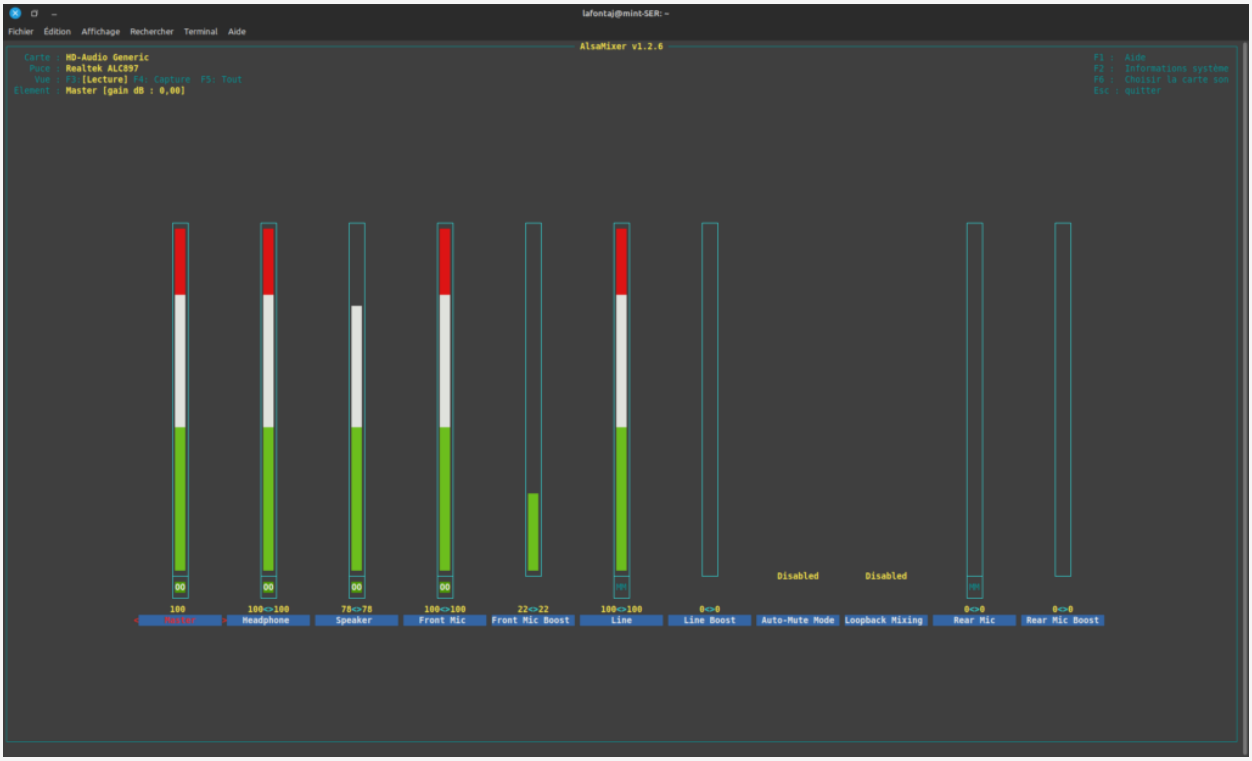
# Beelink – SER5 – [AMD] Family 17h (Models 10h-1fh) HD Audio Controller

Generic_1 [HD-Audio Generic], périphérique 0 : ALC897 Analog [ALC897 Analog]

Le système d’exploitation installé sur le mini PC Beelink – SER5 est Mint 21.1 basé sur Ubuntu 22.04. La carte de son analogique ALC897 n’est pas bien configurée suite à l’installation. Le profil de la carte est bien là dans pulseaudio, les entrées (input sink) sont bien disponibles et configurables, mais la sortie (output sink) n’apparait pas et il est donc impossible d’y assigner la diffusion de son (playback stream).

