

# DSP Amplifier Firmware Update

## Firmware Update – Version 2 or Newer Network Hardware

Below are instructions for updating firmware in the SA-x Amplifiers with the new network hardware/controller.

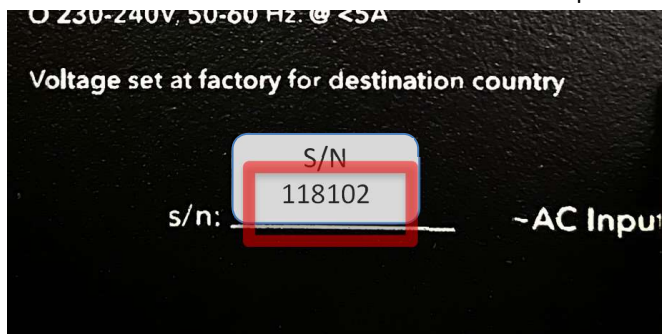
SA-3DSP is shown, but the steps are the same for:

- SA-2DSP
- SA-3DSP
- SA-8DSP
- SW-1DSP
- IA-8DSP

**NOTE:** You must identify the version of hardware you have before beginning. These instructions and the firmware are only for the newer hardware. New hardware can be identified in one of three ways.

If *any one* of the below 3 options are true, you have the newer network hardware and can continue to the firmware update process.

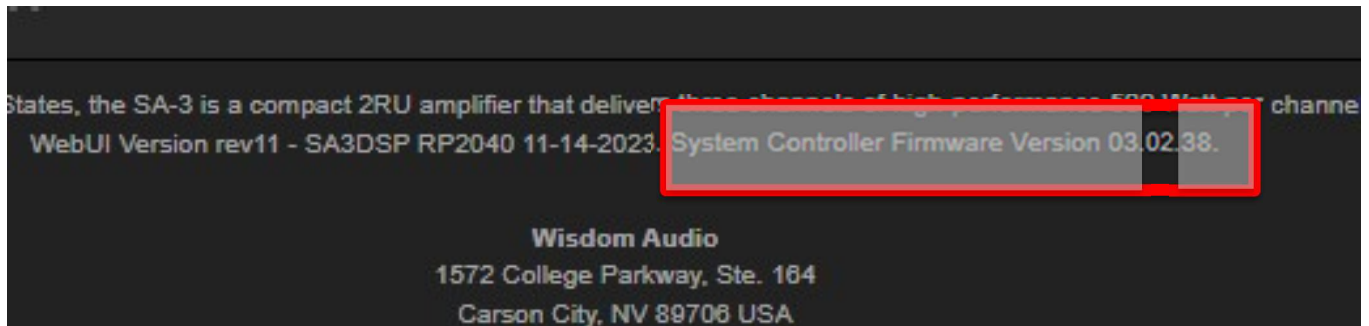
1. Serial # beginning with **SN# 118102** and higher. If your unit has a serial # higher than this, you have the GEN 2 hardware. The serial number sticker will be located on the rear panel either near the A/C inlet or next to the DANTE port:



2. "V2" Sticker on the rear panel with the MAC Address. This is located near the Ethernet Port on the rear panel:



3. Checking the WebUI Audio System home page. The Firmware Version will have xx.02.yy or higher in the number to show it is REV 02 hardware compatible:

