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.

NOTEs:

- Installing the ribbon cable incorrectly will cause damage.
- Assembly for Rev 3.0 streamer is identical for RCA and SPDIF connections see below.

Powering PecanPi and Raspberry Pi or Tinker Board

The PecanPi DAC requires a 9V +/-5%, 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.

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.

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

PecanPi® DAC and Kit Instructions

RCA Connection

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

Red wire (Tip) –> XLR Pin 2

Black and Shield (Ring) –> GND
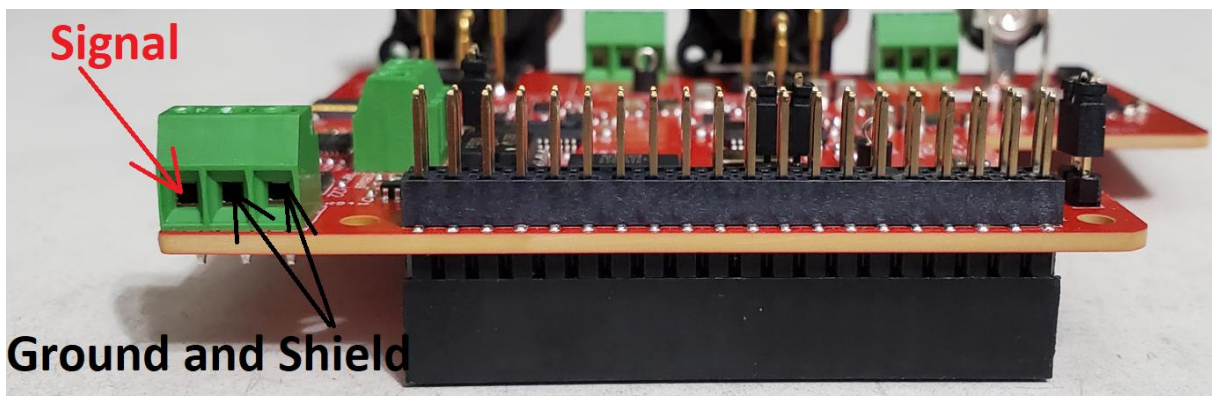
Do not use pin marked XLR Pin 3

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

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.

PecanPi® DAC and Kit Instructions

PecanPi DAC SW Configuration

The PecanPi DAC uses the RPI-DAC 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=rpi-dac

For Volumio:

Select RPI-DAC during initial configuration

Set the volume control (mixer) to software
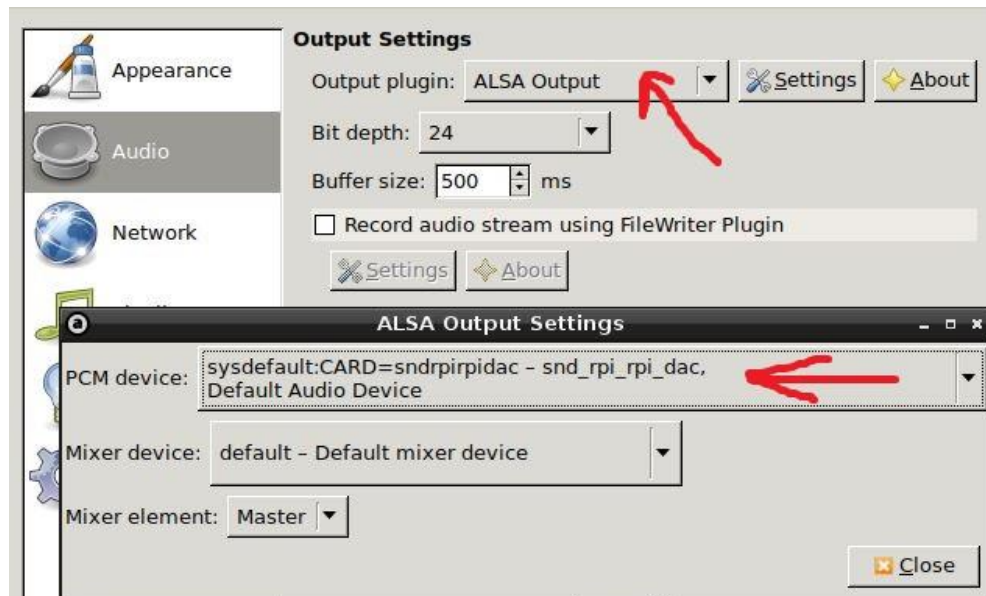
Disable Wifi

For Ropieee:

Select Orchard Audio PecanPi DAC 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:

PecanPi® DAC and Kit Instructions

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.

PecanPi DAC Standalone S/PDIF Operation

The PecanPi DAC can be used completely standalone not needing a Rpi or Tinker Board. In this case, the J1 jumper must be installed for the device to function.

NOTE: Having the J1 jumper installed and connecting the DAC to Rpi or Tinker Board will cause damage.