



RGDAC8 Multi-format USB DAC

Setup and Users Guide



Introduction

Thank you for purchasing the REDGUM Multi-format Asynchronous Hi-res USB DAC

Clearly, a USB DAC has no need to pretend it is trying to be “the world’s most advanced DAC, ever”! But when it presents as a hi-res USB DAC, it does show a determination to maintain digital accuracy, most particularly when it is an Asynchronous DAC.

The sonics of REDGUM CDP/DAC designs have long been trusted, remarkably, because of their asynchronous-ness. And that history began in 1997, decades before that term became widely used!

In brief, REDGUM's RGDAC2 & RGDAC5 have been asynchronous from their first design as their digital stream was (and remains) fully reclocked and reshaped in a separate, additional chip. This additional chip also provides the buffer for the storage of the data stream in real time, thus removing the problem of jitter.

A USB input has been a feature of REDGUM DAC and CD Player models for some years now, so to build on that history, the next product could only bring all these features together. And then some!

We proudly present the RGDAC8 as our new Multi-format Asynchronous Hi-res USB DAC.

FYI - REDGUM 's hi-res DAC was initially released in its Beta-test form as the BlackDac 8 in October 2016. Released at the Australian HiFi & AV Show 2017 in its final version as the RGDAC8, its chassis had morphed into the smoother lines seen here. Internally, the same main circuit boards were now in the company of an additional board, REDGUM's own Advanced Audio Stage. It is considered that this fine-tweaking pcb has the effect of revealing even more musical detail, like adding a goodly pinch of sonic MSG.

And the recipe? It became a clear case of looking to the past to build the future. From the start, all in-house Beta-stage listening was referenced back to the sound of REDGUM's top-line Signature Series DAC, the RGDAC5. The RGDAC5 and the RGCD5ENR (as its CDP) have always used the Rolls Royce of Burr Brown DAC chips. From that high Redbook standard, the ears of any listener would already be beautifully spoilt by the time they were moving on to hi-res files.

But it was realised that a final tweak would still be needed to remove the digital glare that is too often an element of hi res-files.

The slightest hint of any in-your-face digital "edge" definitely needed to be brought under control if the RGDAC8 was to be considered (at the very least) the equal of the RGDAC5. For that final tweak, the REDGUM magic was brought in to free up the revelation. Just like making a finely-balanced curry, it is all in the tweaking! (And you know you can't ask the chef his secret!)

Includes

- * Dedicated USB Cable with Gold-plated Connectors & Blue LED - 2m
- * REDGUM RGAP 1 "Audio Pipeline" OFC Interconnect – 1m

N.B.

- Apple MAC and Linux-based computers do not require any extra drivers.
- Only earlier Windows-based units may require a special driver, available at <https://www.redgumaudio.com/Download/RGDac8.zip>