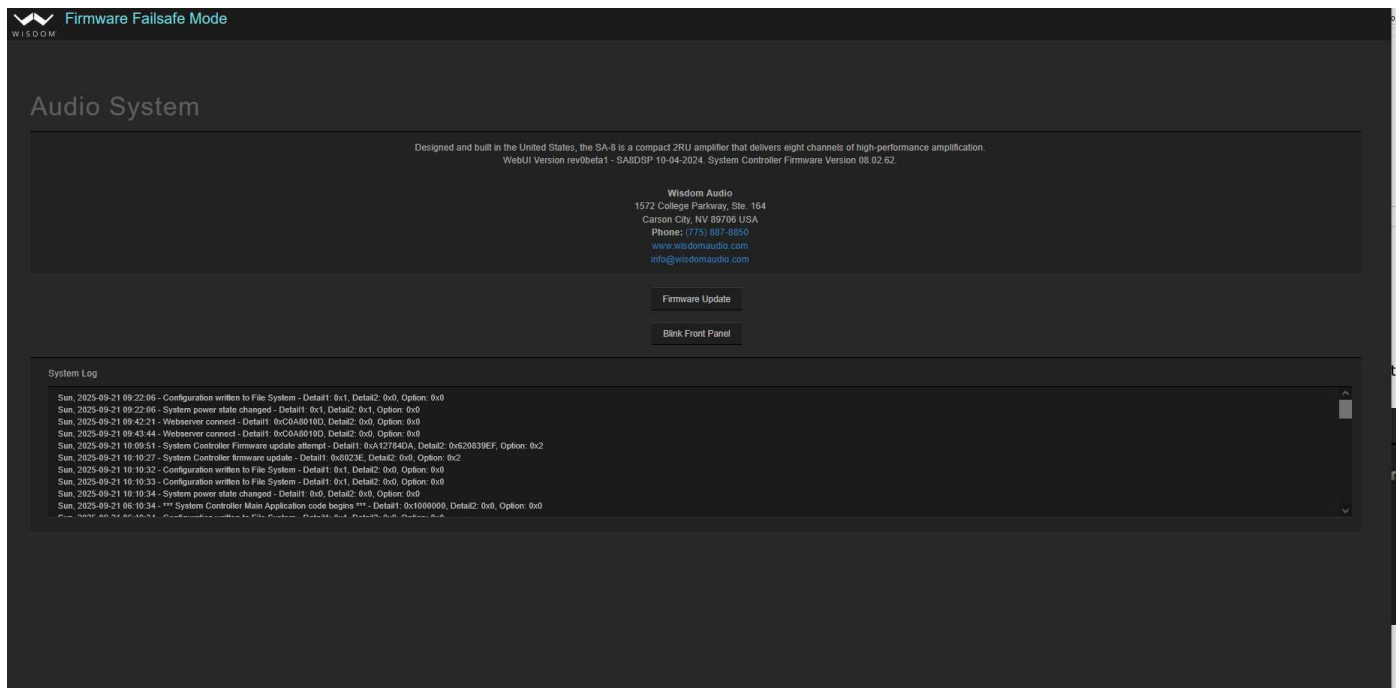


**NOTE:**

There is a fall back firmware update page if for some reason the files become corrupt on the webserver.

The Failsafe page should automatically load if the webpage files cannot be loaded properly. In this case you will see the host name or IP address of the amplifier under test to be appended with `.../failsafe/index.html`

For example: `http://192.168.1.201/failsafe/index.html`



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## Required tools/setup:

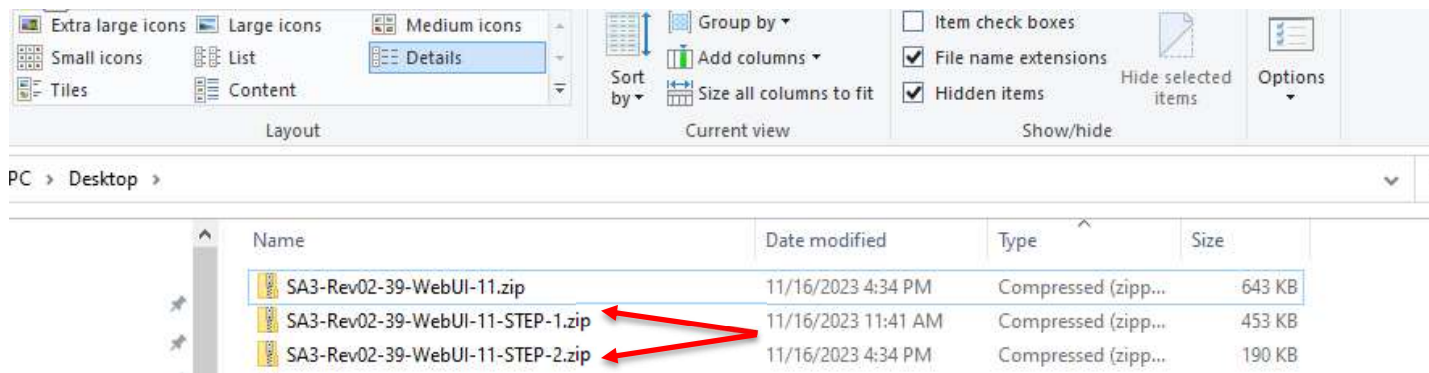
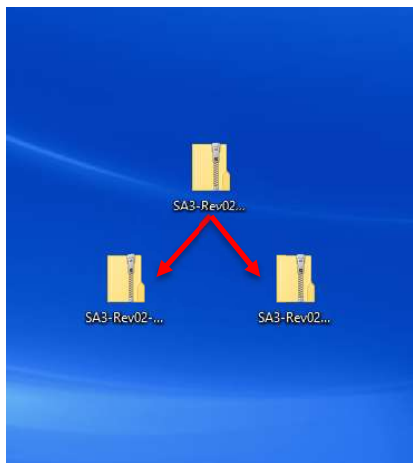
- Ethernet connection to the amplifier
- Firmware Files provided by Wisdom Audio
  - ZIP file Containing all files and instructions including:
    - **SA3-Rev02-xx-WebUI-yy-STEP-1**
    - **SA3-Rev02-xx-WebUI-yy-STEP-2**
  - The **xx** and **yy** will have the Version Numbers for the System Controller Hardware and Web UI files.
  - The Name will be begin with the Amplifier Model, for example, SA3, SA2, SA8, IA8, SW1 etc...depending on model
  - The files are not interchangeable. The hardware will reject a file that is for the wrong model.

