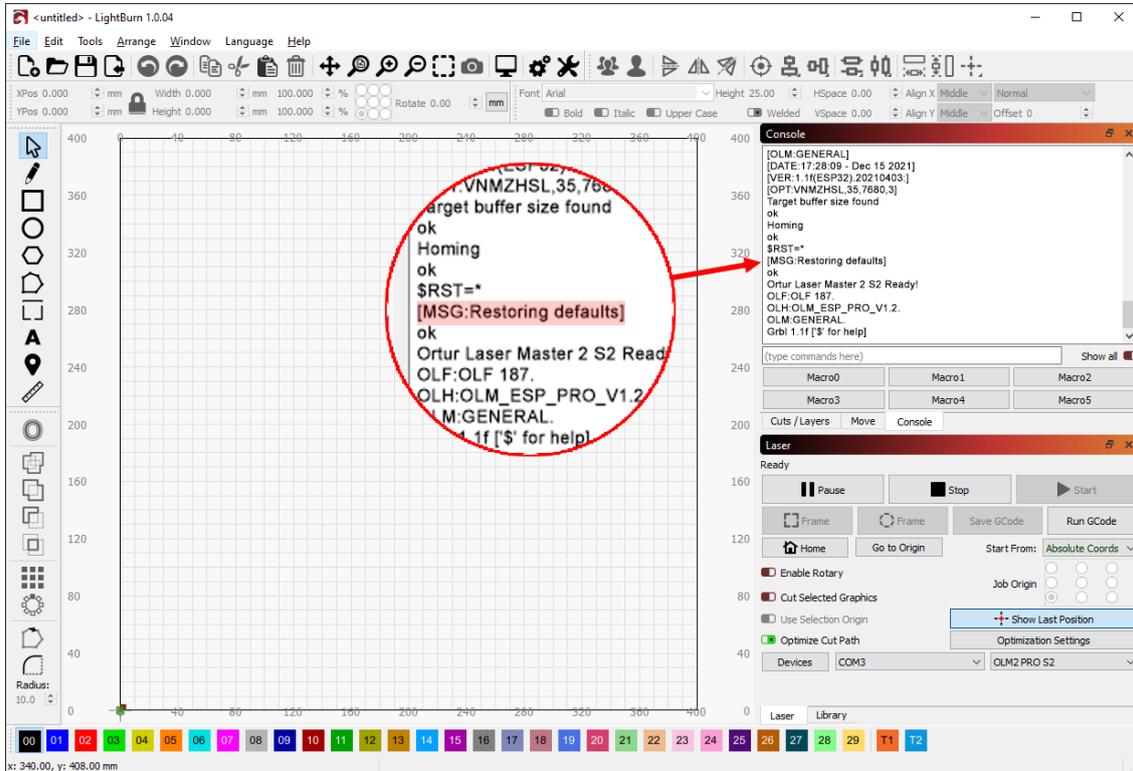
2. Select the appropriate COM port for your **Ortur Laser Master 2 S2** and wait for the **Connection** status “**READY**”;



3. Once connection is established, console window will show the welcome message. If Console is not visible go to Window menu - Console.
4. Confirm that the welcome message shows **[OLF 187]** as latest firmware. This confirms the update procedure was successful.
5. Below console window, where **LightBurn** has a input box saying (type commands here) enter the following command: **\$RST=*** and press the **Enter** key;



7. A response is given by the **Ortur Laser Master 2 S2** motherboard, acknowledging the command by sending a **[MSG: Restoring defaults]**



The firmware update procedure is now complete!

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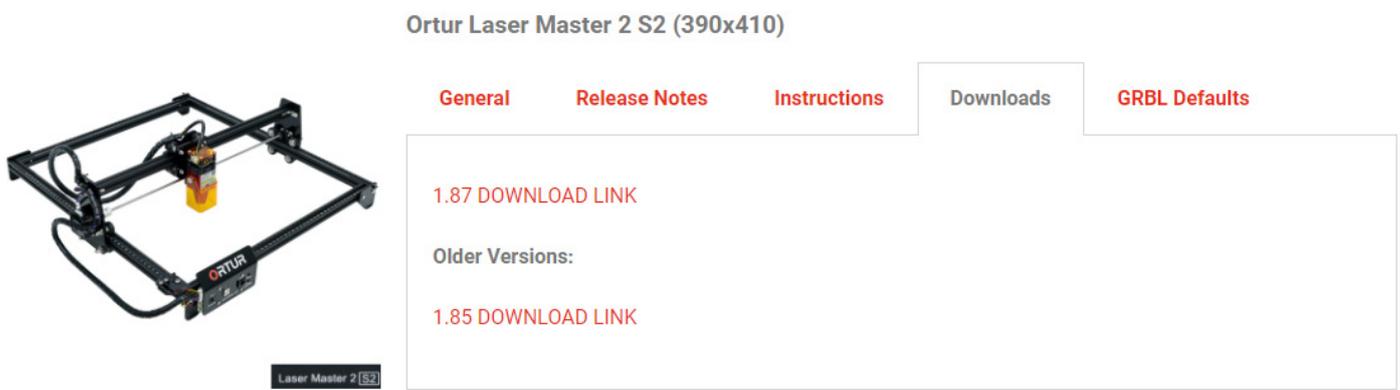
Possible reminders for GRBL settings customizations:

