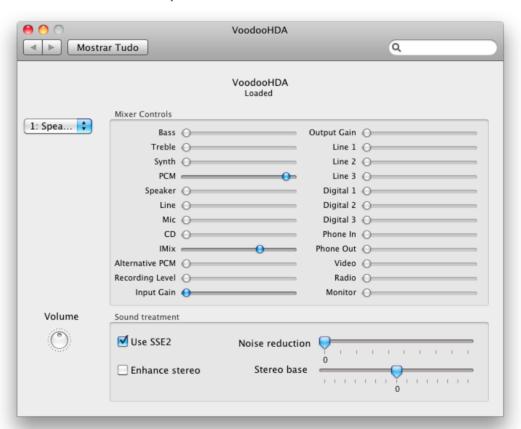


Solution 2: check "Use SSE2" in VoodooHDA prefPane



You can also enable **Vectorize** in Info.plist

true/>_linenums:0'><key>Vectorize</key><true/>

Problem: volume control (slider) doesn't work.

 ${\bf Solution: enable \, Voodoo HDAE nable Volume Change Fix} \ {\bf in \, Info. plist}$

 ${\bf true}/{\bf >_linenums:} o'{\bf >}{\bf <} key{\bf >}{\bf VoodooHDAE} nable Volume Change Fix{\bf <}/key{\bf >}{\bf <}true/{\bf >}$

Problem: volume too low.

Solution: enable VoodooHDAEnableHalfVolumeFix in Info.plist

```
true/>_linenums:o'><key>VoodooHDAEnableHalfVolumeFix</key><true/>
```

Problem: audio feedback (Larsen effect), sound loop between input (microphone) and output (speakers).

Solution: mute iGain and increase iMix or Mic if microphone doesn't work

```
o</string>_linenums:o'><key>iGain</key><string>o</string>
```

It can also be done in the prefPane. In some cases you may need to mute Monitor instead of iGain.

Problem: audio delay. If you change volume, for example, it takes 1 or 2 seconds to play the test sound.

 $\textbf{Solution 1:} \ delete \ com. apple. audio. Device Settings. plist \ and \ com. apple. audio. System Settings. plist \ from \ / Library/Preferences/Audio \ and \ reboot.$

 $\textbf{Solution 2:} \ use \ \underline{SoundFlower (http://code.google.com/p/soundflower/downloads/list)}.$

Problem: inputs or outputs don't show in sound preferences.

Solution 1: look for a kext patched for your codec.

For VT1708S

http://www.insanelym...howtopic=231508 (http://www.insanelymac.com/forum/index.php?showtopic=231508)

For AD1988B

http://www.insanelym...howtopic=267898 (http://www.insanelymac.com/forum/index.php?showtopic=267898)

Solution 2: add NodesToPatch basead on getDump output (download in official thread).

Example

Config (PinDefault) is made up of the last 2 digits of each codec verb, but in the opposite order

More detailed example

http://olarila.com/f...php?f=18&t=604 (http://olarila.com/forum/viewtopic.php?f=18&t=604)

Info about codec verbs

 $\textbf{Source:}\ \underline{\text{http://www.projectos...p?showtopic=465}}\ (\underline{\text{http://www.projectosx.com/forum/index.php?showtopic=465}})$

For each input/output there is a sequence of 4 verbs.

```
        Jack Color Description
        Node PinDefault
        Original Verbs

        1/8 Green Line Out at Ext Rear
        20 0x14 0x01014410 21471610 21471644 21471e01 21471f01
```

Its about NodeID(NID) 0x14 in hex, 20 in decimal.

The default verbs for it: 21471c10 21471d44 21471e01 21471f01

CAd (Codec Adress) NID (NodeID) Verb Command Verb Data

Default Association and Sequence are used together by software to group Pin Complexes (and therefore jacks) together into functional blocks to support multichannel operation. Software may assume that all jacks with the same association number are intended to be grouped together, for instance to provide six channel analog output. The Default Association can also be used by software to prioritize resource allocation in constrained situations. Lower Default Association values would be higher in priority for resources such as processing nodes or Input and Output Converters. Note that this is the default association only, and software can override this value if required, in particular if the user provides additional information about the particular system configuration. A value of 0000b is reserved and should not be used. Software may interpret this value to indicate that the Pin Configuration data has not been properly initialized. A value of 1111b is a special value indicating that the Association has the lowest priority. Multiple different Pin Complexes may share this value, and each is intended to be exposed as independent devices.

