

## *Alpha 9500 Main Controller Firmware Upgrade Procedure*

**WARNING: - If your current Main Controller firmware is version 1.36 or lower, please contact the factory for additional instructions on installing firmware versions 2.0 and above. Run the 9500 Remote software application (Windows) to see the firmware version in upper left corner.**

Upgrading the firmware on the 9500 requires a few simple steps – a broad outline first, the details second.

- Plug the amp in to the power, but leave it turned off.
- Connect the USB cable between the amp and the computer.
- Install the USB driver, if not already done
- Setup the COM port parameters
- Run the Colt Bootloader and choose the correct com port and baud rate.
- Reset the processor on the amplifier and start the firmware download within 2 seconds.
- Once the download has completed, reset the processor again.

### ***USB driver***

The USB driver will allocate the amplifier USB connection to a virtual com port (VCP), which looks and behaves like any other COM port. If your PC cannot see an additional COM port when the USB cable is plugged into the amplifier, run the VCP installer software. To see the COM ports right- click MY COMPUTER, click PROPERTIES, HARDWARE, DEVICE MANAGER.

### ***Colt Bootloader***

The bootloader is a small program that loads the firmware into the amplifier. It will only recognize com ports between 1 and 9 – your amplifier is most likely set up to be on COM port 6. You can verify this by checking the Device Manager control of your PC. The menus on the bootloader to set the com port and the baud rate are a little “quirky”. Although it may look as if there are no other options to choose from, there is a little area on the drop down where you *can* click to show the other choices – contact Alpha directly if you are having trouble with this.

The correct baud rate is 115,200

Make sure that *only* the Reload before Program and Reset after Program boxes are checked – under **NO** circumstances should you check Program data EEPROM as this will **WIPE OUT** all of your factory calibrations.

### ***Reset the Processor***

With the amplifier turned off, pushing the FLT button will reset the processor on the main controller. The FLT button is just below the seven segment display on the far right.

Push F4 on your computer to start the download from the bootloader within 2 seconds of pushing the FLT button on the amplifier.

A blue progress bar will appear to show progress. The process should complete in a couple of minutes.

Reset the Processor again:- the new firmware should take effect.

## *Detailed Instructions*

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Go to [www.alpharfsystems.com](http://www.alpharfsystems.com) and click on PRODUCTS, AMPLIFIERS, ALPHA 9500. The files you need are at the bottom of the 9500 product page. Create a new directory on your computer and download and save the following 3 files into that directory,

**the USB Serial COM Port driver file**

**the Alpha Colt Bootloader file**

**the 9500 firmware file, the latest version is on the web site**

Unzip the Colt Bootloader file and the firmware file into the same directory. To unzip them right- click on each file and select EXTRACT ALL.

Install the USB serial driver file, it is a small program and will install very quickly (double-click it).

With the amplifier plugged in to the mains power and turned off, connect a USB cable between the amp and your computer

Note that the amplifier remains turned off throughout this procedure

Note also that the bootloader will only recognize Com1 through Com9

At this point your computer should recognize the amplifier USB port. Verify the port number assigned to the amplifier through the computer's Device Manager (right-click MY COMPUTER, click PROPERTIES, HARDWARE, DEVICE MANAGER), the correct baud rate is 115,200.

Run the Colt bootloader (double-click it) and choose the COM port that was assigned to the amplifier – note that the scroll buttons to the right of the COM port window may be hard to see.

Click LOAD FILE to choose the unzipped HEX firmware file to download onto the amplifier. DO NOT select the file ending with .zip !!!!

Reset the 9500 (described above) and **within 2 seconds** click the PROGRAM button on the Colt bootloader to load the file, a blue progress bar should begin on the Colt window.

Once the file has loaded you may exit the bootloader, unplug the amplifier for 10 seconds, then plug it back in and turn it on.

Your amp is ready to use with the new firmware.

NOTE – If the 9500 does not respond to the front panel reset described above unplug it from Mains power. Wait 10 seconds, plug it back in and start Colt Bootloader (click Program) **within 2 seconds of plugging in the amplifier.** You may have to repeat the routine of unplugging the amp, wait 10 sec, plug back in and start Colt more than once to get the amp to program.

Contact us at [service@alpharfsystems.com](mailto:service@alpharfsystems.com) if you have any questions