- For the use of the **Ortur YRR** and **Ortur YRR 2.0**;
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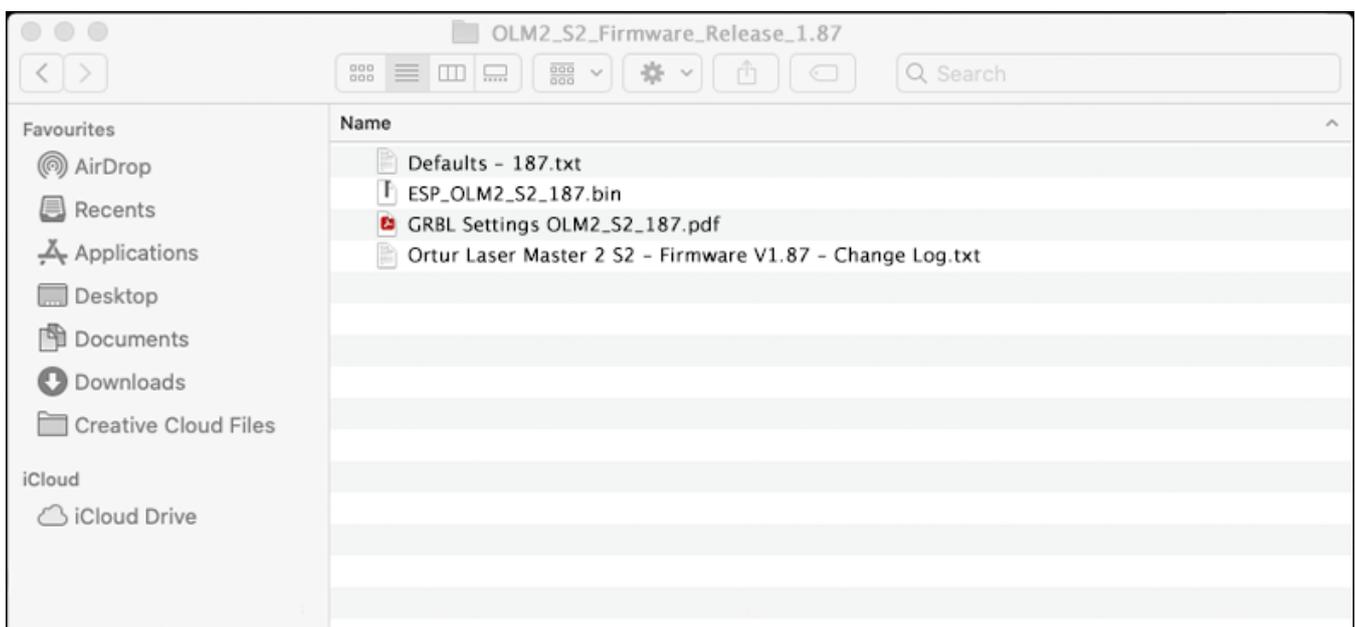
Update Procedure - MacOs

Step 1 - Retrieve Firmware Files

1. Visit <https://ortur.tech/latest-firmware>
2. Browse through the web-page until you find **Ortur Laser Master 2 S2**;
3. Select the Download Tab and click **DOWNLOAD LINK**;
4. Save the .Zip file to your desktop;



5. Unzip the downloaded file using MacOs, The Unarchiver, i-zip, UnRarX or any unpacker program compatible with your MacOs version;



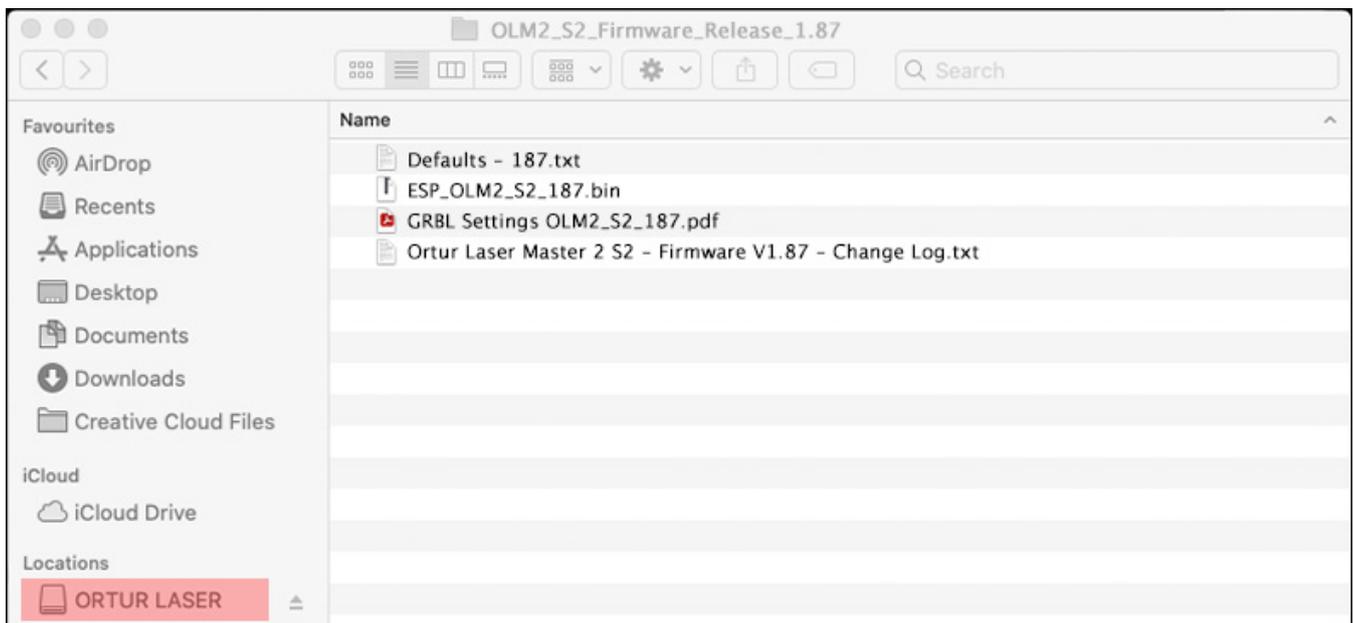
Step 2 - Enable Firmware mode on your Ortur