Sequence indicates the order of the jacks in the association group. The lowest numbered jack in the association group should be assigned the lowest numbered channels in the stream, etc. The numbers need not be sequential within the group, only the order matters. Sequence numbers within a set of Default Associations must be unique.

*My notes for this, if you look on the vanilla codec verb(no matter what codec) you will see that **Sequence** is always 0. Why that, and why for us on our codec verbs is different? Simple **b/c Apple dosen't have multichannel analog out!** so you must change it to 0.

*About **Default Association**, Keep the default one, in order, and on those that are the same replace them with new one that dosen't exist already in the dump... the values you can use are: 1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, c, d and f.(see what does **verbit** if you still don't understand)

71dXY X=Color Y=Misc

Color indicates the color of the physical jack for use by software.

Unknown 0
Black 1
Grey 2
Blue 3
Green 4
Red 5
Orange 6
Yellow 7
Purple 8
Pink 9
Reserved A-D
White E

Misc is a bit field used to indicate other information about the jack. Currently, only bit o is defined. If bit o is set, it indicates that the jack has no presence detect capability, so even if a Pin Complex indicates that the codec hardware supports the presence detect functionality on the jack, the external circuitry is not capable of supporting the functionality.

Reserved 3

Reserved 2

Reserved 1

Jack Detect Override o

*Use o for Jack Detect - External Device(e.g. Headphones Mic etc)
Use 1 for Jack Detect Disabled - Internal Device(e.g. Internal speakers, Internal mic)

71eXY X=Default Device Y=Connection Type

Default Device indicates the intended use of the jack or device. This can indicate either the label on the jack or the device that is hardwired to the port, as with integrated speakers and the like.

Line Out 0
Speaker 1
HP Out 2
CD 3
SPDIF Out 4
Digital Other Out 5
Modem Line Side 6
Modem Handset Side 7
Line In 8
AUX 9
Mic In A
Telephony B

Connection Type indicates the type of physical connection, such as a 1/8-inch stereo jack or an optical digital connector, etc. Software can use this information to provide helpful user interface descriptions to the user or to modify reported codec capabilities based on the capabilities of the physical transport external to the codec.

Unknown o

1/8" stereo/mono 1

1/4" stereo/mono 2

ATAPI internal 3

RCA 4

Optical 5

Other Digital 6

Other Analog 7

Multichannel Analog (DIN) 8

XLR/Professional 9

RJ-11 (Modem) A

Combination B

71fXY X=Port Connectivity Y=Location

Port Connectivity indicates the external connectivity of the Pin Complex. Software can use this value to know what Pin Complexes are connected to jacks, internal devices, or not connected at all.

- oob The Port Complex is connected to a jack (1/8", ATAPI, etc.).
- 01b No physical connection for Port.
- 10b A fixed function device (integrated speaker, integrated mic, etc.) is attached.
- 11b Both a jack and an internal device are attached. The Information provided in all other fields refers to the integrated device. The PD pin will reflect the status of the jack; the user will need to be queried to figure out what it is.

Location indicates the physical location of the jack or device to which the pin complex is connected. This allows software to indicate, for instance, that the device is the "Front Panel Headphone Jack" as opposed to rear panel connections.

*Details:

Convert the 2 digit hex number to binary.

Pad the front with zero's to make it 8 dgits.

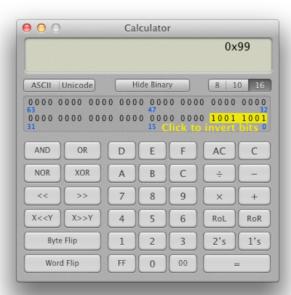
Example:

Reading the bits from left to right:

Port Connectivity bits 7:6

OO - Port is connected to a Jack
O1 - No External Port -or- No physical connection for Port
TO - Fixed Function/Built In Device (integrated speaker, mic, etc)
T1 - Jack and Internal device are attached

Location Part 1 - bits 5:4



Thanks so much for this! I'll try some of these.

