



Mountain Lion HDMI Audio

Ivy Bridge - HD4000 Graphics/7 Series Motherboards w/AMI EFI/DSDT

A simple HDMI Audio dsdt editing tool for OS X HDMI audio on 7 Series motherboards with HD4000 graphics. Based on the MaciASL built by SJ_UnderWater, the Apply button automatically makes the HDMI audio dsdt edits.

Verify AMI dsdt (1st line)

```
DefinitionBlock (".dsdt.aml", "DSDT", 2, "ALASKA", "A M I", 0x000000..)
```

Benefits

1. Automated HDMI audio dsdt editing
2. Installs HD4000 integrated graphics HDMI audio dsdt edits
3. Installs AMD/Nvidia discrete graphics card HDMI audio dsdt edits
4. No copy, no paste, no finding the right place to paste....

Before You Start:

1. OS X does not provide HDMI audio controls (No volume, no mute, no balance, etc.)
2. The connected HDMI device (TV, receiver, etc.) provides any and all audio controls
3. Delete any audio enablers (S/L/E/HDAEnabler1.kext)
4. Remove any property-type injection (Extra/org.chameleon.Boot.plist)

Requirements

1. Intel
 - 1a. Ivy Bridge 7 Series motherboards - Z77, H77, B75, Q77
 - 1b. Not supported - X79
2. OS X
 - 2a. Mountain Lion - 10.8.2 and newer
3. dsdt - no compile errors
 - 3a. No dsdt, extract dsdt, see **I. Preparation**

4. Motherboard onboard audio codec
 - 4a. Realtek supported audio codecs (8xy): 885, 887, 888, 889, 892, 898
 - 4b. Unsupported audio codecs: ML HDMI audio works with any unsupported audio codec/no onboard audio
5. AppleHDA.kext (one of the following)
 - 5a. ML: MultiBeast 5.2.1 or newer/Audio/Realtek ALC8xx/With DSDT/ALC...
 - 5b. ML: Native AppleHDA.kext (unsupported audio codecs)

More Information

Special HDMI Audio Considerations

Detailed Instructions

See [Mountain Lion HDMI Audio - AMI DSDT](#)

Tools

1. MaciASL [MaciASL | Free Development software downloads at SourceForge.net](#)
2. IORegistryExplorer see [\[Guide\] How to Make a Copy of IOReg](#)
3. CarbonCopyCloner or SuperDuper
4. Download/ZIP: https://github.com/toleda/audio_hdmi_hd4000

Mountain Lion Audio IDs (10.8.2 AppleHDA.kext_v2.3.1 or newer)

1. Audio ID 1/A1: AMD/Nvidia HDMI audio with 3/5/6 port onboard audio
2. Audio ID 3/A3: HD4000 HDMI audio with 3/5/6 port onboard audio

Patches - github.com/toleda/audio_hdmi_hd4000/tree/master/Patches

IB1. AMI-EFI/Clean Compile - fix native dsdt compiler errors for successful dsdt edits

IB2. AMI-AMD-Nvidia-7_Series-A1 - AMD/Nvidia HDMI audio dsdt edits

IB3. AMI-HD4000-7_Series-A3 - HD4000 HDMI audio dsdt edits

IB4. AMI-HD4000-on-6_Series_MB - HD4000 MEI dsdt edit (apply only with IB2 or IB3)

IB5. Award-HD4000-AMD-Nvidia-6_Series-A1 - HD4000/AMD/Nvidia HDMI audio dsdt edits

Note: for A3, Find: 0x01, 0x00, 0x00, 0x00/Replace: 0x03, 0x00, 0x00, 0x00

IB6. AMI-HD4000-Laptop-FB-01-A3 - Laptop HD4000 HDMI audio dsdt edits

IB7. AMI-HD4000-Laptop-FB-03-A3 - Laptop HD4000 HDMI audio dsdt edits

IB8. Intel-HD4000-NUC - NUC HDMI audio edits (2xHDMI and TB)