1. Connect your **Ortur Laser Master 2 S2** via USB directly to your Mac - do not use USB Hubs. Keep the **Ortur Laser Master 2 S2** in Off and confirm the emergency switch is NOT engaged;
2. On the front of your **Ortur Laser Master 2 S2** motherboard press the following sequence of buttons:
 - Press and Hold the POWER button for 5 seconds
 - Without releasing the held POWER button, after 5 seconds elapse, tap RESET button for 1 second.



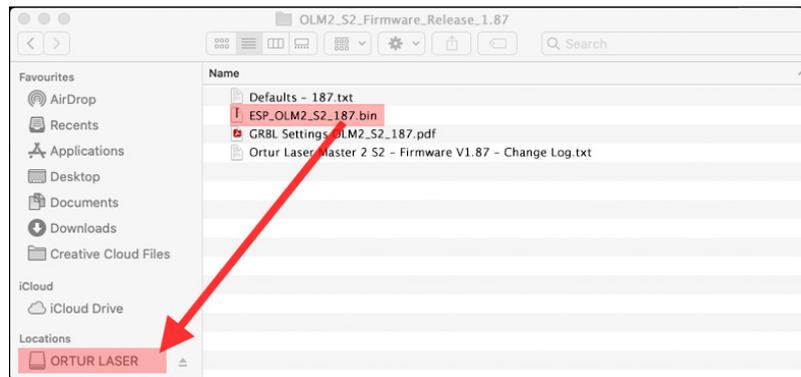
OLM-ESP-V1.2 Motherboard

3. Depending on how accurate the button presses are performed, this operation might need to be repeated.
4. The press buttons are successful when “**ORTUR LASER**” device appears in “Locations” as a drive.



- From the extracted/unzipped folder drag and drop onto the “**ORTUR LASER**” drive the file ESP_OLM2_PRO_S2_187.bin. Alternatively, Ctrl click the ESP_OLM2_PRO_S2_187.bin file and press copy. Navigate to “**ORTUR LASER**” drive and ctrl click and press Paste Item; (Command + C and Command +V will also work)

Note: The file will have the version number. At the time of writing of this guide is ESP_OLM2_PRO_S2_187.bin. Any other files included in the ZIP file should be ignored unless advised by Ortur Support otherwise



- Wait a few moments to be sure the file is copied properly;
- Wait 5 seconds. **Ortur Laser Master 2 S2** will power off automatically;
- Confirm that your Power Adapter is plugged in and its receiving Mains Power;
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Step 3 - Confirm Firmware was written correctly

In order to confirm the Firmware was written successfully to your **Ortur Laser Master 2 S2** Motherboard, is necessary to connect your machine to **Lightburn**.

Additionally is required to restore Factory Default settings on the Motherboard to clear the EEPROM (Electrically Erasable Programmable Read-Only Memory) - internal motherboard memory.