BTW, some of the lingo probably passed over my head, but do you know how to get surround sound working?

oldnapalm

Posted 13 October 2011 - 03:31 AM

Usually (at least in the codecs I tested) all line-out have the same **default association**, only the **sequence** changes. You have to set a different default association for each line-out and set sequence as zero.

Once you have 3 or 4 line-out working, create an aggregate device, configure the speakers and select it in sound output.

Check this example

http://www.insanelym...howtopic=267898 (http://www.insanelymac.com/forum/index.php?showtopic=267898)

Quote

*About Default Association, Keep the default one, in order, and on those that are the same replace them with new one that dosen't exist already in the dump... the values you can use are: 1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, c, d and f. (see what does verbit if you still don't understand)

buoo

Posted 14 October 2011 - 05:01 AM

Thanks Crosx86 (!!

Thanks to this guide the audio works, but not perfectly. I hear a little background noise (like crackling noises).

I got my codec_dump in http://www.insanelymac.com/forum/index.php?app=core&module=attach§ion=attach&attach_id=103537)

codec_dump.txt (http://www.insanelymac.com/forum/index.php?app=core&module=attach§ion=attach&attach_id=103537)
15.35KB
52 downloads

and that's what I get with verbit:

[codebox]Verbs from Linux Codec Dump File: codec#o

Codec: Realtek ALC887 Address: o DevID: 283904135 (0x10eco887)

Jack Color Description Node PinDefault Original Verbs

 $1/8 \; Black \; Speaker \; at \; Ext \; Rear \; 17 \; Ox11 \; Ox4111111f0 \; O1171cf0 \; O1171d11 \; O1171e11 \; O1171f41$

 $1/8 \; Black \; Speaker \; at \; Ext \; Rear \; 18 \; 0x12 \; 0x4111111f0 \; 01271cf0 \; 01271d11 \; 01271e11 \; 01271f41 \; 01271f411 \; 01271f4111 \; 01271f41 \; 01271f41 \; 01271f41 \; 01271f41 \; 0127$

 $1/8 \; Green \; Line \; Out \; at \; Ext \; Rear \; 20 \; 0x14 \; 0x01014010 \; 01471c10 \; 01471d40 \; 01471e01 \; 01471f01 \; 01471$

1/8Black Speaker at Ext Rear 21 0x15 0x411111fo 01571cfo 01571d11 01571e11 01571f41 1/8Black Speaker at Ext Rear 22 0x16 0x411111fo 01671cfo 01671d11 01671e11 01671f41

1/8 Black Speaker at Ext Rear 23 0x17 0x411111f0 01771cf0 01771d11 01771e11 01771f41

Mic at Ext Rear 0x18 0x18 27367488 01871c40 01871d98 01871ea1 01871f01

Mic at Ext Front 0x19 0x19 44145744 01971c50 01971d9c 01971ea1 01971f02

1/8 Blue Line In at Ext Rear 26 0x1a 0x0181304f 01a71c4f 01a71d30 01a71e81 01a71f01

HP Out at Ext Front 0x1b 0x1b 35736608 01b71c20 01b71d4c 01b71e21 01b71f02

1/8 Black Speaker at Ext Rear 28 0x1c 0x411111f0 01c71cf0 01c71d11 01c71e11 01c71f41

RCA UNKNOWN Line Out at Ext N/A 29 0x1d 0x4004c601 01d71c01 01d71dc6 01d71e04 01d71f40

Optical Orange SPDIF Out at Ext Rear 30 0x1e 0x01456130 01e71c30 01e71d61 01e71e45 01e71f01

1/8 Black Speaker at Ext Rear 31 0x1f 0x411111fo 01f71cfo 01f71d11 01f71e11 01f71f41

Jack Color Description Node PinDefault Modified Verbs

1/8 Green Line Out at Ext Rear 20 0x14 0x01014010 01471c10 01471d40 01471e01 01471f01

