



Meridian Audio Limited  
Latham Road, Huntingdon  
Cambridgeshire PE29 6YE  
United Kingdom

T +44(0)1480 445678  
F +44(0)1480 445686  
E info@meridian.co.uk  
www.meridian-audio.com

# Technical Note TN23

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## 810 scaler firmware update process

The 810 firmware is split into two parts: The Bootloader and the Main Firmware. This procedure describes updating the Main Firmware.

Place the 810.mfu file onto the root of a USB memory stick and place the stick in either the front panel or back panel USB socket of the 810 Scaler.

The USB memory stick must use either the FAT16 or FAT32 filesystem. This is a standard file system used by Microsoft Windows.

Connect a standard Meridian RS232 cable from PC to the 810 Scaler Maintenance port.

Setup HyperTerminal for 96008N1 (standard Meridian) and connect to the RS232 com port that connected to the 810 Scaler.

Reset the 810 and you will see appear in HyperTerminal:

Autoboot in 1

This message is informing you that the Bootloader is waiting 1 second before it loads the Main Firmware. Press Return within 1 second to abort the autoboot and you will see the Bootloader command prompt. If you are too late and the main firmware starts to boot just reset the 810 again. You should now see a similar message to this:

**Meridian Astraeus Bootloader 1.0.1. Feb 13 2009 09:32:56  
Astraeus>**

Type:

**usbupdate**

Followed by a return to start the update .

You will see the following text as it updates:

**Assert(0) failed in file add-ons/usb/usb\_ohci.c, line 2461  
scanning bus for devices... USB\_CLASS: 8 - Mass Storage  
1 USB Device(s) found**

**Partition Map for USB device 0 -- Partition Type: DOS**

Partition	Start Sector	Num Sectors	Type
1	8064	7927936	c

**1 Storage Device(s) found**

**Interface: USB**

**Device 0: Vendor: Kingston Prod.: DataTraveler 2.0 Rev: PMAP  
Type: Removable Hard Disk  
Capacity: 3875.0 MB = 3.7 GB (7936000 x 512)**

**Partition 1: Filesystem: FAT32 "**

**Verifying MFU.. pass**

**version: 1.0.33**

**heap: allocated big chunk (2247760 bytes), it will never be freed!  
reading "810.mfu" of size 2247728 to  
0xc010bea8.....**



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**Verifying firmware.. pass**

**Installing. Do not turn off the system.**

**If you do, you may not be able to restart the system.**

**Updating firmware**

**Updating filesystem at 0x00500000**

**Install complete.**

**Please powercycle the system for changes to take effect.**

**Astraeus>**

The output will stall on the message "Installing. Do not turn off the system". This is when the firmware is being written to flash. This is normal.

If at any point the bootloader reports errors, simply repeat the procedure as no damage can take place.

Once the 'Install complete' appears you can reset the 810 Scaler so that the new firmware will be booted.