Avec alsamixer, il est possible de valider que la sortie (Front) est bien active. Sur cette photo le correctif (à venir) est déjà appliqué. La sortie SPEAKER porte originalement le nom FRONT.



Il est possible d’obtenir l’index et le nom de périphérique avec les commandes suivantes:

```
aplay -l
```

```
**** Liste des périphériques matériels PLAYBACK ****
carte 0 : Generic [HD-Audio Generic], périphérique 3 : HDMI 0 [HDMI 0]
Sous-périphériques : 1/1
Sous-périphérique #0 : subdevice #0
carte 0 : Generic [HD-Audio Generic], périphérique 7 : HDMI 1 [HDMI 1]
Sous-périphériques : 1/1
Sous-périphérique #0 : subdevice #0
carte 0 : Generic [HD-Audio Generic], périphérique 8 : HDMI 2 [HDMI 2]
Sous-périphériques : 1/1
Sous-périphérique #0 : subdevice #0
carte 0 : Generic [HD-Audio Generic], périphérique 9 : HDMI 3 [HDMI 3]
Sous-périphériques : 1/1
Sous-périphérique #0 : subdevice #0
carte 1 : CODEC [USB Audio CODEC], périphérique 0 : USB Audio [USB Audio]
Sous-périphériques : 1/1
Sous-périphérique #0 : subdevice #0
carte 2 : Generic_1 [HD-Audio Generic], périphérique 0 : ALC897 Analog [ALC897
Analog]
Sous-périphériques : 0/1
Sous-périphérique #0 : subdevice #0
```

```
aplay -L
```

```
null
    Discard all samples (playback) or generate zero samples (capture)
default
    Playback/recording through the PulseAudio sound server
samplerate
    Rate Converter Plugin Using Samplerate Library
speexrate
    Rate Converter Plugin Using Speex Resampler
jack
```

```
    JACK Audio Connection Kit
oss
    Open Sound System
pulse
    PulseAudio Sound Server
upmix
    Plugin for channel upmix (4,6,8)
vdownmix
    Plugin for channel downmix (stereo) with a simple spacialization
hw:CARD=Generic,DEV=3
    HD-Audio Generic, HDMI 0
    Direct hardware device without any conversions
hw:CARD=Generic,DEV=7
    HD-Audio Generic, HDMI 1
    Direct hardware device without any conversions
hw:CARD=Generic,DEV=8
    HD-Audio Generic, HDMI 2
    Direct hardware device without any conversions
hw:CARD=Generic,DEV=9
    HD-Audio Generic, HDMI 3
    Direct hardware device without any conversions
plughw:CARD=Generic,DEV=3
    HD-Audio Generic, HDMI 0
    Hardware device with all software conversions
plughw:CARD=Generic,DEV=7
    HD-Audio Generic, HDMI 1
    Hardware device with all software conversions
plughw:CARD=Generic,DEV=8
    HD-Audio Generic, HDMI 2
    Hardware device with all software conversions
plughw:CARD=Generic,DEV=9
    HD-Audio Generic, HDMI 3
    Hardware device with all software conversions
hdmi:CARD=Generic,DEV=0
    HD-Audio Generic, HDMI 0
    HDMI Audio Output
hdmi:CARD=Generic,DEV=1
    HD-Audio Generic, HDMI 1
    HDMI Audio Output
hdmi:CARD=Generic,DEV=2
    HD-Audio Generic, HDMI 2
    HDMI Audio Output
```

```
hdmi:CARD=Generic,DEV=3
    HD-Audio Generic, HDMI 3
    HDMI Audio Output
dmix:CARD=Generic,DEV=3
    HD-Audio Generic, HDMI 0
    Direct sample mixing device
dmix:CARD=Generic,DEV=7
    HD-Audio Generic, HDMI 1
    Direct sample mixing device
dmix:CARD=Generic,DEV=8
    HD-Audio Generic, HDMI 2