Mic at Ext Rear 0x18 0x18 27367488 01871c40 01871d90 01871ea
1 01871f01

Mic at Ext Front 0x19 0x19 44145744 01971c50 01971d90 01971ea1 01971f01

1/8Blue Line In at Ext Rear 26 0x1a 0x0181304f 01a71c60 01a71d30 01a71e81 01a71f01

 $HP\ Out\ at\ Ext\ Front\ ox1b\ ox1b\ 35736608\ o1b71c20\ o1b71d40\ o1b71e21\ o1b71fo1$

RCA UNKNOWN Line Out at Ext N/A 29 oxıd ox4004c601 o1071c70 o1071c70 o1071c00 o1071c160 Optical Orange SPDIF Out at Ext Rear 30 ox1001c160 o1071c30 o1071c30 o1071c160 o1071c161

[/addbas

I've tried replacing the default nodes with mine

From:

[codebox]<key>NodesToPatch</key>

<array>

<dict>

<key>Codec</key>

<integer>2</integer> <key>Config</key> <string>0x90a70120</string> <key>Node</key> <integer>12</integer> </dict> <dict> <key>Codec</key> <integer>2</integer> <key>Config</key> <string>0x02a1102f</string> <key>Node</key> <integer>14</integer> </dict> <dict> <key>Codec</key> <integer>2</integer> <key>Config</key> <string>0x90a6e140</string> <key>Node</key> <integer>19</integer> </dict> <dict> <key>Codec</key> <integer>2</integer> <key>Config</key> <string>0x02011030</string> <key>Node</key> <integer>15</integer> </dict> <dict> <key>Codec</key> <integer>2</integer> <key>Config</key> <string>0x02211050</string> <key>DAC</key> <string>3</string> <key>Node</key> <integer>10</integer> </dict> </array>[/codebox] To: [codebox]<key>NodesToPatch</key> <array> <dict><key>Node</key> <integer>20</integer> <key>Config</key> <string>0x01014010</string> </dict> <dict> <key>Node</key> <integer>26</integer> <key>Config</key> <string>0x01813060</string> </dict> <dict> <key>Node</key> <integer>29</integer> <key>Config</key> <string>0x4004c070</string> </dict> <dict> <key>Node</key> <integer>30</integer> <key>Config</key> <string>0x01456030</string> </dict> <dict> </array>[/codebox]

Magically the audio doesn't work anymore.





Crosx86

Posted 14 October 2011 - 06:11 AM

@buoo

the problem in this edition of the nodes, I think.simple patch your dsdt and install the voodooHDA 2.7.2.pkg and edit the info.plist of the kext:

<key>IOMatchCategory</key> <string>VoodooHDADevice</string> <key>IOPCIPrimaryMatch</key> <string>0x27d88086</string>

<kev>IOProviderClass</kev>

<string>IOPCIDevice</string>

you're right the sound still works perfectly, more now.works best.with codec dump I did not succeed, controls lit up, but without sound.

oldnapalm

Posted 14 October 2011 - 06:15 AM

You have to specify the Codec key in each node patch.

Where did you get the "default" NodesToPatch?

 $Post\ your\ VoodooHDA\ getDump.$

About the crackling sound, see here

http://www.insanelym...howtopic=267905 (http://www.insanelymac.com/forum/index.php?showtopic=267905)

buoo

Posted 14 October 2011 - 07:57 AM

oldnapalm, on Oct 13 2011, 10:15 PM, said:

You have to specify the **Codec** key in each node patch.

Where did you get the "default" NodesToPatch?

Post your VoodooHDA getDump.

About the crackling sound, see here

http://www.insanelym...howtopic=267905 (http://www.insanelymac.com/forum/index.php?showtopic=267905)

Thanks guys 😃



I'm using voodoohda 2.7.2, I only added my PCI ID.

<key>IOPCIPrimaryMatch</key> <string>0x27d88086</string>

With "default" I mean the nodes that I found in the unpatched 2.7.2's plist.

Oldnapalm, Should be these the right nodes to use?