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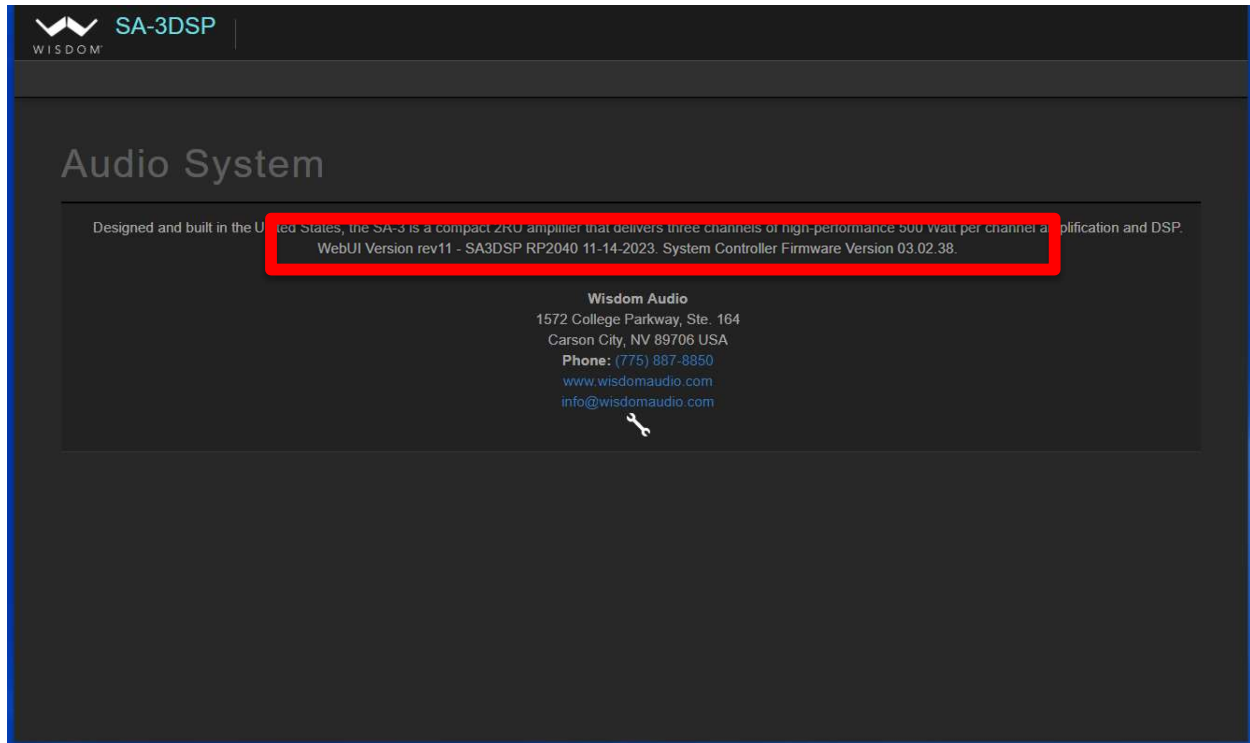
## Firmware Update from Web UI over Ethernet

If you have not identified the correct hardware on page 1, go back and make sure you are reading the correct instructions. The firmware will not load into the wrong hardware.

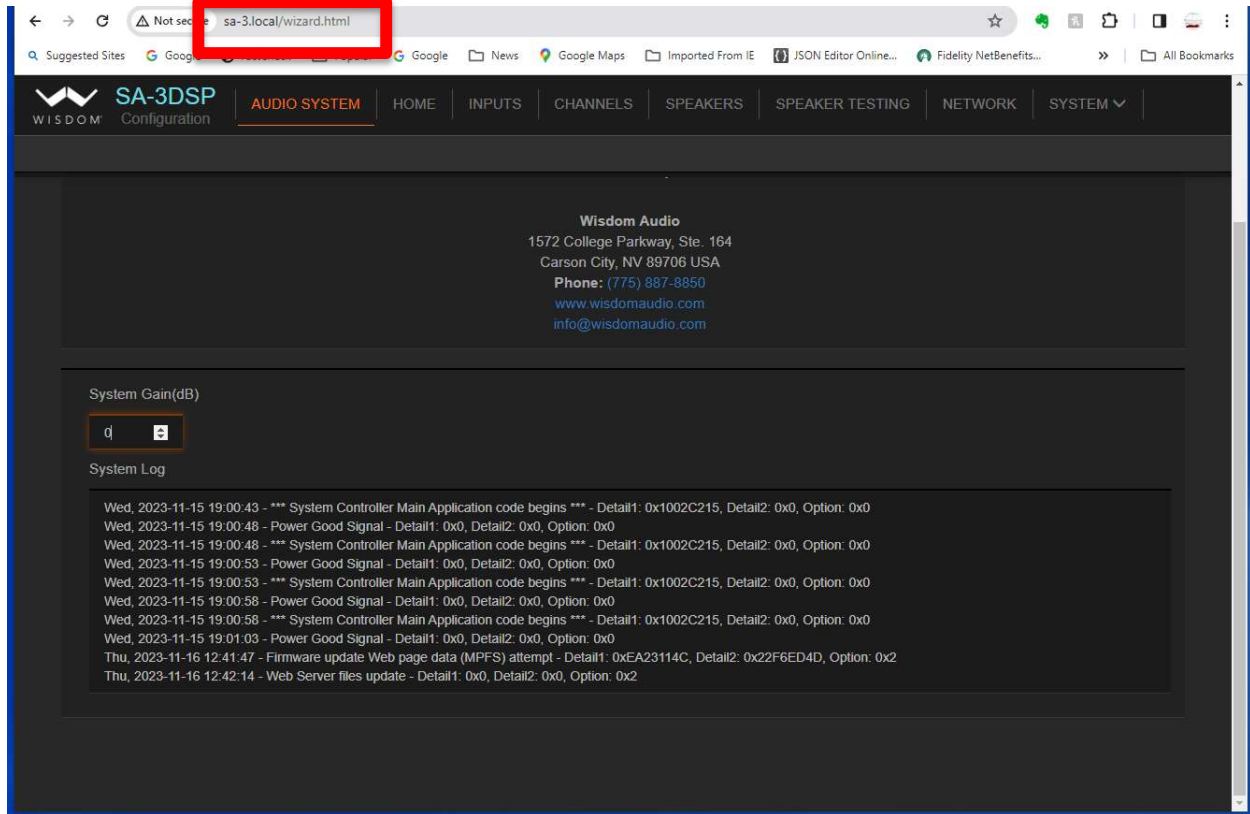
The download from [www.WisdomAudio.com](http://www.WisdomAudio.com) will include 2 .zip files labelled STEP 1 and STEP 2. Place the 2 Zip Files on your computer (desktop or other location) **but do not unzip them**.