    Direct sample mixing device
dmix:CARD=Generic,DEV=9
    HD-Audio Generic, HDMI 3
    Direct sample mixing device
usbstream:CARD=Generic
    HD-Audio Generic
    USB Stream Output
hw:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    Direct hardware device without any conversions
plughw:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    Hardware device with all software conversions
sysdefault:CARD=CODEC
    USB Audio CODEC, USB Audio
    Default Audio Device
front:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    Front output / input
surround21:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    2.1 Surround output to Front and Subwoofer speakers
surround40:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    4.0 Surround output to Front and Rear speakers
surround41:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    4.1 Surround output to Front, Rear and Subwoofer speakers
surround50:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    5.0 Surround output to Front, Center and Rear speakers
```

```
surround51:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    5.1 Surround output to Front, Center, Rear and Subwoofer speakers
surround71:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    7.1 Surround output to Front, Center, Side, Rear and Woofer speakers
iec958:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    IEC958 (S/PDIF) Digital Audio Output
dmix:CARD=CODEC,DEV=0
    USB Audio CODEC, USB Audio
    Direct sample mixing device
usbstream:CARD=CODEC
    USB Audio CODEC
    USB Stream Output
hw:CARD=Generic_1,DEV=0
    HD-Audio Generic, ALC897 Analog
    Direct hardware device without any conversions
plughw:CARD=Generic_1,DEV=0
    HD-Audio Generic, ALC897 Analog
    Hardware device with all software conversions
sysdefault:CARD=Generic_1
    HD-Audio Generic, ALC897 Analog
    Default Audio Device
front:CARD=Generic_1,DEV=0
    HD-Audio Generic, ALC897 Analog
    Front output / input
surround21:CARD=Generic_1,DEV=0
    HD-Audio Generic, ALC897 Analog
    2.1 Surround output to Front and Subwoofer speakers
surround40:CARD=Generic_1,DEV=0
    HD-Audio Generic, ALC897 Analog
    4.0 Surround output to Front and Rear speakers
surround41:CARD=Generic_1,DEV=0
    HD-Audio Generic, ALC897 Analog
    4.1 Surround output to Front, Rear and Subwoofer speakers
surround50:CARD=Generic_1,DEV=0
    HD-Audio Generic, ALC897 Analog
    5.0 Surround output to Front, Center and Rear speakers
surround51:CARD=Generic_1,DEV=0
    HD-Audio Generic, ALC897 Analog
    5.1 Surround output to Front, Center, Rear and Subwoofer speakers
```

```
surround71:CARD=Generic_1,DEV=0
    HD-Audio Generic, ALC897 Analog
    7.1 Surround output to Front, Center, Side, Rear and Woofer speakers
dmix:CARD=Generic_1,DEV=0
    HD-Audio Generic, ALC897 Analog
    Direct sample mixing device
usbstream:CARD=Generic_1
    HD-Audio Generic
    USB Stream Output
usbstream:CARD=acp
    acp
    USB Stream Output
usbstream:CARD=Webcam
    C505 HD Webcam
    USB Stream Output
```