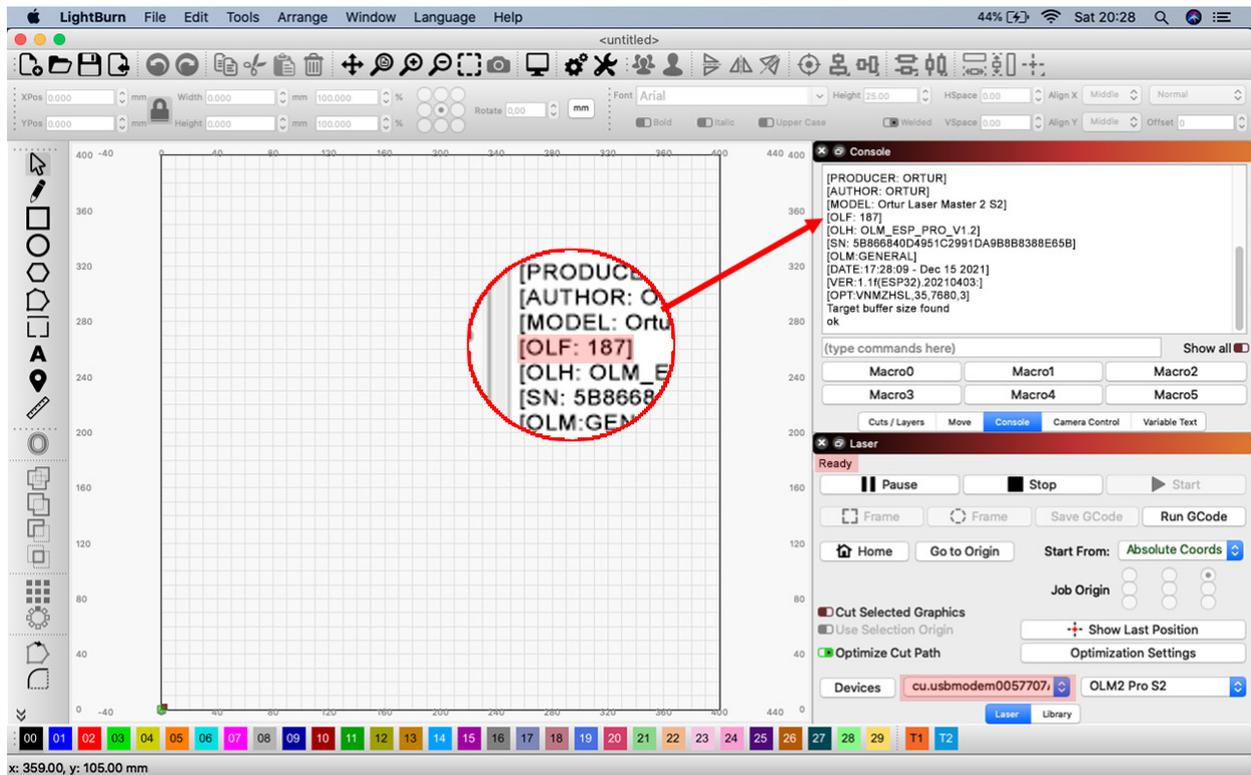
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LightBurn

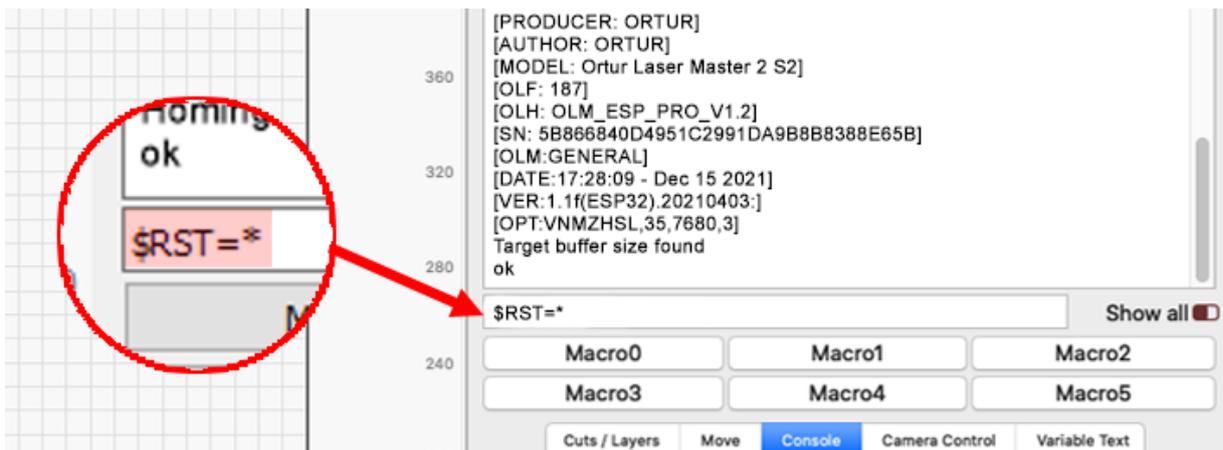
1. Launch **LightBurn** software;

Note: We would recommend updating to the latest version as well. Lightburn 1.0.04 is the latest version at the time of writing of this guide