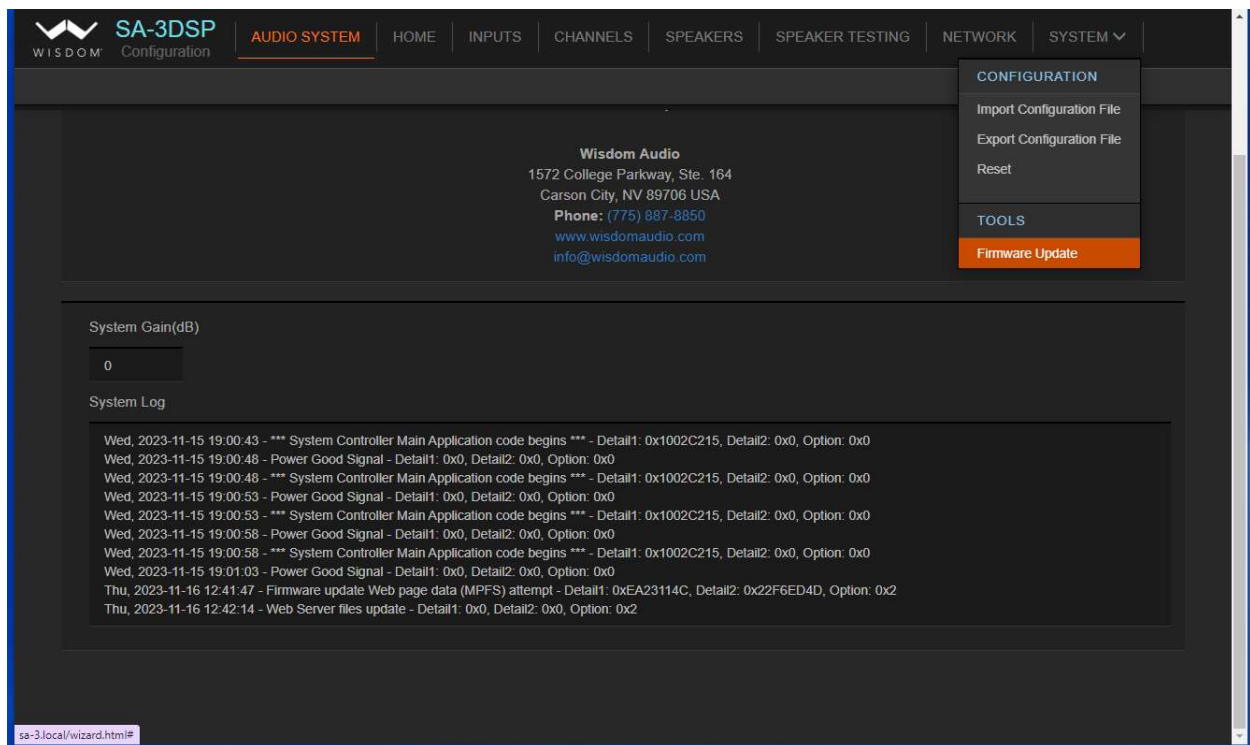
1. Go to the webpage on your local network for the amplifier to be updated. For example: <http://SA-3.local> or <http://192.168.1.xxx> , as shown below.
2. Check the current firmware: WebUI Version is the current webpage server files that you see; the System Controller Firmware Version is the operating system of the amplifier →