Choisir un fichier audio .wav pour tester la sortie:

```
aplay --device hw:CARD=2,DEV=0 /media/nas1/Audio/Systeme/chimes.wav
```

```
aplay --device hw:CARD=Generic_1,DEV=0 /media/nas1/Audio/Systeme/chimes.wav
```

J’ai bien entendu le son. Donc la carte fonctionne.

Pour obtenir un peu plus d’information:

```
lspci -v | grep -A7 -i "audio"
```

```
04:00.1 Audio device: Advanced Micro Devices, Inc. [AMD/ATI] Renoir Radeon High
Definition Audio Controller
        Subsystem: Advanced Micro Devices, Inc. [AMD/ATI] Renoir Radeon High
Definition Audio Controller
        Flags: bus master, fast devsel, latency 0, IRQ 82, IOMMU group 14
        Memory at fcbc8000 (32-bit, non-prefetchable) [size=16K]
        Capabilities: <access denied>
        Kernel driver in use: snd_hda_intel
```

```
        Kernel modules: snd_hda_intel

04:00.2 Encryption controller: Advanced Micro Devices, Inc. [AMD] Family 17h
(Models 10h-1fh) Platform Security Processor
--
04:00.5 Multimedia controller: Advanced Micro Devices, Inc. [AMD]
Raven/Raven2/FireFlight/Renoir Audio Processor (rev 01)
        Subsystem: Advanced Micro Devices, Inc. [AMD]
Raven/Raven2/FireFlight/Renoir Audio Processor
        Flags: bus master, fast devsel, latency 0, IRQ 65, IOMMU group 18
        Memory at fcb80000 (32-bit, non-prefetchable) [size=256K]
        Capabilities: <access denied>
        Kernel driver in use: snd_rn_pci_acp3x
        Kernel modules: snd_pci_acp3x, snd_rn_pci_acp3x, snd_pci_acp5x,
snd_pci_acp6x

04:00.6 Audio device: Advanced Micro Devices, Inc. [AMD] Family 17h (Models
10h-1fh) HD Audio Controller
        DeviceName: HD Audio Controller
        Subsystem: Advanced Micro Devices, Inc. [AMD] Family 17h (Models 10h-1fh)
HD Audio Controller
        Flags: bus master, fast devsel, latency 0, IRQ 83, IOMMU group 19
        Memory at fcbc0000 (32-bit, non-prefetchable) [size=32K]
        Capabilities: <access denied>
        Kernel driver in use: snd_hda_intel
        Kernel modules: snd_hda_intel

05:00.0 Non-Essential Instrumentation [1300]: Advanced Micro Devices, Inc. [AMD]
Zeppelin/Raven/Raven2 PCIe Dummy Function (rev 81)
```

```
pacmd list-cards
```

```
4 card(s) available.
    index: 0
        name: <alsa_card.pci-0000_04_00.1>
        driver: <module-alsa-card.c>
        owner module: 7
        properties:
                alsa.card = "0"
```

```
                alsa.card_name = "HD-Audio Generic"
                alsa.long_card_name = "HD-Audio Generic at 0xfcbc8000 irq 82"
                alsa.driver_name = "snd_hda_intel"
                device.bus_path = "pci-0000:04:00.1"
                sysfs.path =
"/devices/pci0000:00/0000:00:08.1/0000:04:00.1/sound/card0"
                device.bus = "pci"
                device.vendor.id = "1002"
                device.vendor.name = "Advanced Micro Devices, Inc. [AMD/ATI]"
                device.product.id = "1637"
                device.product.name = "Renoir Radeon High Definition Audio
Controller"
                device.string = "0"
                device.description = "Renoir Radeon High Definition Audio
Controller"
                module-udev-detect.discovered = "1"
                device.icon_name = "audio-card-pci"
        profiles:
                HiFi: Play HiFi quality Music (priority 40768, available:
unknown)
                off: Éteint (priority 0, available: unknown)
        active profile: <HiFi>
        sinks:
                alsa_output.pci-0000_04_00.1.HiFi__hw_Generic_9__sink/#0: Renoir
Radeon High Definition Audio Controller HDMI / DisplayPort 4 Output
                alsa_output.pci-0000_04_00.1.HiFi__hw_Generic_8__sink/#1: Renoir
Radeon High Definition Audio Controller HDMI / DisplayPort 3 Output
                alsa_output.pci-0000_04_00.1.HiFi__hw_Generic_7__sink/#2: Renoir
Radeon High Definition Audio Controller HDMI / DisplayPort 2 Output
                alsa_output.pci-0000_04_00.1.HiFi__hw_Generic_3__sink/#3: Renoir
Radeon High Definition Audio Controller HDMI / DisplayPort 1 Output
        sources:
                alsa_output.pci-0000_04_00.1.HiFi__hw_Generic_9__sink.monitor/#0:
Monitor of Renoir Radeon High Definition Audio Controller HDMI / DisplayPort 4
Output
                alsa_output.pci-0000_04_00.1.HiFi__hw_Generic_8__sink.monitor/#1:
Monitor of Renoir Radeon High Definition Audio Controller HDMI / DisplayPort 3
Output
                alsa_output.pci-0000_04_00.1.HiFi__hw_Generic_7__sink.monitor/#2:
Monitor of Renoir Radeon High Definition Audio Controller HDMI / DisplayPort 2
Output
                alsa_output.pci-0000_04_00.1.HiFi__hw_Generic_3__sink.monitor/#3:
```

```
Monitor of Renoir Radeon High Definition Audio Controller HDMI / DisplayPort 1
Output
        ports:
                [Out] HDMI4: HDMI / DisplayPort 4 Output (priority 1400, latency
offset 0 usec, available: no)
                        properties:
                [Out] HDMI3: HDMI / DisplayPort 3 Output (priority 1300, latency
offset 0 usec, available: no)
                        properties:
                [Out] HDMI2: HDMI / DisplayPort 2 Output (priority 1200, latency
offset 0 usec, available: no)
                        properties:
                [Out] HDMI1: HDMI / DisplayPort 1 Output (priority 1100, latency
offset 0 usec, available: yes)
                        properties:
                                device.product.name = "PA248"
    index: 1
        name: <alsa_card.usb-Burr-Brown_from_TI_USB_Audio_CODEC-00>
        driver: <module-alsa-card.c>
        owner module: 8
        properties:
                alsa.card = "1"
                alsa.card_name = "USB Audio CODEC"
                alsa.long_card_name = "Burr-Brown from TI USB Audio CODEC at
usb-0000:04:00.4-2.3, full speed"
                alsa.driver_name = "snd_usb_audio"
                device.bus_path = "pci-0000:04:00.4-usb-0:2.3:1.0"
                sysfs.path =
"/devices/pci0000:00/0000:00:08.1/0000:04:00.4/usb3/3-2/3-2.3/3-2.3:1.0/sound/car
d1"
                udev.id = "usb-Burr-Brown_from_TI_USB_Audio_CODEC-00"
                device.bus = "usb"
                device.vendor.id = "08bb"
                device.vendor.name = "Texas Instruments"
                device.product.id = "2902"
                device.product.name = "PCM2902 Audio Codec"
                device.serial = "Burr-Brown_from_TI_USB_Audio_CODEC"
                device.string = "1"
                device.description = "PCM2902 Audio Codec"
                module-udev-detect.discovered = "1"
                device.icon_name = "audio-card-usb"
        profiles:
```

```
                input:analog-stereo-input: Entrée Stéréo analogique (priority 54,
available: unknown)
                input:analog-mono: Entrée Mono analogique (priority 3, available:
unknown)
                input:analog-mono-left: Entrée Analog Mono (Left) (priority 32,
available: unknown)
                input:analog-mono-right: Entrée Analog Mono (Right) (priority 31,
available: unknown)
                output:analog-stereo-output: Sortie Stéréo analogique (priority
5000, available: unknown)
                output:analog-stereo-output+input:analog-stereo-input: Sortie
Stéréo analogique + Entrée Stéréo analogique (priority 5054, available: unknown)
                output:analog-stereo-output+input:analog-mono: Sortie Stéréo
analogique + Entrée Mono analogique (priority 5003, available: unknown)
                output:analog-stereo-output+input:analog-mono-left: Sortie Stéréo
analogique + Entrée Analog Mono (Left) (priority 5032, available: unknown)
                output:analog-stereo-output+input:analog-mono-right: Sortie
Stéréo analogique + Entrée Analog Mono (Right) (priority 5031, available:
unknown)
                off: Éteint (priority 0, available: unknown)
        active profile: <output:analog-stereo-output+input:analog-stereo-input>
        sinks:
                alsa_output.usb-Burr-Brown_from_TI_USB_Audio_CODEC-00.analog-
stereo-output/#4: PCM2902 Audio Codec Stéréo analogique
        sources:
                alsa_output.usb-Burr-Brown_from_TI_USB_Audio_CODEC-00.analog-
stereo-output.monitor/#4: Monitor of PCM2902 Audio Codec Stéréo analogique
                alsa_input.usb-Burr-Brown_from_TI_USB_Audio_CODEC-00.analog-
stereo-input/#5: PCM2902 Audio Codec Stéréo analogique
        ports:
                analog-input: Analog Input (priority 10000, latency offset 0
usec, available: unknown)
                        properties:
                analog-output: Analog Output (priority 9900, latency offset 0
usec, available: unknown)
                        properties:
    index: 2