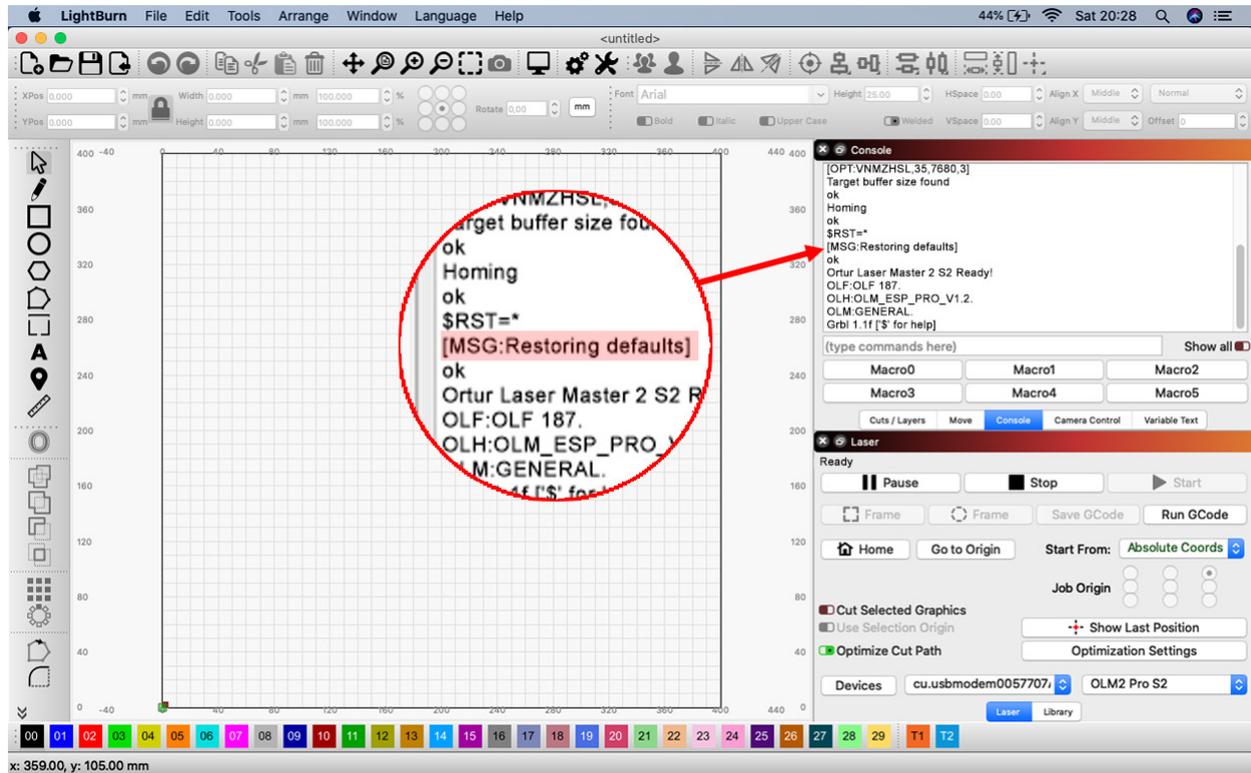
2. Select the appropriate serial port for your **Ortur Laser Master 2 S2** and wait for the **Connection** status “**READY**”;



3. Once connection is established, console window will show the welcome message. If Console is not visible go to Window menu - Console.
4. Confirm that the welcome message shows **[OLF 187]** as latest firmware. This confirms the update procedure was successful.
5. Below console window, where **LightBurn** has a input box saying (type commands here) enter the following command: **\$RST=*** and press the **Enter** key;



7. A response is given by the **Ortur Laser Master 2 S2** motherboard, acknowledging the command by sending a **[MSG: Restoring defaults]**



The firmware update procedure is now complete!