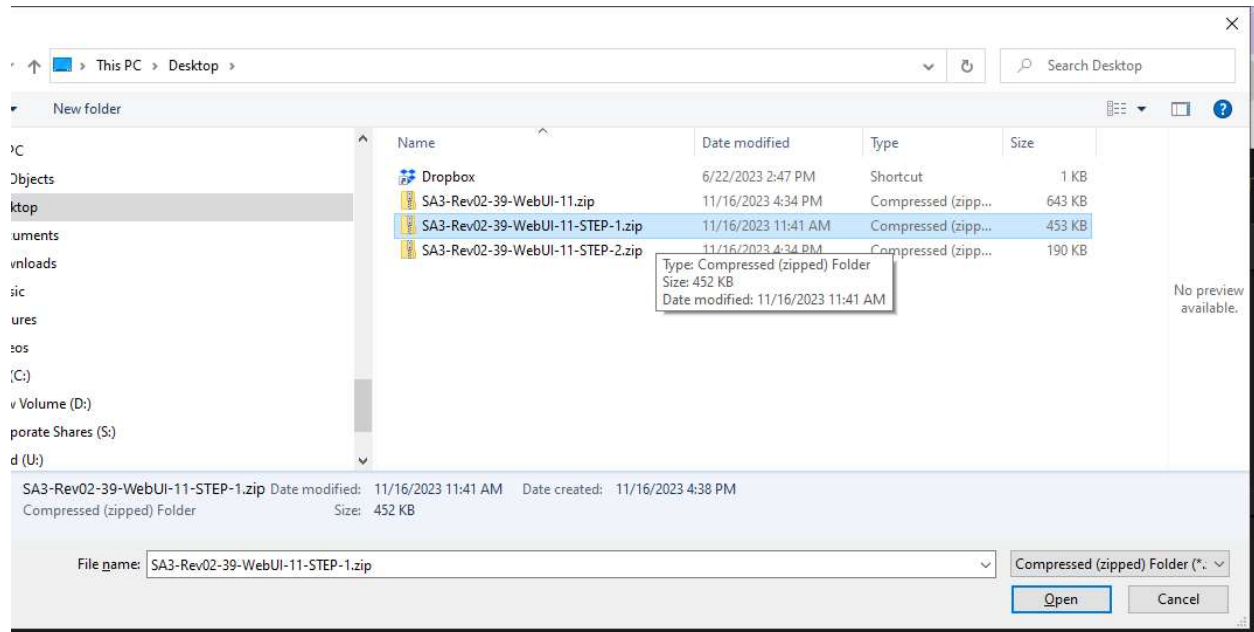
3. Click on the Wrench Icon or navigate to the /wizard.html page for advanced setup:



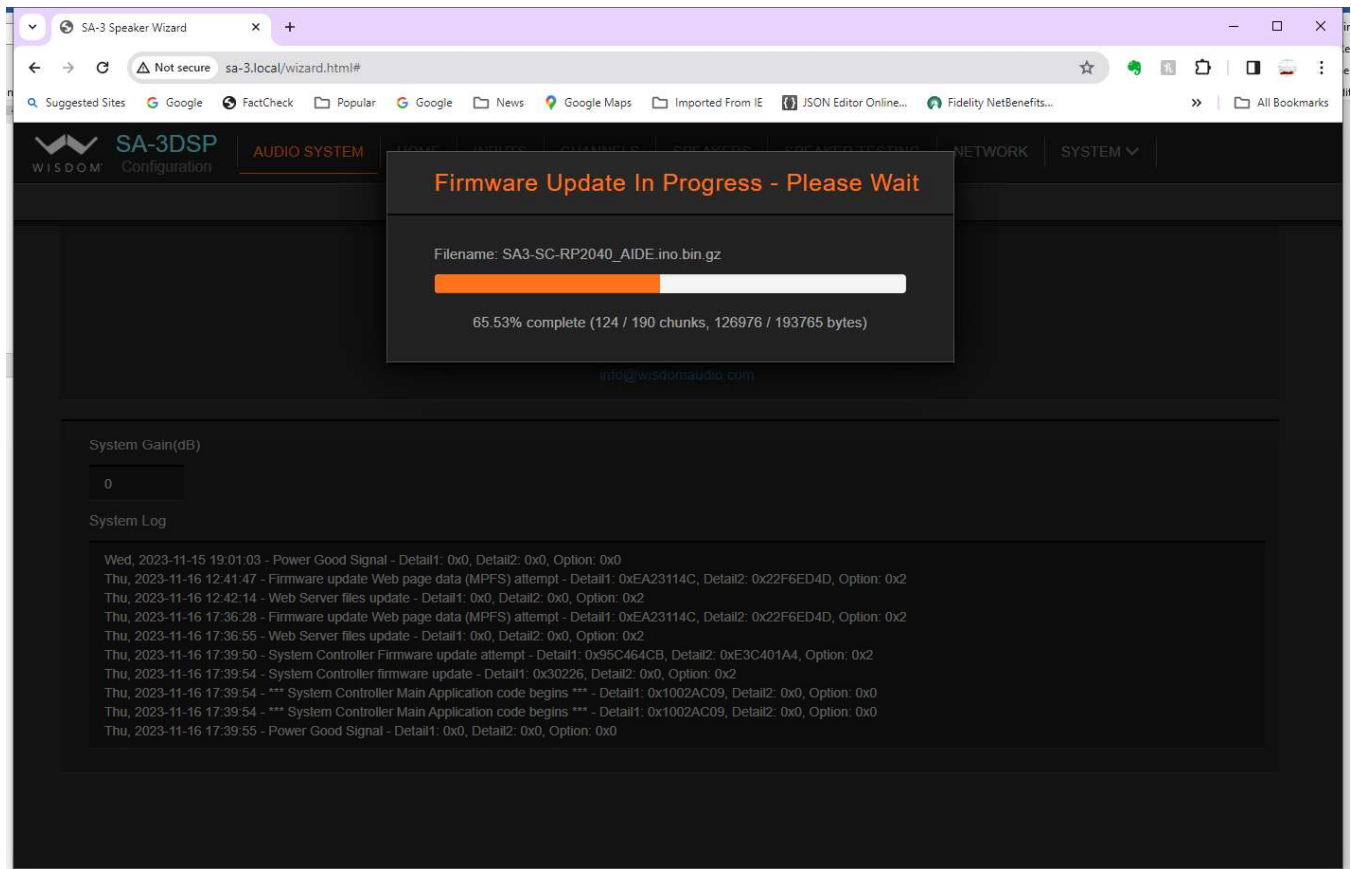
4. SYSTEM→FIRMWARE UPDATE



5. Choose the **STEP 1 ZIP** file previously downloaded from Wisdom:

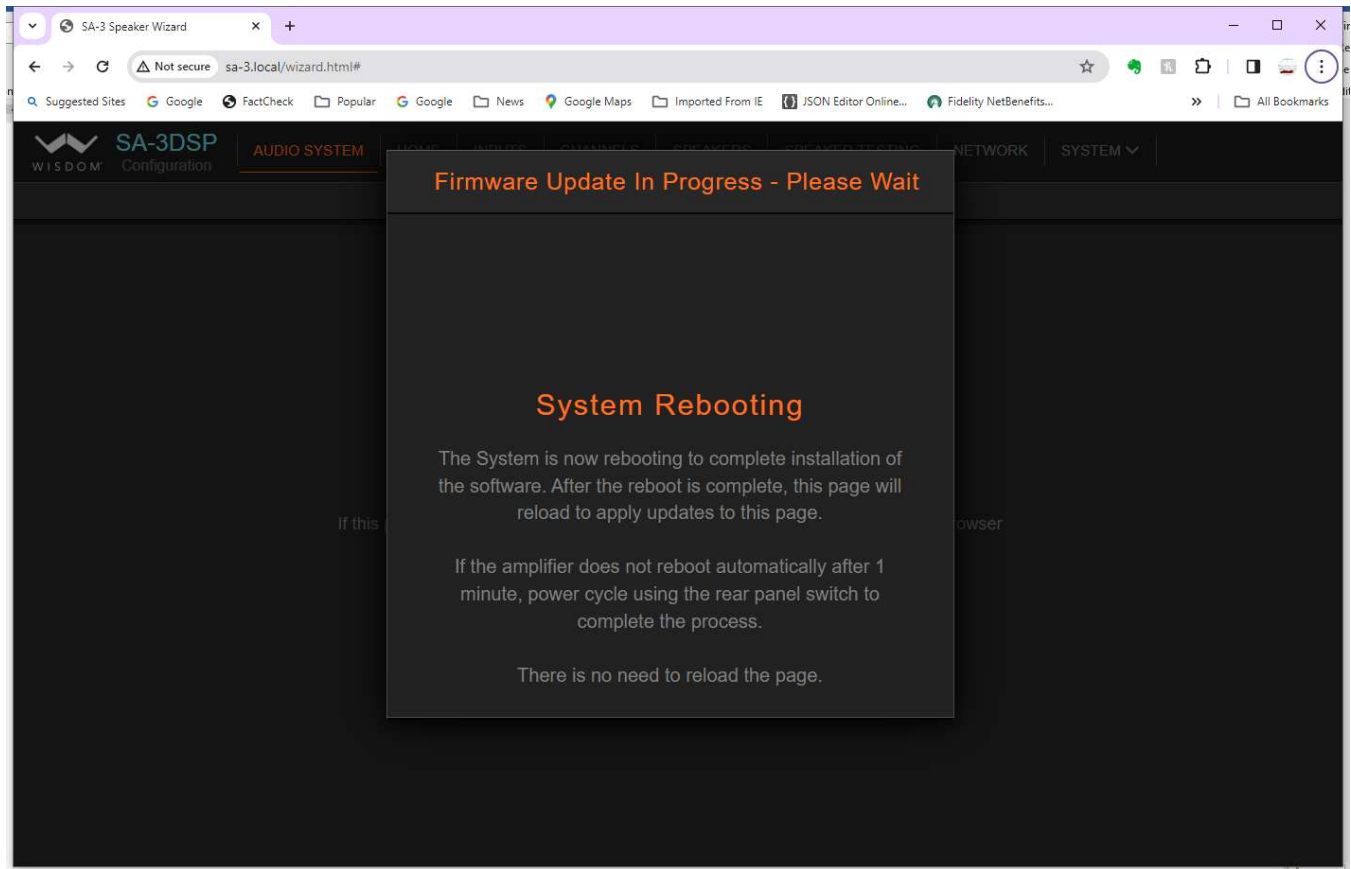


6. First download of SA-x firmware files (Amplifier System Controller Operating System Files)→ The Upload will automatically complete and reboot the system.

