



# Audio-GD – DSP Manual

## The Ultimate PCM1704 dac

## Dedicated Discrete Balanced DAC

- DAC 19 (Model 2015 or later)
- Master 11 / REF 10.32
- Master 7

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### Introduction

This document describes the prerequisites and procedures for the configuration of Audio-GD PCM1704 based DSP DAC and DAC with build-in pre- amplifiers.



## ESD Precautions



All ICs and many other electronic components are susceptible to electrostatic discharges (ESD). ESD can cause instant failures, but can also drastically limit the life span of the affected part and cause unexplainable behavior of the equipment.

When handling printed circuit boards always take the following preventive measures:

- Keep printed circuit boards as long as possible in their protective bags.
- Use an anti-ESD bracelet where required. The ESD symbol in this manual indicates when ESD-protective measures are required.

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## Safety Precautions

- Always turn off the equipment and take out the power cable before changing internal settings
- When installing hardware, be sure that you are aware of the hazards involved. Never work on “live” equipment of which the housing or panels have been removed.
- Cabinet keys must be kept in a safe place, and be handed over for use to authorized installation or service personnel only.
- Use only the suitable tools to perform a task.





## Audio-GD PCM1704 based DSP Configuration Settings

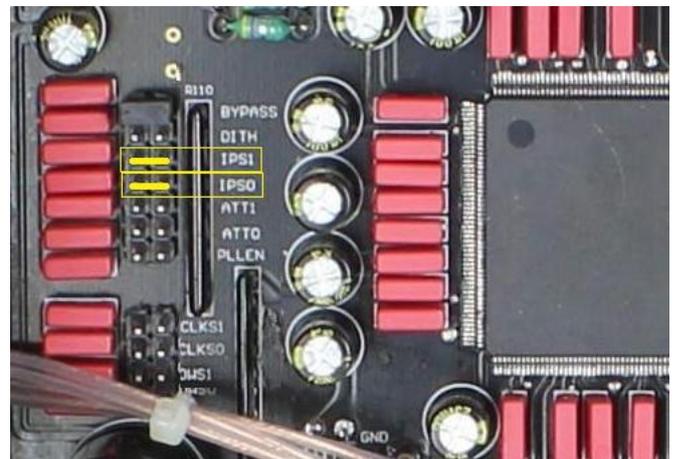
### Oversampling settings

Info <https://en.wikipedia.org/wiki/Oversampling>

#### 1x Oversampling ( NOS – Non Oversampling)

IPS0=JUMPER

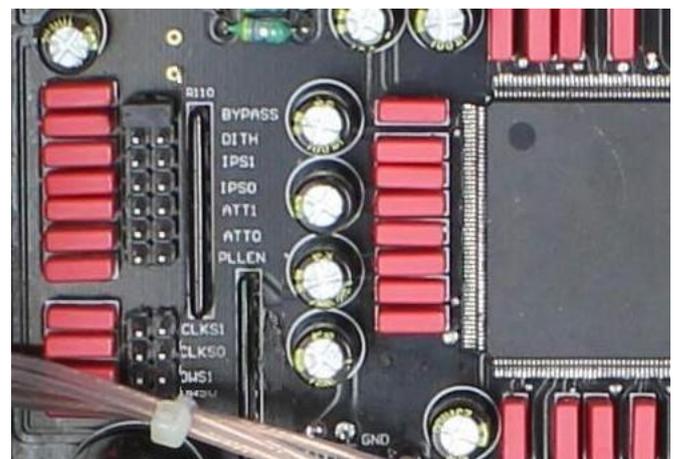
IPS1=JUMPER



#### 8x Oversampling

IPS0= NO Jumper

IPS1= NO Jumper





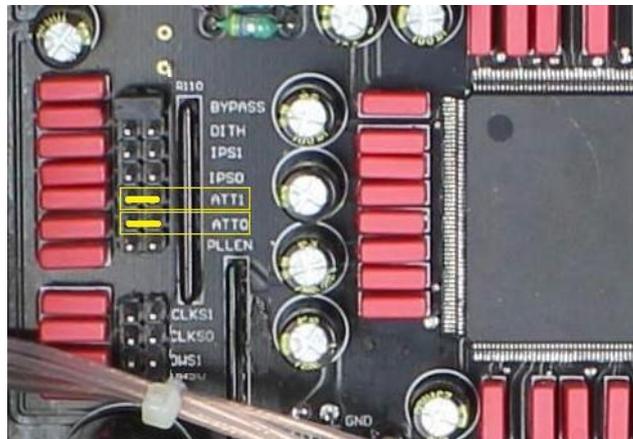
## Stopband attenuation settings

Info <https://en.wikipedia.org/wiki/Stopband>

### Digital Stopband Filter -50dB

ATT0=JUMPER

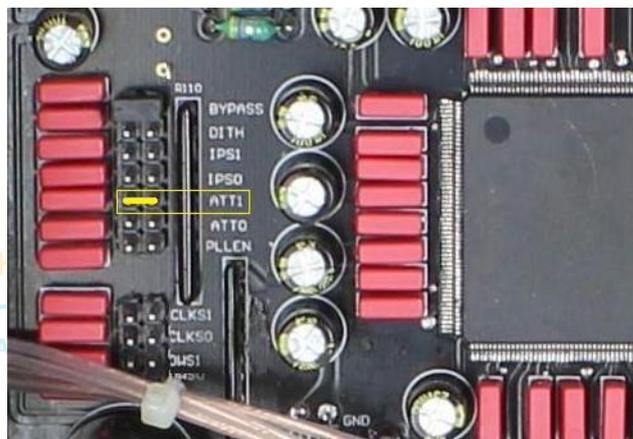
ATT1=JUMPER



### Digital Stopband Filter -90dB

ATT0=NO Jumper

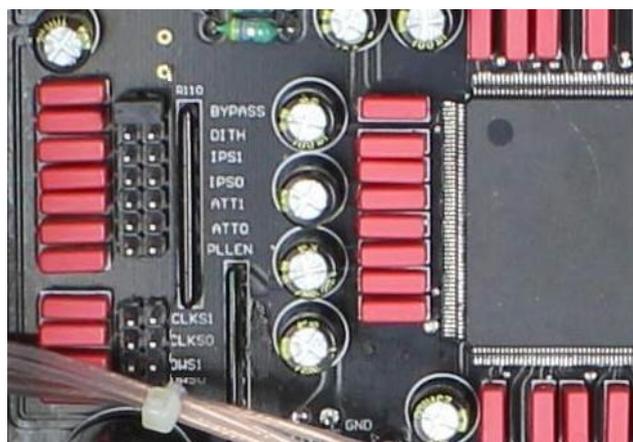
ATT1=JUMPER



### Digital Stopband Filter -130dB

ATT0=NO Jumper

ATT1=NO Jumper





## DITHERING

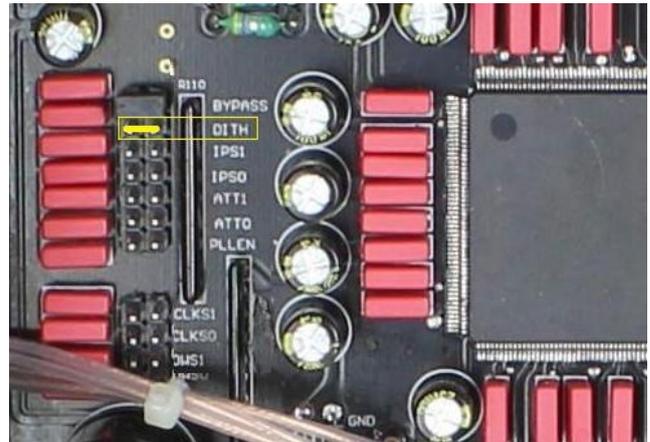
**Dithering = ENABLED**

DITH = NO Jumper

**Dithering = DISABLED**

DITH = JUMPER

Info: <http://wiki.audacityteam.org/wiki/Dither>



## PLL (Phase Locked Loop)

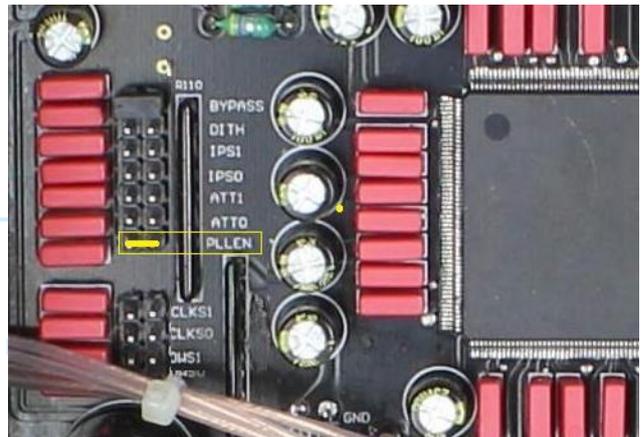
**PLL ENABLED**

PLLEN = NO Jumper

**PLL DISABLED**

PLLEN = JUMPER

Info: [https://en.wikipedia.org/wiki/Phase-locked\\_loop](https://en.wikipedia.org/wiki/Phase-locked_loop)



## DSP BYPASS

Note: DSP Bypass is not recommended

BYPASS Enabled = NO Jumper

BYPASS Disabled = JUMPER

In Bypass mode DSP is bypassed:

- 1x Oversampling
- No dithering
- No PLL
- No stopband filter