20 0x01014010

26 0x0181304f

29 0x4004c601

30 0x01456130

This is the getdump

🍖 (http://www.insanelymac.com/forum/index.php?app=core&module=attach§ion=attach&attach_id=103549) getdump.rtf $(http://www.insanelymac.com/forum/index.php?app=core\&module=attach\§ion=attach\&attach_id=103549) \\ 45.26KB \\ 56 \\ downloads \\ 60 \\ downlo$

oldnapalm

Posted 14 October 2011 - 08:23 AM

Unpatched plist should have no nodes to patch

```
I think you just need
                                  <dict>
                                      <key>Codec</key>
                                      <integer>0</integer>
                                      <key>Config</key>
                                      <string>0x01813060</string>
                                      <key>Node</key>
                                      <integer>26</integer>
                                  </dict>
                                You can try this to get headphones auto-detect
                                  <dict>
                                      <key>Codec</key>
                                      <integer>0</integer>
                                      <key>Config</key>
                                      <string>0x02214c1f</string>
                                      <key>Node</key>
                                      <integer>27</integer>
                                  </dict>
buoo
                               Posted 14 October 2011 - 07:30 PM
                                The audio works, but there are 2 problems:
                                the voodooprefpan reset at the reboot
                                Mission Complete!
                                The audio works very god LoL using VoodooHDA\mathbf{2.2} + my PCI ID
                                  <key>IOPCIPrimaryMatch</key>
                                  <string>0x27d88086</string>
buoo
                               Posted 24 October 2011 - 03:31 AM
                                Hi man, I don't understand the portuguese but I want to try it xD
                                Wow! This is the first VoodooHDA 2.7.2 that doesn't give me noice.
                                But It gives me too much audio delay and the mic doesn't work.
                                Crosx86, do you know how to eliminate the audio delay?
```

<key>NodesToPatch</key>

<array/>

Crosx86

Posted 24 October 2011 - 04:02 AM

Hey buoo, for me works perfect...you can check in prefpane:

@buoo



(http://www.insanelymac.com/forum/uploads/monthly_10_2011/post-711330-1319396502.png)

Your get dump is the same as mine?

put your device id and your vendor ID in the plist kext if it is already there, delete all nodes and run vooodoo get dump and compare.

buoo

Posted 24 October 2011 - 04:09 AM

Our chips are different :\

I'was looking your codec_dump, however ...do you know how to eliminate the audio delay?

Thanks 😃

Edit: It is the same 0x27d88086

but the nodes are differents

Could you take a look here?

[http://www.insanelymac.com/forum/index.php?app=core&module=attach§ion=attach&attach_id=104162) codec.txt.zip (http://www.insanelymac.com/forum/index.php?app=core&module=attach§ion=attach&attach_id=104162) 1.9KB 26 downloads [http://www.insanelymac.com/forum/index.php?app=core&module=attach§ion=attach&attach_id=104163) getdump.zip (http://www.insanelymac.com/forum/index.php?app=core&module=attach§ion=attach&attach_id=104163) 5.15KB 55 downloads

..If you could help me, this audio chip is killing me.

Crosx86

Posted 24 October 2011 - 04:15 AM

EDIT: the get dump with this voodoo with nodes, remove all repair permissions reboot and run get dump

Quote

put your device id and your vendor ID in the plist kext if it is already there, delete all nodes and run vooodoo get dump and compare.

this part of your dump:

Probing codec #o...

HDA Codec #0: Realtek ALC887

HDA Codec ID: 0x10ec0887

Vendor: 0x10ec Device: 0x0887

Revision: 0x02

Stepping: 0x02

PCI Subvendor: 0x83bc1043 startNode=1 endNode=2

Found audio FG nid=1 startNode=2 endNode=39 total=37

AND

post it.

buoo

Posted 24 October 2011 - 09:22 PM

Ok!