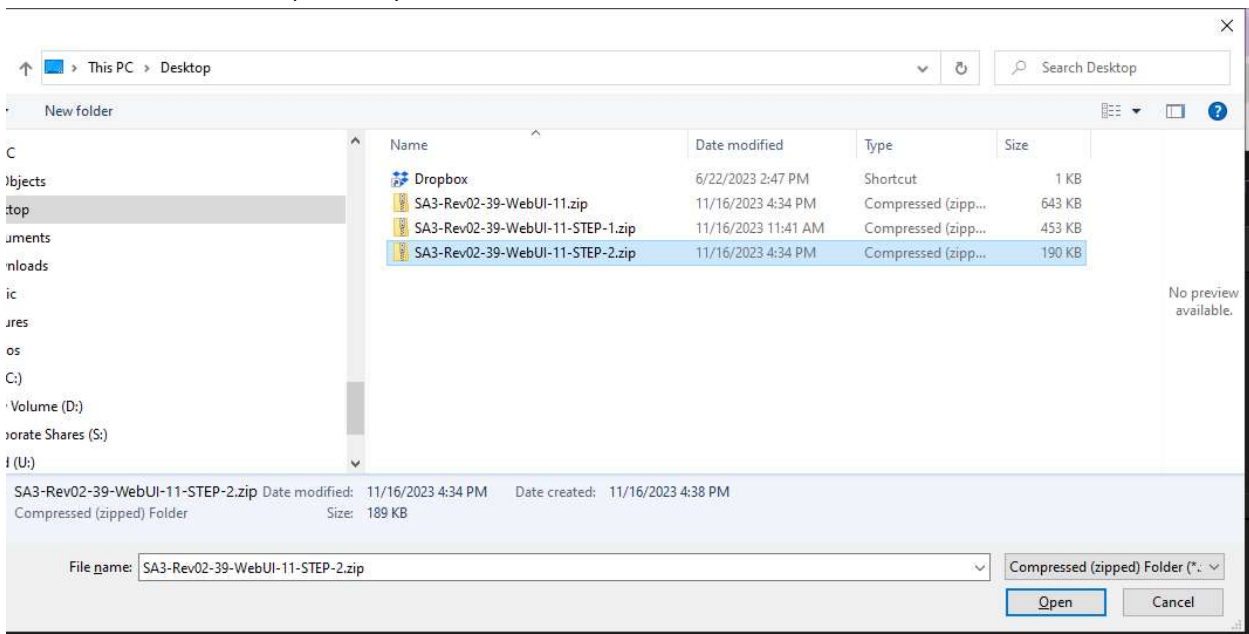




7. If the System does not reboot and reload after 1 minute, switch off the amplifier from the rear panel, wait for the Amber Standby LED to extinguish, and turn on again to complete the update. After Reboot continue to **STEP 2**.