Attachments

N/A HDMI audio dsdt edits are available in MaciASL/Patch

Start of Procedure

HD4000/7 Series Motherboards - Mountain Lion HDMI audio edits

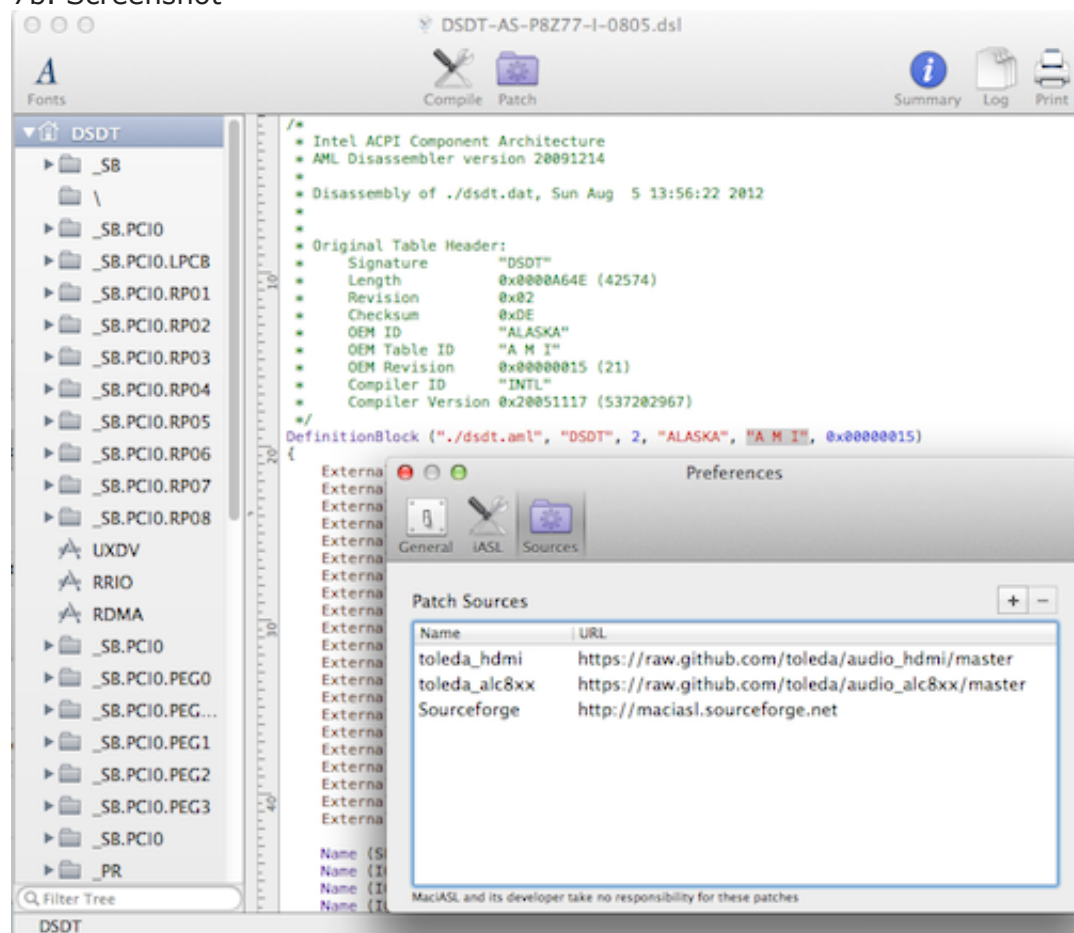
I. Preparation

1. Make bootable backup of system (CarbonCopyCloner or SuperDuper)
2. Make a copy of IOReg, see **Tools/2**.
3. Verify no audio enablers (S/L/E/HDAEnabler1.kext, HDAEnabler8xx.kext, etc.)
4. MultiBeast 5.2.1 or newer - Select/Drivers & Bootloaders/Drivers/Audio/Realtek ALC8xx/With DSDT/ALC8--, if Realtek ALC8xx audio,
5. Download MaciASL and install/Applications, see **Tools/1**.
6. Applications/MaciASL

