

PecanPi[®]+ DAC and Kit Instructions

Assembly of PecanPi+ Streamer

Watch this video instruction of how to assemble the streamer here:

https://youtu.be/cV3Tu6f_TW0

Ribbon Cable Connection

When installing the ribbon cable, make sure to place it properly oriented. See the above video at the 8:30 mark.

NOTE: Installing the ribbon cable incorrectly will cause damage.

RCA Connection

The RCA connectors get wired to the green terminal blocks (X4 & X5) between the XLR connectors. Connections are as follows:

Red wire → RCA Tip (X4 for left, X5 for right)

Black wire → RCA Ring (X4 for left, X5 for right)

Shield → GND (Shield) (X4 for left, X5 for right)

Both RCA and XLR outputs are active at the same time.

Headphone Connection

The headphone connector get wired to the green terminal blocks (X4 & X5) between the XLR connectors. Connections are as follows:

Red wire (left channel) → RCA Tip (X4)

Black wire (left channel) → RCA Ring (X4)

Red wire (right channel) → RCA Tip (X5)

Black wire (right channel) → RCA Ring (X5)

Both headphone and XLR outputs are active at the same time.

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Powering PecanPi+ and Raspberry Pi or Tinker Board

The PecanPi+ DAC requires a 9V 2A minimum power supply with a 2.1mm I.D. x 5.5mm O.D. barrel plug that is center positive.

By default, the PecanPi+ DAC will power the Raspberry Pi or Tinker Board. It has a built-in 9V to 5V converter.

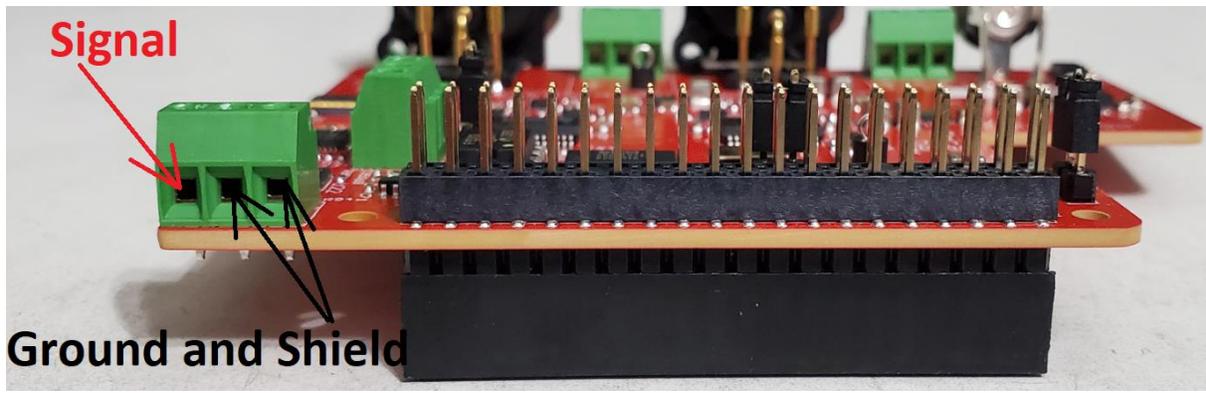
If you want to power the Raspberry Pi or Tinker Board with its own power supply, remove jumper J2.

NOTE: Do not power both DAC and Raspberry Pi / Tinker Board with J2 jumper installed, this will cause damage.

S/PDIF Connection

The S/PDIF coax connection gets wired to connector X8.

The wire connection closest to the edge of the board is the signal (tip) and the other two can be interchangeably used for ground and shield (ring).



The S/PDIF input has an automatic switch over that routes audio from the S/PDIF connection when there is a valid signal. When no valid signal is available on the S/PDIF interface the device defaults to accepting data from Rpi or Tinker Board.

Sound Control Mode

The AKM 4499 chip has a sound control mode. This is controlled using jumper J1 on the board. Install J1 to enable sound control mode, in this mode AKM says the sound quality is better especially for highly dynamic music. Remove J1 to disable sound control mode. Try it both ways to see which one you like best. By default the board comes with J1 installed.

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Volume Control

When the potentiometer (pot) is turned fully clockwise the volume control is disabled.

When the pot is turned fully counter-clockwise the DAC is muted.

To disable volume control install jumper J3.

When operating from the S/PDIF interface the volume can only be controlled using the pot.

PecanPi+ DAC Configuration

The PecanPi+ DAC uses the Hifiberry DAC+ DSP overlay/driver. This is what you have to select in your RPi software package or enable in the config.txt file with the following command:

```
dtoverlay=hifiberry-dacplusdsp
```

For Volumio:

Select HiFiBerry DAC Plus DSP during initial configuration

Set the volume control (mixer) to software

Disable Wifi

For Ropieee:

Select HiFiBerry DAC Plus DSP in configuration and disable USB audio.

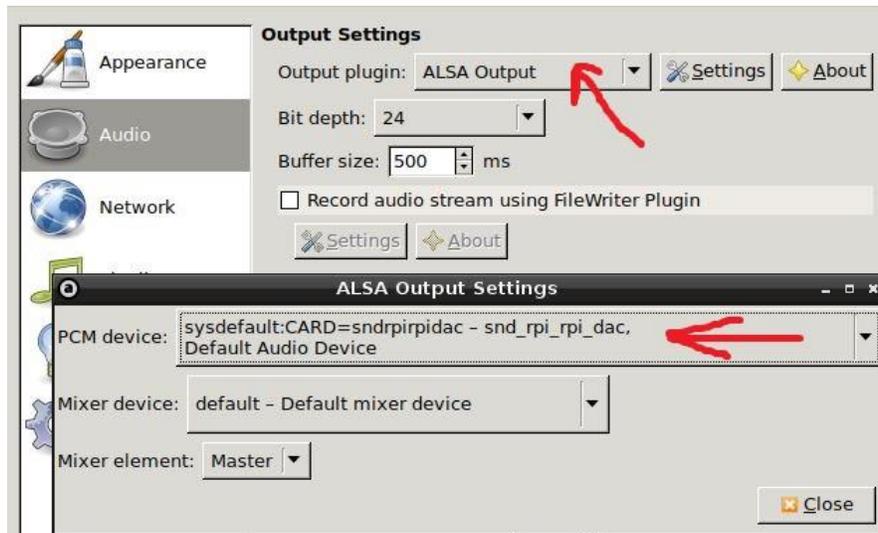
For TinkerOS

You need to add the following line to the hw_intf.conf file:

```
intf:dtoverlay=rpi-dac
```

For TinkerOS make sure you are using the ALSA with RPI-DAC as the output device like this:

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Wi-Fi with PecanPi+ DAC

Disable the Raspberry Pi's or Tinker Boards internal Wi-Fi and Bluetooth. If you need Wi-Fi operation use one of the recommended Wi-Fi to ethernet bridges:

[TP-Link AC750 Wi-Fi Bridge and Extender](#) - For 5G

[TP-Link 300Mbps Wi-Fi Bridge and Extender](#) - For 2.4G

The Wi-Fi and Bluetooth can be disabled in your software interface or by adding the following two (2) lines to the config.txt file for a Pi 3B or Pi 3B+:

```
dtoverlay=pi3-disable-wifi
```

```
dtoverlay=pi3-disable-bt
```

For TinkerOS disable Wi-Fi in the settings menu.