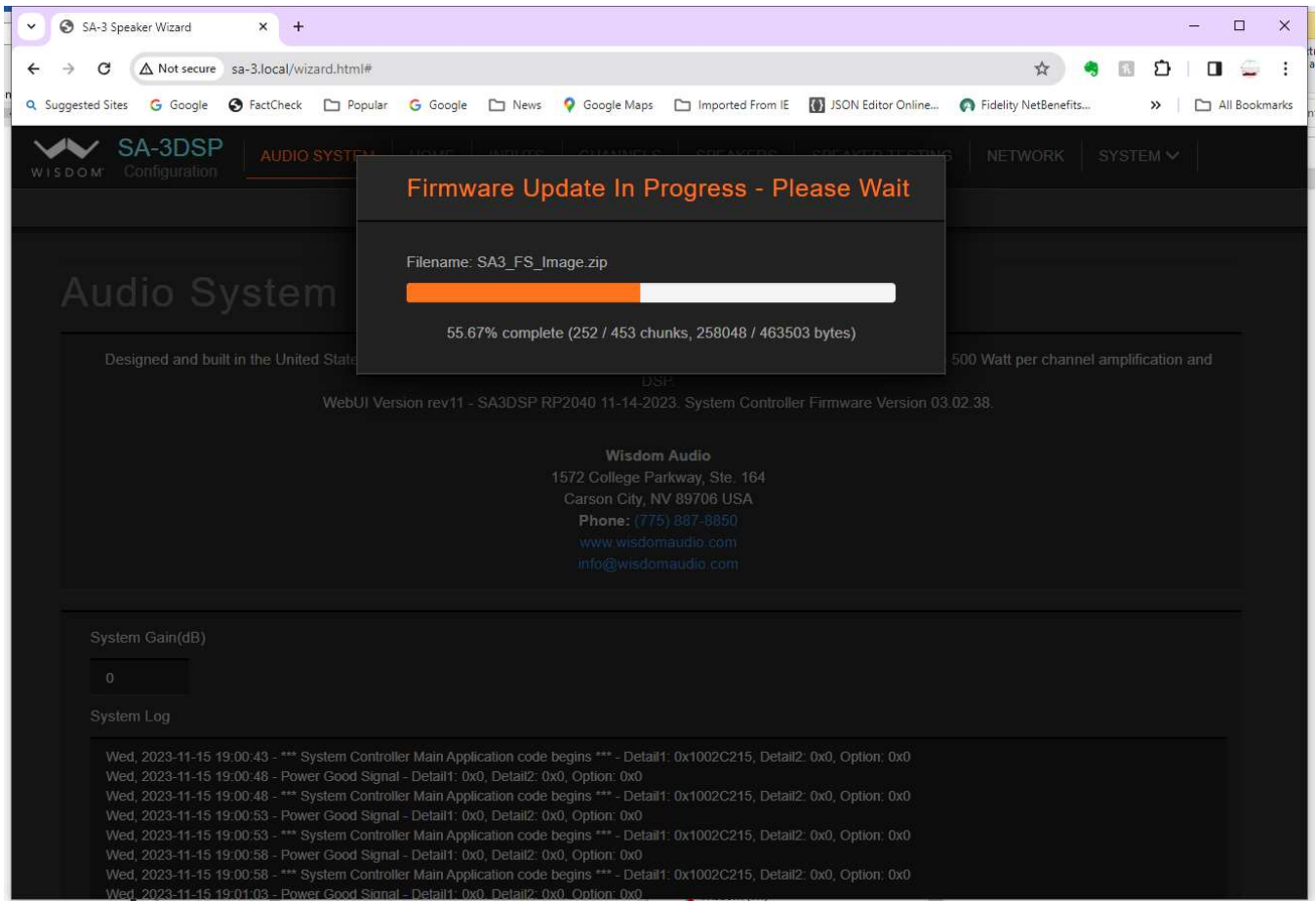


8. Choose the **STEP 2 ZIP** file previously downloaded from Wisdom:





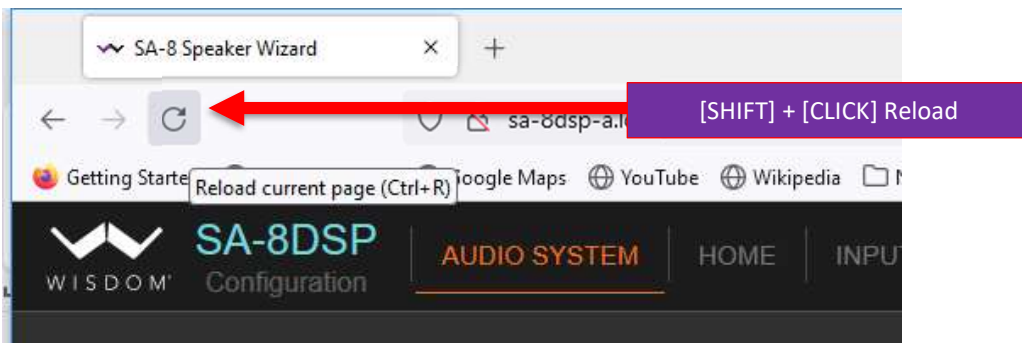
9. Download begins with FS\_Image (File System Web UI Files) →



10. The download will complete and after approximately 30 seconds the web page will reload. You are now ready for the final page refresh as shown below.

### Refresh the Web UI Interface

After the new files have been loaded into the SA-xDSP, it may be necessary to refresh the Web UI to make the new UI elements visible. Once you have opened your web browser and are on the setup pages for the SA-xDSP, hold down the SHIFT key and press the RELOAD:



## Check the firmware has successfully completed

Check that the firmware on the main page shows the latest version. Also you can see the firmware and file system update attempts and update completion in the System Log.

The screenshot shows the SA-3DSP Configuration web interface. The top navigation bar includes links for AUDIO SYSTEM, HOME, INPUTS, CHANNELS, SPEAKERS, SPEAKER TESTING, NETWORK, and SYSTEM. The main heading is "Audio System". Below the heading, there is a section for "WebUI Version rev11 - SA3DSP RP2040 11-14-2023. System Controller Firmware Version 08.02.39." and "Wisdom Audio" contact information. The "System Gain(dB)" is set to 0. The "System Log" section displays a list of events, including "Firmware update Web page data (MPFS) attempt" and "System Controller Firmware update attempt".

WebUI Version rev11 - SA3DSP RP2040 11-14-2023. System Controller Firmware Version 08.02.39.

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System Gain(dB)  
0

System Log

Thu, 2023-11-16 17:50:14 - \*\*\* System Controller Main Application code begins \*\*\* - Detail1: 0x1002AC09, Detail2: 0x0, Option: 0x0  
Thu, 2023-11-16 17:50:14 - \*\*\* System Controller Main Application code begins \*\*\* - Detail1: 0x1002AC09, Detail2: 0x0, Option: 0x0  
Thu, 2023-11-16 17:50:20 - Power Good Signal - Detail1: 0x0, Detail2: 0x0, Option: 0x0  
Thu, 2023-11-16 18:05:34 - Firmware update Web page data (MPFS) attempt - Detail1: 0xEA23114C, Detail2: 0x22F6ED4D, Option: 0x2  
Thu, 2023-11-16 18:06:00 - Web Server files update - Detail1: 0x0, Detail2: 0x0, Option: 0x2  
Thu, 2023-11-16 18:06:24 - System Controller Firmware update attempt - Detail1: 0x95C464CB, Detail2: 0xE3C401A4, Option: 0x2  
Thu, 2023-11-16 18:06:25 - System Controller firmware update - Detail1: 0x80227, Detail2: 0x0, Option: 0x2  
Thu, 2023-11-16 18:06:25 - \*\*\* System Controller Main Application code begins \*\*\* - Detail1: 0x1002AC09, Detail2: 0x0, Option: 0x0  
Thu, 2023-11-16 18:06:29 - \*\*\* System Controller Main Application code begins \*\*\* - Detail1: 0x1002AC09, Detail2: 0x0, Option: 0x0  
Thu, 2023-11-16 18:06:30 - Power Good Signal - Detail1: 0x0, Detail2: 0x0, Option: 0x0