7. MaciASL/Preferences/Sources/+/https://raw.githubusercontent.com/toleda/audio_hdmi_hd4000/master

7a. URL: https://raw.githubusercontent.com/toleda/audio_hdmi_hd4000/master

7b. Screenshot



8. With dsdt,

8a. Copy Extra/dsdt.aml to Desktop

8b. MaciASL/File/Open/Desktop/dsdt.aml

8c. jump to **II. Native Compile**

9. If no dsdt,

9a. MaciASL/File/New from ACPI/DSDT

9b. MaciASL/File/Save As../Desktop/dsdt-motherboard-native.dsl

II. Native Compile

10. Verify AMI dsdt (1st line)

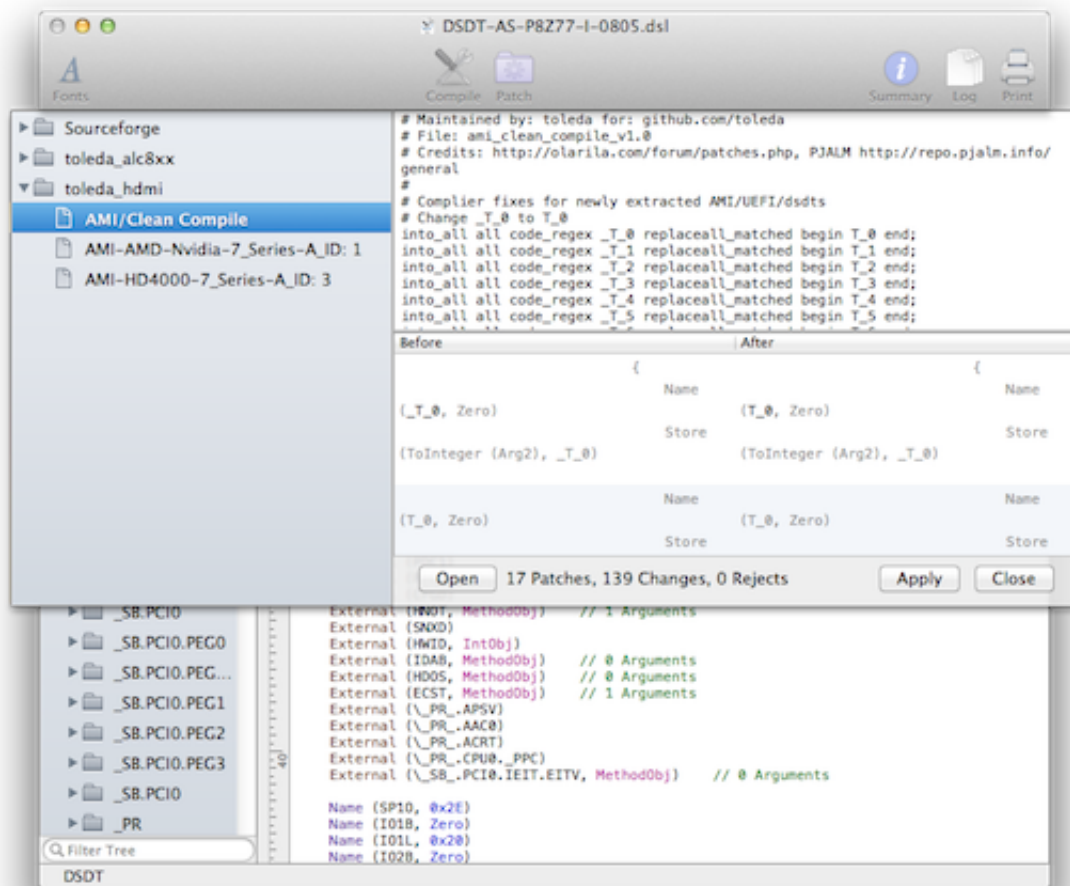
10a. DefinitionBlock ("./dsdt.aml", "DSDT", 2, "ALASKA", "A M I", 0x000000..)

10b. See Screenshot at 7b.

10c. If dsdt is not AMI, this method will not work. Full Stop.