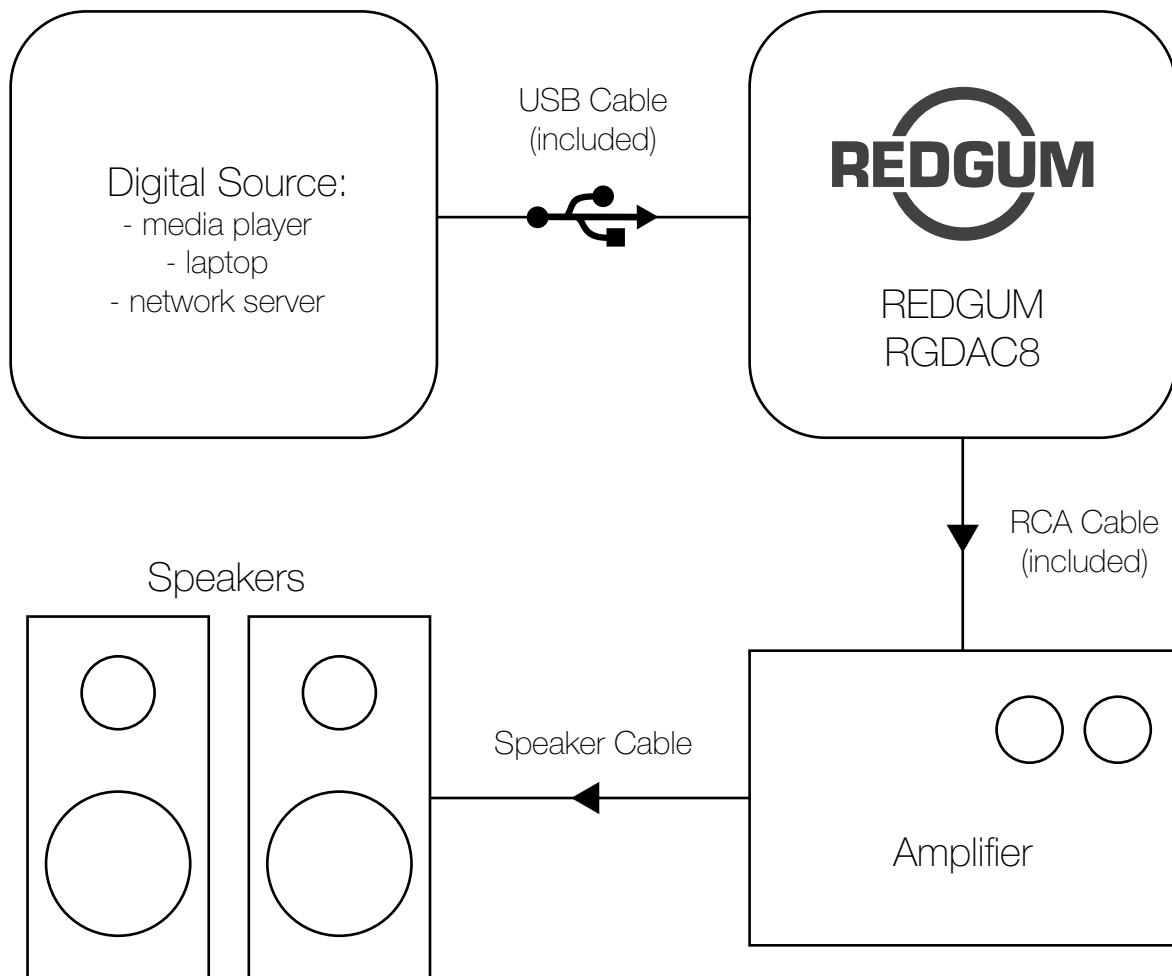


Initial Setup

The thigh bone's connected to the.. hip bone.

The following will take you through the simple step-by-step setup of your REDGUM RGDAC8

Below is a typical setup for hifi playback:



Simply connect your digital source, whether it be a laptop, network server, or REDGUM's stunning RGM8 Media Player, to the RGDAC8 via the supplied USB cable.

Connect the RGDAC8 to your amplifier of choice using the supplied REDGUM 'Audio Pipeline' OFC Interconnect. The RGDAC8 is powered via the USB source, so once your music source is powered up, the RGDAC8 is also on & ready to go.



Specifications

Data rate maximum speed: 384kHz

Bit depth maximum: 32bit

USB Audio Streaming Controller – SA9227 :

Supports 16/24/32 Bit resolution and sampling rates of 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz, 352.8kHz, 384kHz.

THD <0.005% (including noise component)

S/N ratio > 95dB

Audio Stereo DAC PCM5102A :

2VRMS DirectPath™, 112dB Audio Stereo DAC with 32bit, 384kHz PCM Interface

SNR 112dB

Dynamic range 112dB

THD+N at -1 dBFS -93dB

Full-scale single-ended output

2.1 V RMS (GND center)

Normal 8× oversampling digital filter latency 20t S

Low latency 8× oversampling digital filter latency 3.5t S

Sampling frequency 8kHz to 384kHz

System clock multiples (f SCK): 64, 128, 192, 256, 384,

512, 768, 1024, 1152, 1536, 2048, 3072 up to 50MHz

(H 50 x W 113 x D 142 mm / H 2 x W 4.5 x D 5.6 in – 1.25kg / 2.75lb)

2 year Warranty

Serving Suggestion: The RGDAC8 stacks up best with its performance soul mate,
REDGUM's mighty little RGMP8 Media Player.