I've deleted all nodes from your VoodooHDA

```
        <key>MixerValues</key>
        <dict>
        <key>Mic</key>
        <string>0</string>
        <key>PCM</key</td>

        >
        <string>100</string>
        <key>iGain</key>
        <string>100</string>
        <key>iMix</key>

        <string>30</string>
        </dict>
        <key>NodesToPatch

        <key>Noise</key>

        <integer>2</integer>
        <key>Vectorize</key>
        <true/>
```

Now this is the new getdump:

```
Probing codec #0...

HDA Codec #0: Realtek ALC887

HDA Codec ID: 0x10ec0887

Vendor: 0x10ec

Device: 0x0887

Revision: 0x02

Stepping: 0x02

PCI Subvendor: 0x84271043

startNode=1 endNode=2

Found audio FG nid=1 startNode=2 endNode=39 total=37

Processing audio FG cad=0 nid=1...
```

Is this the right configuration? The mic doesn't work and I got audio delay (2 seconds)

```
        <key>NodesToPatch</key>
        <array>
        <dict>
        <key>Codec</key>
        <integer>o</integer</td>

        er>
        <key>Config</key>
        <string>oxo1014010</string>
        <key>Node</key>
        <integer>o</integer>
        <dict>
        <key>Codec</key>
        <integer>
        <key>Node</key>
        <key>Node</key>
        <key>Node</key>
        <key>Node</key>
        <key>Node</key>
        <key>Node</key>
        <key>Codec</key>
        <key>Node</key>
        <key>Codec</key>
        <key>Node</key>
        <key>Codec</key>
        <key>Codec</key>
        <key>Codec</key>
        <key>Codec</key>
        <key>Codec</key>
        <key>Codec
        <key>Codec
```

oldnapalm

Posted 24 October 2011 - 11:04 PM

Just install SoundFlower and the delay should be gone.

http://code.google.c.../downloads/list (http://code.google.com/p/soundflower/downloads/list)

You just need to add in NodesToPatch the nodes you want to patch, the ones that are fine with the default Config you don't need to add.

You just need

nid 26 0x01813060

If you want to turn pink and blue rear into line-out (for 5.1 audio)

nid 24 0x01019840 nid 26 0x01013060

Crosx86

Posted 24 October 2011 - 11:57 PM

@buuo

Hey buuo,the error in node 26,you repeat the end of the strings.

your nodes to patch:

The correct patching:

You need put it line-out,use this string:0x01013060 in node 26

oldnapalm

Posted 25 October 2011 - 03:14 AM

Please see my post above

Quote

You just need to add in Nodes To Patch the nodes you want to patch, the ones that are fine with the default Config you don't need to add.

The error is using default association 4 for node 26, it's already used in node 24.

buoo

Posted 25 October 2011 - 04:38 AM

The mic works but I hear it in the speakers and I'm not able to decrease the volume(of the mic).

oldnapalm

Posted 25 October 2011 - 05:03 AM

buoo, on Oct 24 2011, 05:38 PM, said:

The mic works but I hear it in the speakers

Onote

Problem: audio feedback (Larsen effect), sound loop between input (microphone) and output (speakers). **Solution:** mute **iGain** and increase **iMix** or **Mic** if microphone doesn't work

 $o < / string > _linenums : o' > < key > i Gain < / key > < \textbf{string} > o < / \textbf{str$

It can also be done in the prefPane. In some cases you may need to mute $\mathbf{Monitor}$ instead of iGain.

Quote

I'm not able to decrease the volume(of the mic)

Try to do it in VoodooHDA prefPane, once you find a good value you can set in Info.plist (MixerValues), but the value set in prefPane will be restored after reboot if you use **voodoohdahelper** (installed by the pkg).

oldnapalm

Posted 27 October 2011 - 04:07 AM

 $I\ found\ another\ solution\ to\ the\ delay\ problem\ (worked\ for\ me):\ delete\ com. apple. audio. Device Settings. plist\ and\ com. apple. audio. System Settings. plist\ from\ / Library/Preferences/Audio\ and\ reboot.$

Page 1 of 7

 $In sanely Mac\ Forum\ \rightarrow\ OSx86\ Project\ \rightarrow\ Hardware\ Components\ and\ Drivers\ \rightarrow\ Sound\ \rightarrow\ VoodooHDA$

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