11. MaciASL/Patch/Select AMI/Clean Compile

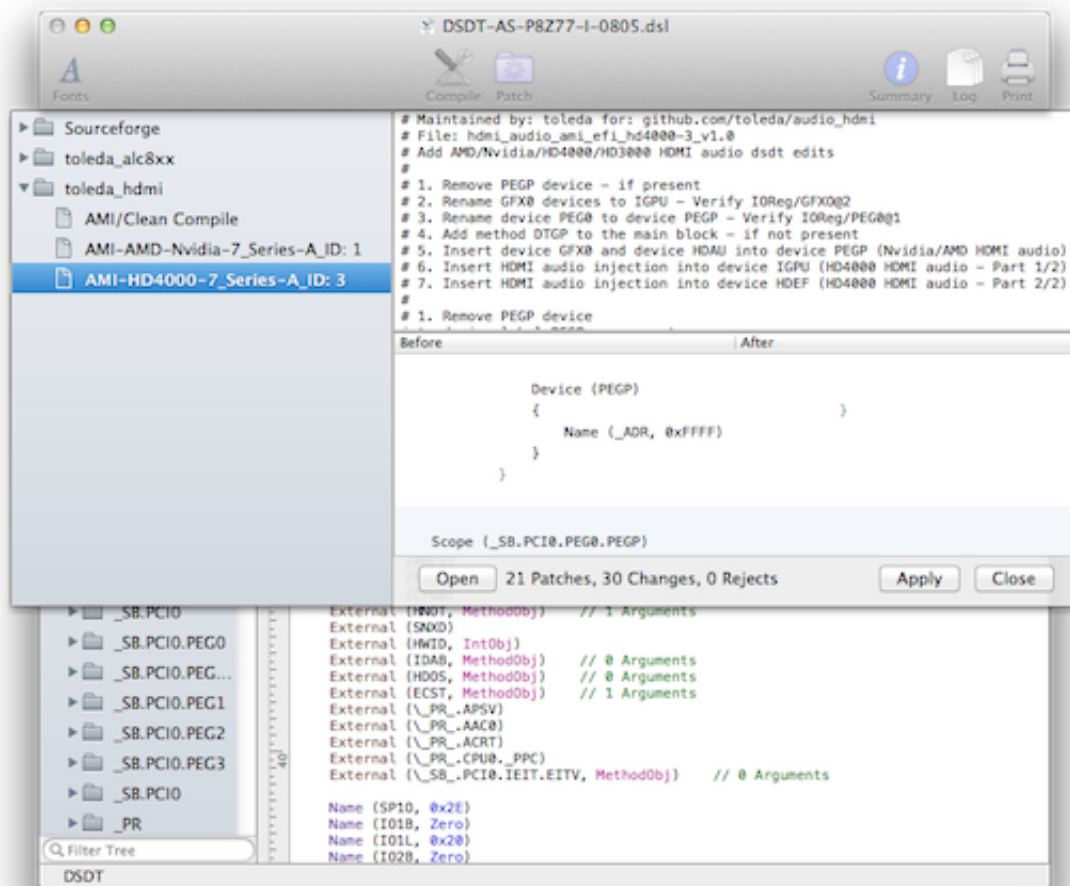
11a. Screenshot



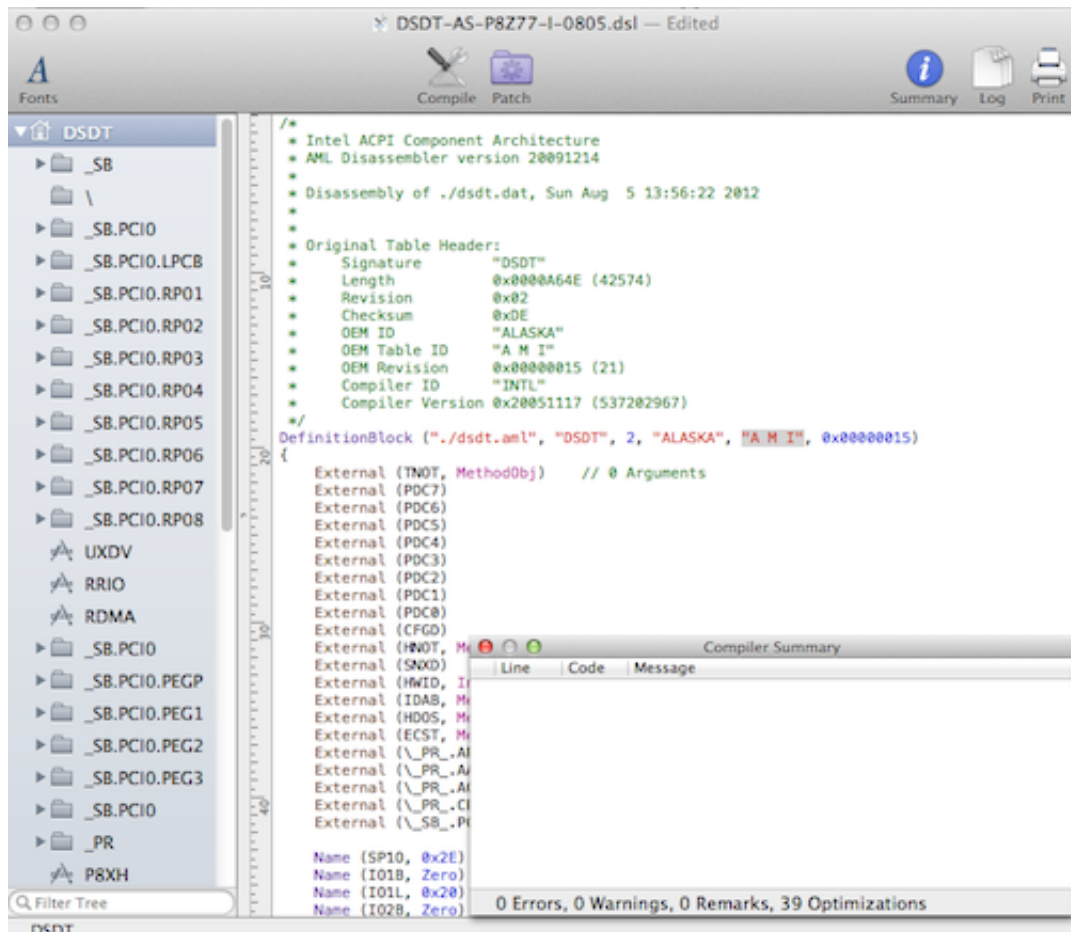
12. MaciASL/Patch/Apply
13. MaciASL/Patch/Close
14. MaciASL/Compile
- 14a. See Screenshot at 19a
15. If no errors, jump to **III. Apply Patch file - MaciASL**
- 15a. Errors, see Troubleshooting/Problem Reporting/4.