REDGUM Audio Pty Ltd

ABN 45 093 132 515

401 Belgrave – Gembrook Road

Emerald 3782, VIC, Australia

Telephone

Local 03-9001-6788

International 61-3-9001-6788

Mobile 044 88 33 091

Email sales@redgumaudio.com



Additional Information

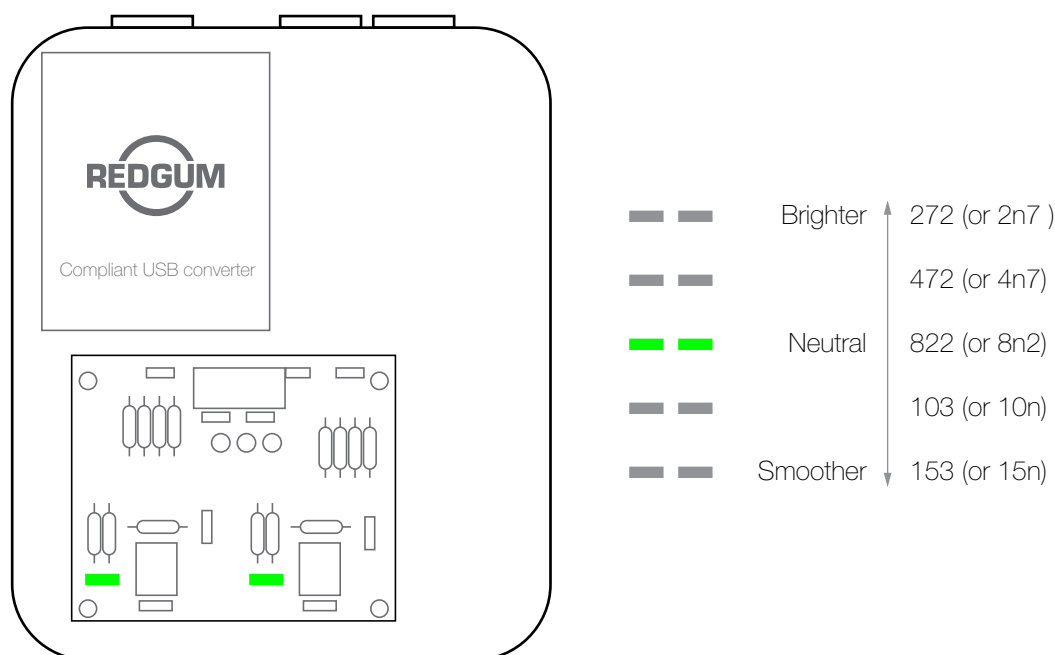
Output Stage Filter Adjustment

Switching the Output Stage Caps

As everyone likes to tweak DAC values these days, the RGDAC8 has been designed so that the output stage filter can be adjusted by the user, if wished. As standard, each unit includes a matched set of small capacitors to adjust the filter shaping, thus covering a range of carefully-determined sonic options.

Clearly that is not where a new owner starts the process of assessing the unit, but along the way it is likely that some users will enjoy the option of modifying the tonal balance as their "inner designer" comes to the fore! In addition, this possibility allows for any change in personal preferences and/or their system over the years. Once again, that old mainstay of REDGUM designs becomes apparent, whereby its minimalism aims to provide future-proofing as much as sonic quality.

To make any adjustment is as simple as removing the base plate of the RGDAC8 to reveal these caps in a cellophane bag! (And yes, the bag does rattle gently if the unit is shaken, but that should not intrude whilst it sits on a shelf.) The existing caps can easily be removed by hand from their gold-plated machine-pin push-in socket and replaced with the paired alternatives provided. (However, if preferred, these caps can safely be ignored for the rest of the product's days!)



N.B. Making these adjustments does not void the warranty unless there is clear evidence of a lack of care.

The range of values covered by the caps has been "Goldilocks-ed". To REDGUM ears, the pair fitted as factory-standard is "Just right!". Depending on what change you seek when choosing an alternative matched pair, note that the lower the value inserted, the brighter the sound quality; the higher the value, the duller the resultant change to the sound. With a total of six options, let your ears finesse the RGDAC8 till it has "your" sound as it "plays nicely together" with the rest of your system.

The physical position of these caps may alter between production runs.
Simply reference the position via the caps number - "822" as Factory Default.