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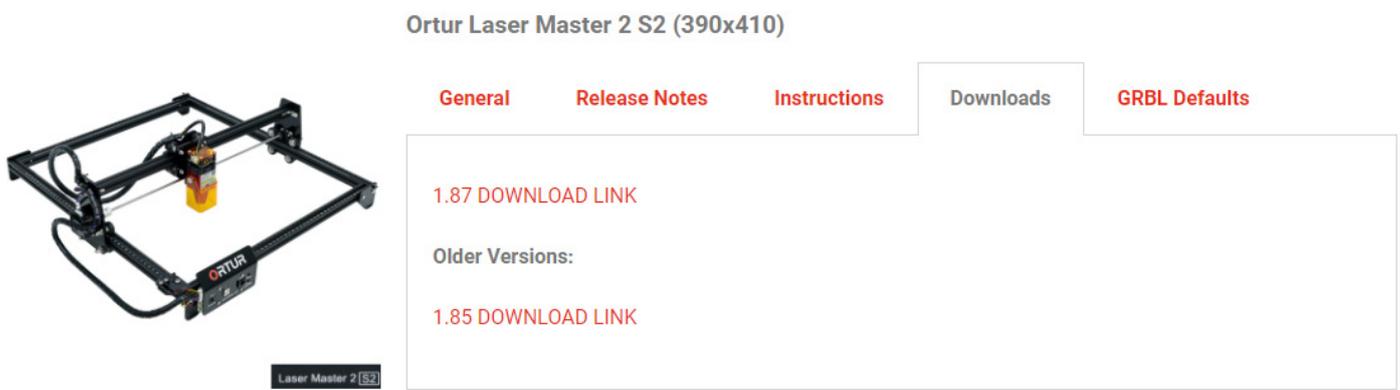
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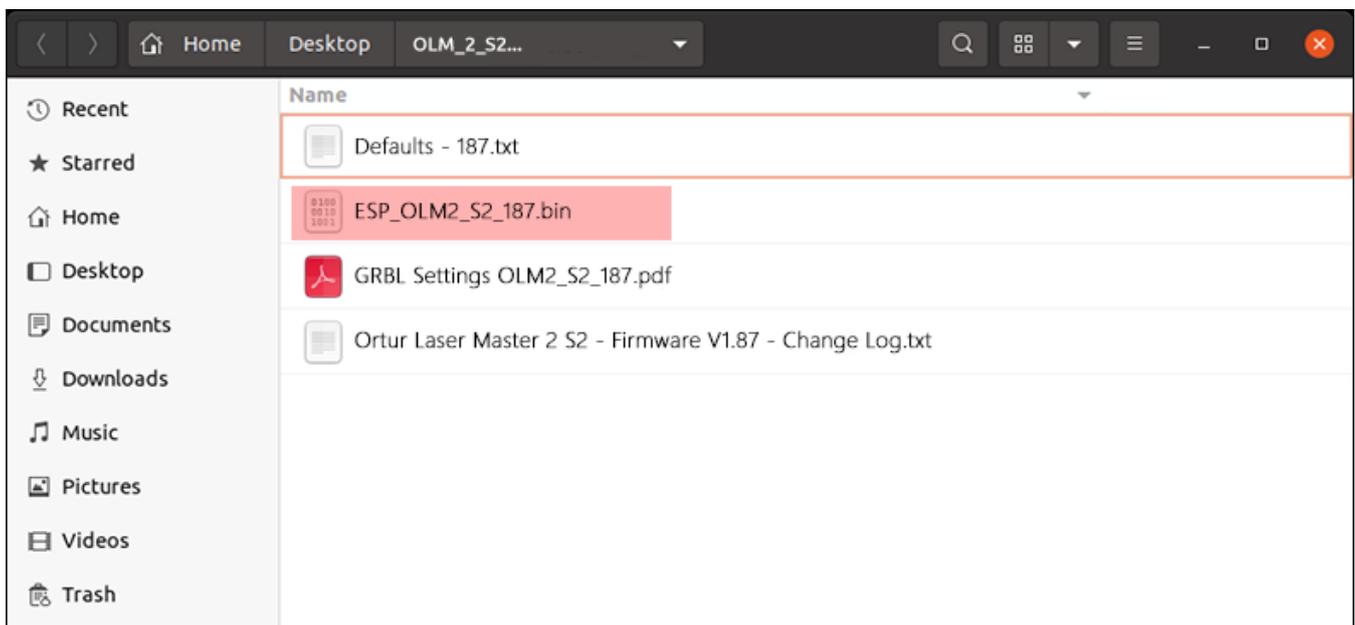
Update Procedure - Linux

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2. Browse through the web-page until you find **Ortur Laser Master 2 S2**;
3. Select the Download Tab and click **DOWNLOAD LINK**;
4. Save the .Zip file to your desktop;



5. Unzip the downloaded file using Linux, PeaZip, 7-zip, File Roller or any unpacker program compatible with your Linux distro;