III. Apply Patch file - MaciASL

16. Patch/toleda_hdmi_hd4000/Select appropriate Patch file/make any edits
- 16a. Screenshot



17. MaciASL/Patch/Apply
18. MaciASL/Patch/Close
19. MaciASL/Compile
- 19a. Screenshot



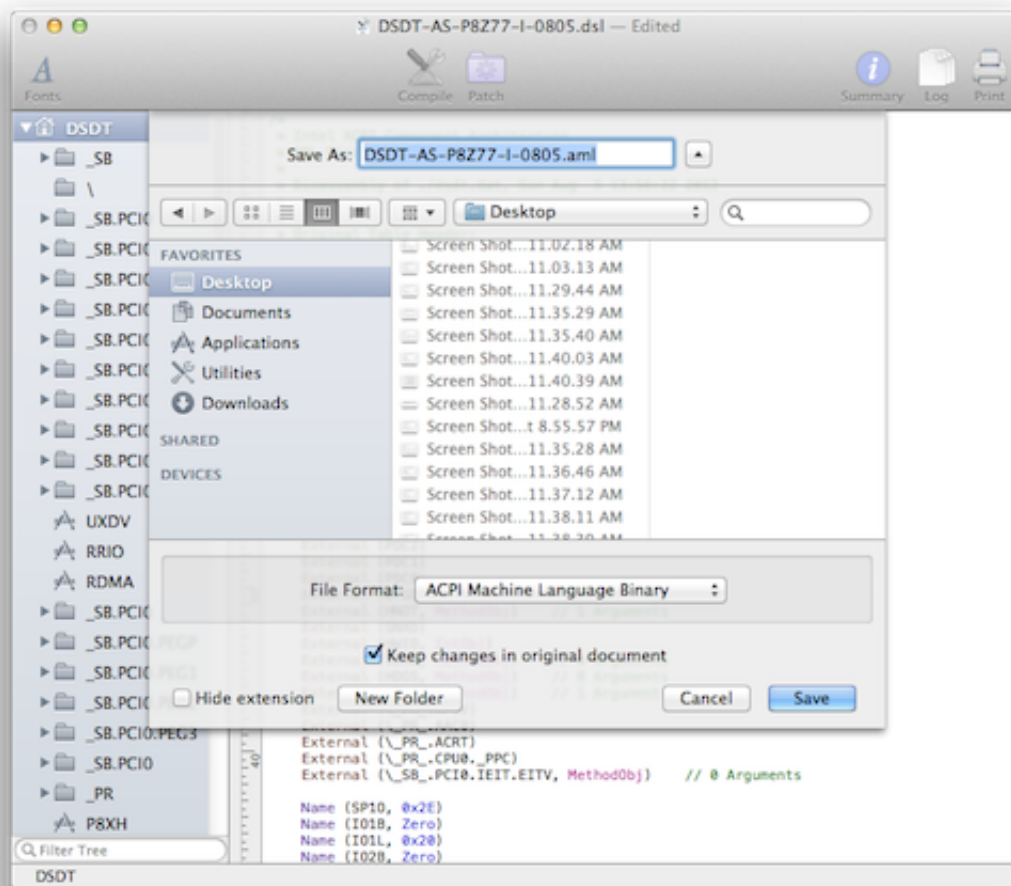
20. If no errors, jump to **IV. Save dsdt.aml - MaciASL**

20a. Errors, see Troubleshooting/Problem Reporting/4.

IV. Save dsdt.aml - MaciASL

21. MaciASL/File/Save As... /ACPI Machine Language Binary/Desktop/dsdt.aml (add extension)

21a. Screenshot



V. Install dsdt.aml - MaciASL

22. MaciASL/File/Save As... /ACPI Machine Language Binary/Extra/dsdt.aml (add extension)

VI. Restart

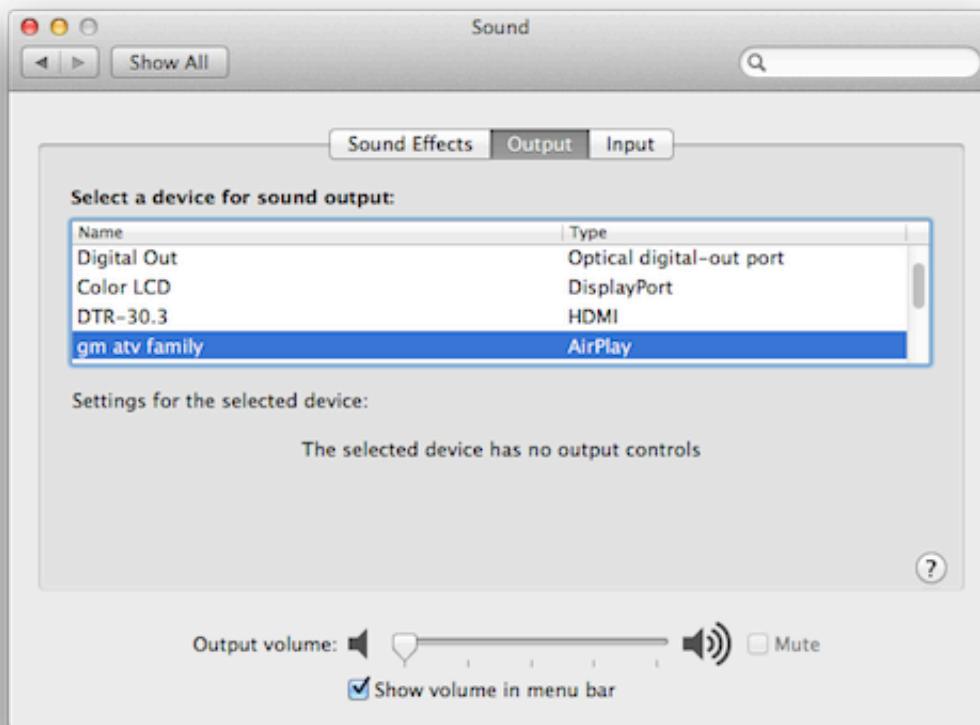
23. Repair permissions and cache (Ex., Disk Utility, Kext Beast, Kext Utility, Kext Wizard, etc.)