        name: <alsa_card.usb-046d_C505_HD_Webcam_8B3A4C50-02>
        driver: <module-alsa-card.c>
        owner module: 9
        properties:
                alsa.card = "4"
```

```
                alsa.card_name = "C505 HD Webcam"
                alsa.long_card_name = "C505 HD Webcam at usb-0000:04:00.4-2.4.4,
high speed"
                alsa.driver_name = "snd_usb_audio"
                device.bus_path = "pci-0000:04:00.4-usb-0:2.4.4:1.2"
                sysfs.path =
"/devices/pci0000:00/0000:00:08.1/0000:04:00.4/usb3/3-2/3-2.4/3-2.4.4/3-2.4.4:1.2
/sound/card4"
                udev.id = "usb-046d_C505_HD_Webcam_8B3A4C50-02"
                device.bus = "usb"
                device.vendor.id = "046d"
                device.vendor.name = "Logitech, Inc."
                device.product.id = "08e3"
                device.product.name = "C505 HD Webcam"
                device.serial = "046d_C505_HD_Webcam_8B3A4C50"
                device.form_factor = "webcam"
                device.string = "4"
                device.description = "C505 HD Webcam"
                module-udev-detect.discovered = "1"
                device.icon_name = "camera-web-usb"
        profiles:
                input:mono-fallback: Entrée Mono (priority 1, available: unknown)
                off: Éteint (priority 0, available: unknown)
        active profile: <input:mono-fallback>
        sources:
                alsa_input.usb-046d_C505_HD_Webcam_8B3A4C50-02.mono-fallback/#6:
C505 HD Webcam Mono
        ports:
                analog-input-mic: Microphone (priority 8700, latency offset 0
usec, available: unknown)
                        properties:
                                device.icon_name = "audio-input-microphone"
    index: 3
        name: <alsa_card.pci-0000_04_00.6>
        driver: <module-alsa-card.c>
        owner module: 11
        properties:
                alsa.card = "2"
                alsa.card_name = "HD-Audio Generic"
                alsa.long_card_name = "HD-Audio Generic at 0xfcbc0000 irq 83"
                alsa.driver_name = "snd_hda_intel"
                device.bus_path = "pci-0000:04:00.6"
```

```
                sysfs.path =
"/devices/pci0000:00/0000:00:08.1/0000:04:00.6/sound/card2"
                device.bus = "pci"
                device.vendor.id = "1022"
                device.vendor.name = "Advanced Micro Devices, Inc. [AMD]"
                device.product.id = "15e3"
                device.product.name = "Family 17h (Models 10h-1fh) HD Audio
Controller"
                device.string = "2"
                device.description = "Family 17h (Models 10h-1fh) HD Audio
Controller"
                module-udev-detect.discovered = "1"
                device.icon_name = "audio-card-pci"
        profiles:
                HiFi: Play HiFi quality Music (priority 40768, available:
unknown)
                off: Éteint (priority 0, available: unknown)
        active profile: <HiFi>
        sinks:
                alsa_output.pci-0000_04_00.6.HiFi__hw_Generic_1__sink/#5: Family
17h (Models 10h-1fh) HD Audio Controller Speaker + Headphones
        sources:
                alsa_output.pci-0000_04_00.6.HiFi__hw_Generic_1__sink.monitor/#7:
Monitor of Family 17h (Models 10h-1fh) HD Audio Controller Speaker + Headphones
                alsa_input.pci-0000_04_00.6.HiFi__hw_Generic_1__source/#8: Family
17h (Models 10h-1fh) HD Audio Controller Front Stereo Microphone + Headphones
Stereo Microphone
                alsa_input.pci-0000_04_00.6.HiFi__hw_acp__source/#9: Family 17h
(Models 10h-1fh) HD Audio Controller Digital Microphone
        ports:
                [Out] Speaker: Speaker (priority 100, latency offset 0 usec,
available: unknown)
                        properties:
                [Out] Headphones: Headphones (priority 200, latency offset 0
usec, available: no)
                        properties:
                [In] Mic3: Front Stereo Microphone (priority 400, latency offset
0 usec, available: no)
                        properties:
                [In] Mic2: Headphones Stereo Microphone (priority 200, latency
offset 0 usec, available: unknown)
                        properties:
```

```
                [In] Mic1: Digital Microphone (priority 100, latency offset 0
usec, available: unknown)
                        properties:
```