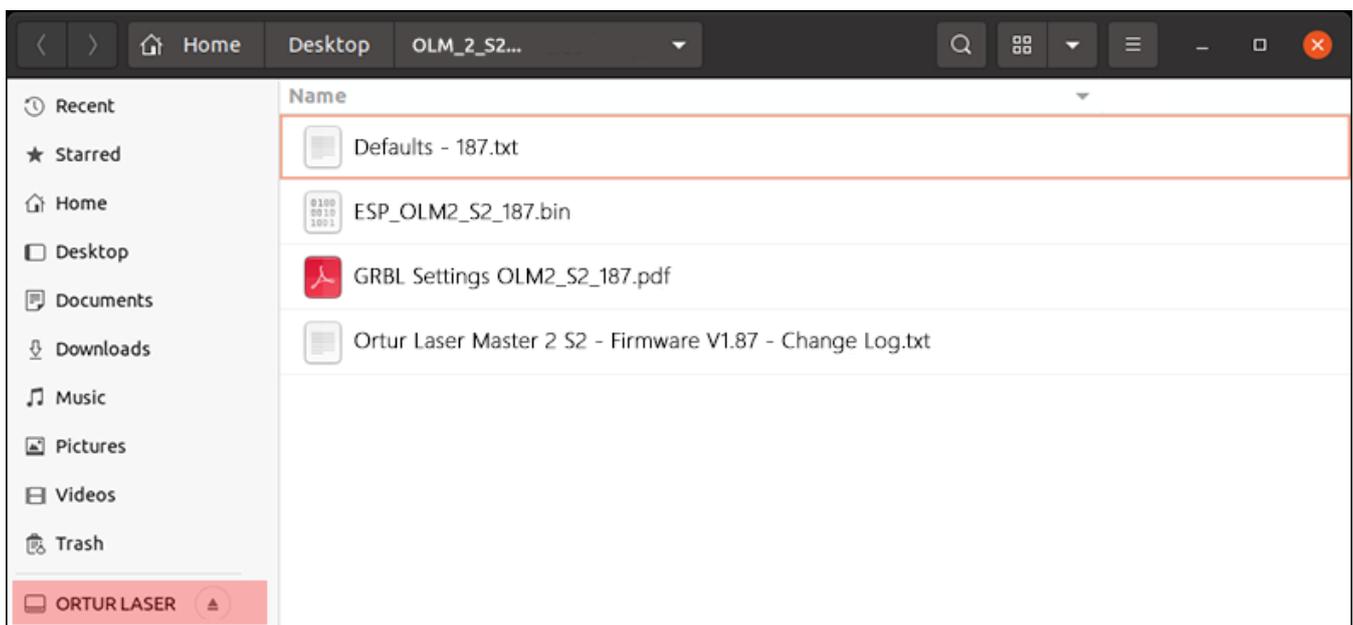
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1. Connect your **Ortur Laser Master 2 S2** via USB directly to your Linux Machine - do not use USB Hubs. Keep the **Ortur Laser Master 2 S2** in Off and confirm the emergency switch is NOT engaged;
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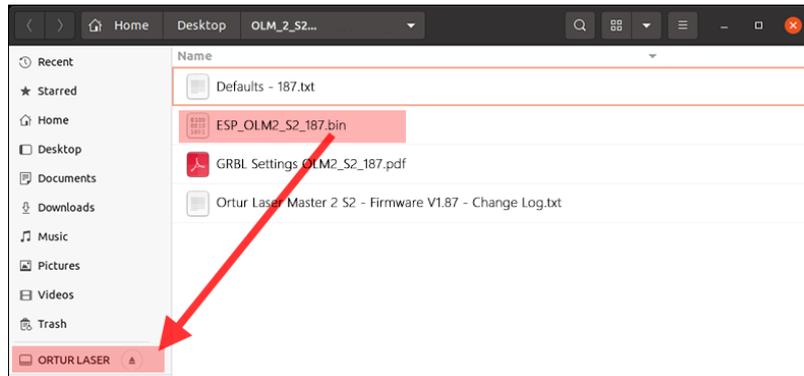
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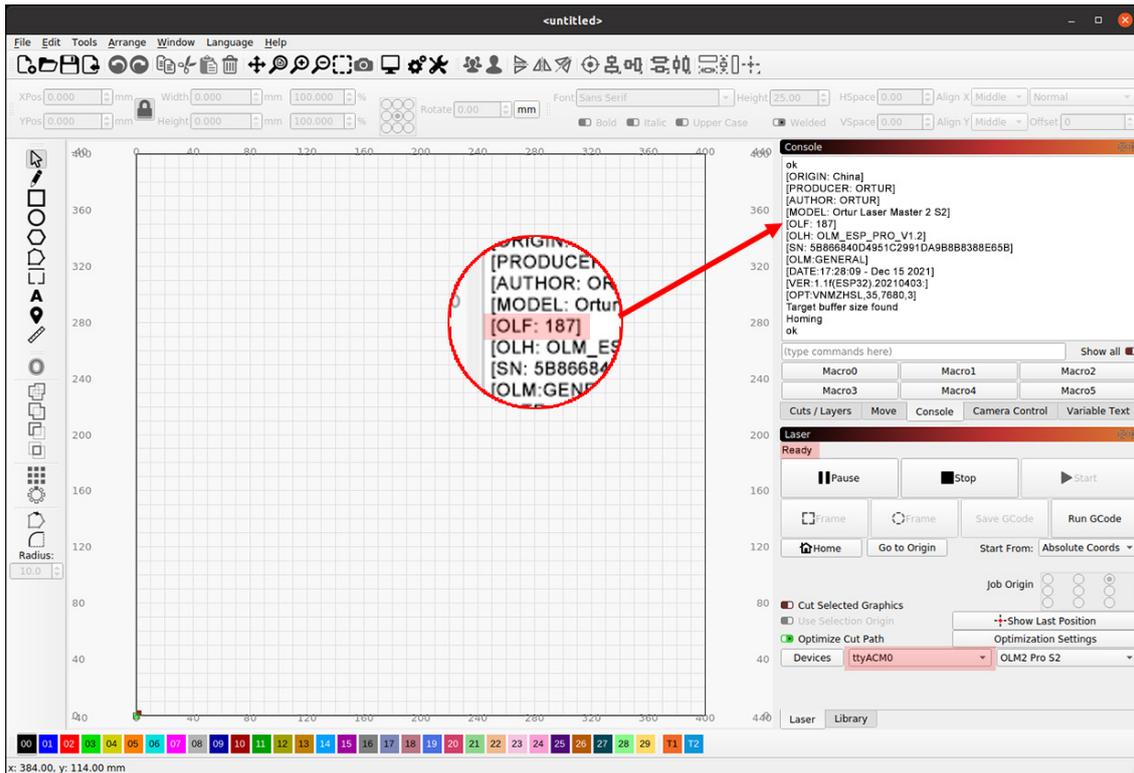
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LightBurn