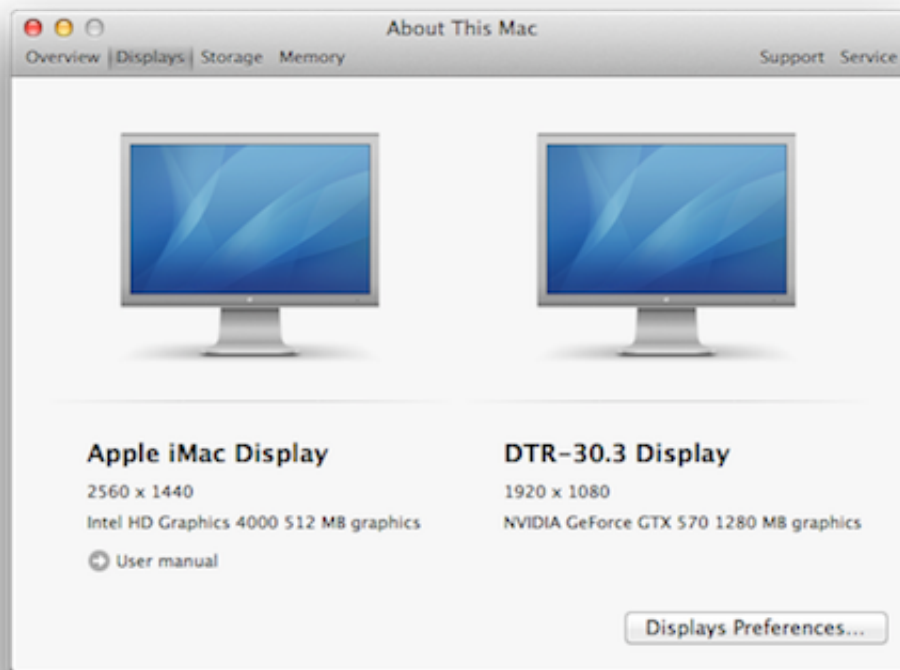
24. Restart

VII. Verify HDMI Audio

P8Z77 I Deluxe/i7-3770K/HD4000 DP audio/NVidia HDMI audio/AirPlay Mirroring

25. System Preferences/Sound/Outputs/Select HDMI





Troubleshooting

1. Verify HDMI device connected
 - 1a. System Information/Graphics/Display/HDMI device name/Television/Yes
2. Verify Extra/dsdt.aml is
 - 2a. .aml file
 - 2b. edited
3. Run IOREg/Verify Devices (PEGP, GFX0, HDAU, HDEF and IGPU)
 - 3a. Device (IGPU) may not be present if HD4000 Graphics is not enabled
 - 3b. Device (GFX0) and Device (HDAU) may not be present if no discrete graphics
4. Problem Reporting/Post to [\[Easy Guide\] ML: HDMI Audio/HD4000/7 Series MB](#)
 - 4a. Motherboard/BIOS version/processor/graphics/OS and version
 - 4b. dsdt
 - 4c. copy of IOREg

References

[\[Easy Guide\] ML: HDMI Audio/HD4000/7 Series MB](#)
[Mountain Lion HDMI Audio - AMI DSDT](#)
[toleda/audio_hdmi_hd4000 · GitHub](#)

Credits:

VCH888: [ALC889A, Gigabyte \(Intel\): now having a working front mic - Page 38 - Sound - InsanelyMac Forum](#)
SJ_UnderWater: [Native DSDT/AML IDE & Compiler: MaciASL Open Beta](#)

[Guide] ML-HD4000-7_series-hdmi_audio_dsdt_edits_v1.2