Quelques commandes pour alsa:

```
sudo nano /var/lib/alsa/asound.state
```

```
sudo alsactl restore
```

```
sudo -H alsactl store
```

Dans un premier temps, j’ai ajouté « load-module » tel qu’indiqué plus bas, mais finalement j’ai retiré modification après avoir trouvé une autre solution.

```
sudo nano /etc/pulse/default.pa
```

```
load-module module-alsa-sink device=hw:CARD=Generic_1,0
```

```
pulseaudio -k
pulseaudio --start
```

La solution qui a fonctionné:

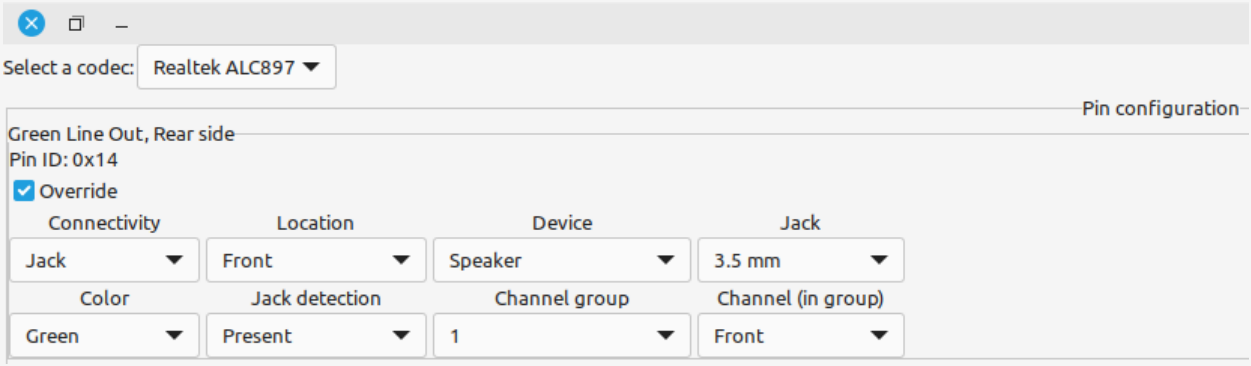
```
sudo apt install alsa-tools-gui
```

Lancer le programme à partir du menu:

```
hdajackretask
```

- Sélectionner le bon codec au haut de l’écran: Realtek ALC897
- Cocher « Override »
- options « Advanced Override »

Effectuer les modifications telles qu’indiquées dans cette image




- Appuyer sur le bouton « Apply now »
- Appuyer sur le bouton « Install boot override »
- Ré-initialiser l’ordinateur
- Sélectionner la bonne carte de son avec l’applet « Son » de l’ordinateur