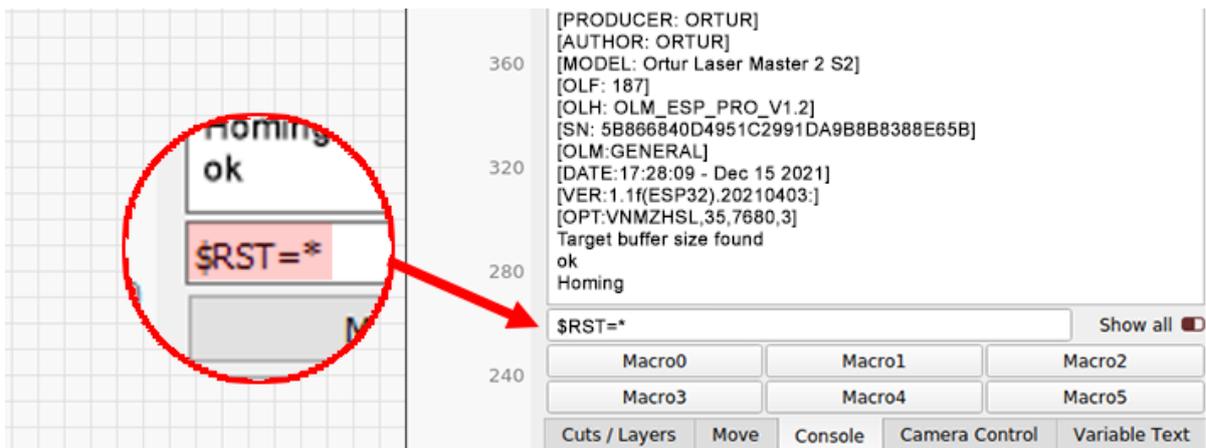
1. Launch **LightBurn** software;

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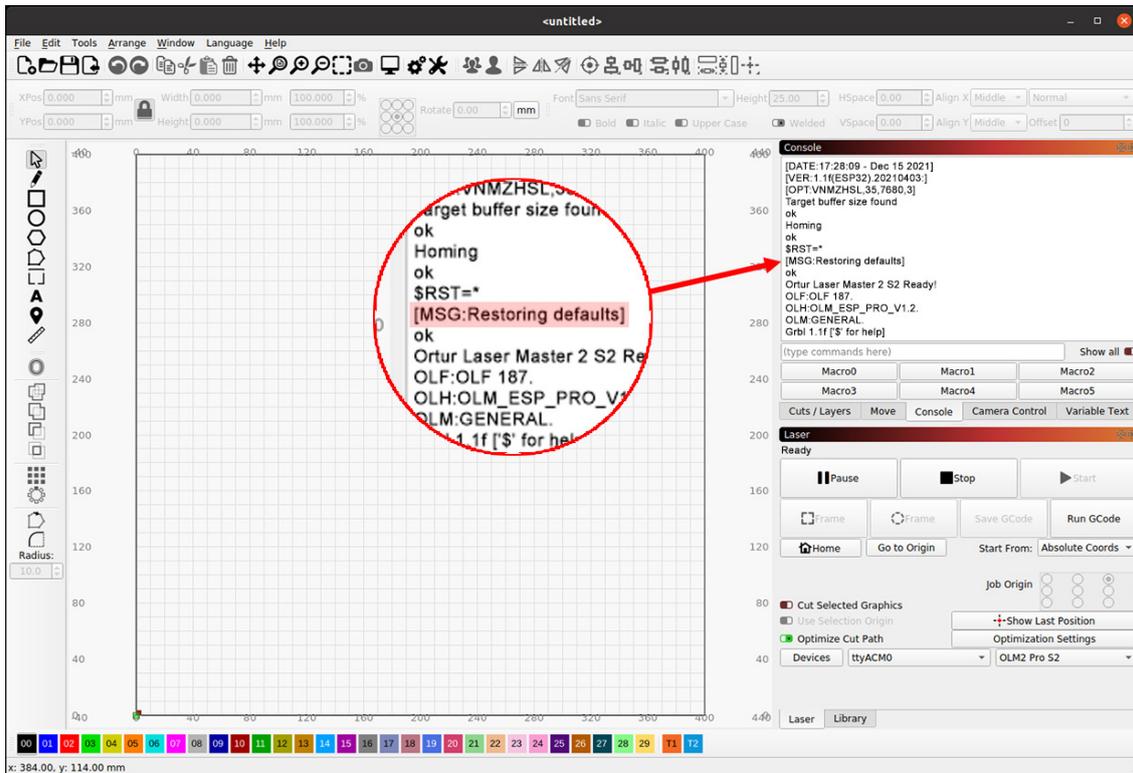
2. Select the appropriate serial port for your **Ortur Laser Master 2 S2** and wait for the **Connection** status “**READY**”;



3. Once connection is established, console window will show the welcome message. If Console is not visible go to Window menu - Console.
4. Confirm that the welcome message shows **[OLF 187]** as latest firmware. This confirms the update procedure was successful.
5. Below console window, where **LightBurn** has a input box saying (type commands here) enter the following command: **\$RST=*** and press the **Enter** key;



7. A response is given by the **Ortur Laser Master 2 S2** motherboard, acknowledging the command by sending a **[MSG: Restoring defaults]**



The firmware update procedure is now complete!

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