APHRODITE

LampizatOr DAC – User Manual

Revision Beta 2.0 - September 2025

WARNING: as every DAC comes with a 7 days testing period (please to confirm it - ask your dealer first), during this time it is not allowed to open the DAC. The screws are protected with a seal. Any modifications – no matter how small – invalidate the 5 years warranty. Tube changes outside of our approved list of types also invalidates warranty. DACS returned during the test period with the seal broken will not be refunded and will be sent back.

THE SHORT MANUAL

1. Plug in the mains, digital source input and analog (amplifier) output cables.

2. Press the Right -Bottom button on the front panel for 3 seconds until click of the relays confirms the power (Or Remote control power)

3. Observe the display come alive 3 sec later

4. Watch calmly the countdown of 30 s warm-up period

5. The DAC is ready to play.

6. Select the desired input, press MUTE to Un-Mute the initial muting state, adjust the volume on your preamp or amp.

Enjoy !

From the designer:

I am so extremely happy to introduce to you our Lampizator's brainchild - the **Aphrodite**.

Thanks to a revolutionary chip technology, like nothing we ever saw before - it was possible to design a DAC that creates a class of its own. Never in the sixteen years since LampizatOr's founding have we taken on such an ambitious, expensive and labor intensive project. Even the Horizon is dwarfed by it.
From new huge EI custom transformers, custom 4 layer PCB, 20 separate power circuits, ultra high end music conversion topology, customised "garbage" muting solutions, proprietary firmware and software, the chip that revolutionises the industry, new tube scheme, new tube selection, TRP (tube rolling paradise setup), new CNC chassis, new heating scheme, new uber cool dual OLED display, elimination of knobs, elimination of LCD displays, new USB solution with super-clocking, anti-vibration CNC milled support for all PCBs, elimination of visible screws - everything about this DAC is exciting, re-thought and re-designed.
The resulting DAC is a true flagship. We can say with full confidence that you are getting a unique masterpiece of craftsmanship that will redefine what you believed possible and may even never be surpassed.

The most important difference versus the former flagship - the Horizon DAC is that we eliminated the volume control and preamp circuits. Since we learned that 80% of users play the Horizon with volume maxed out - we decided to offer a fixed volume DAC because almost everybody has a preamp.

The key highlights

1. Based on an improved Horizon360 state of the art digital engine
2. Puristic design without preamp or volume control - JUST DAC
3. “Open” budget - design and execution
4. No feedback, no silicon, no solid state, no opamps
5. Tube Rolling Paradise
6. Cost allocation is 80% music quality, 10% convenience, 10% looks

WIKI: Aphrodite (/ˌæfrəˈdaɪtiː/, AF-rə-DY-tee) is an ancient Greek goddess associated with love, lust, beauty, pleasure, passion, procreation, and as her syncretised Roman goddess counterpart Venus, desire, sex, fertility,

Introduction

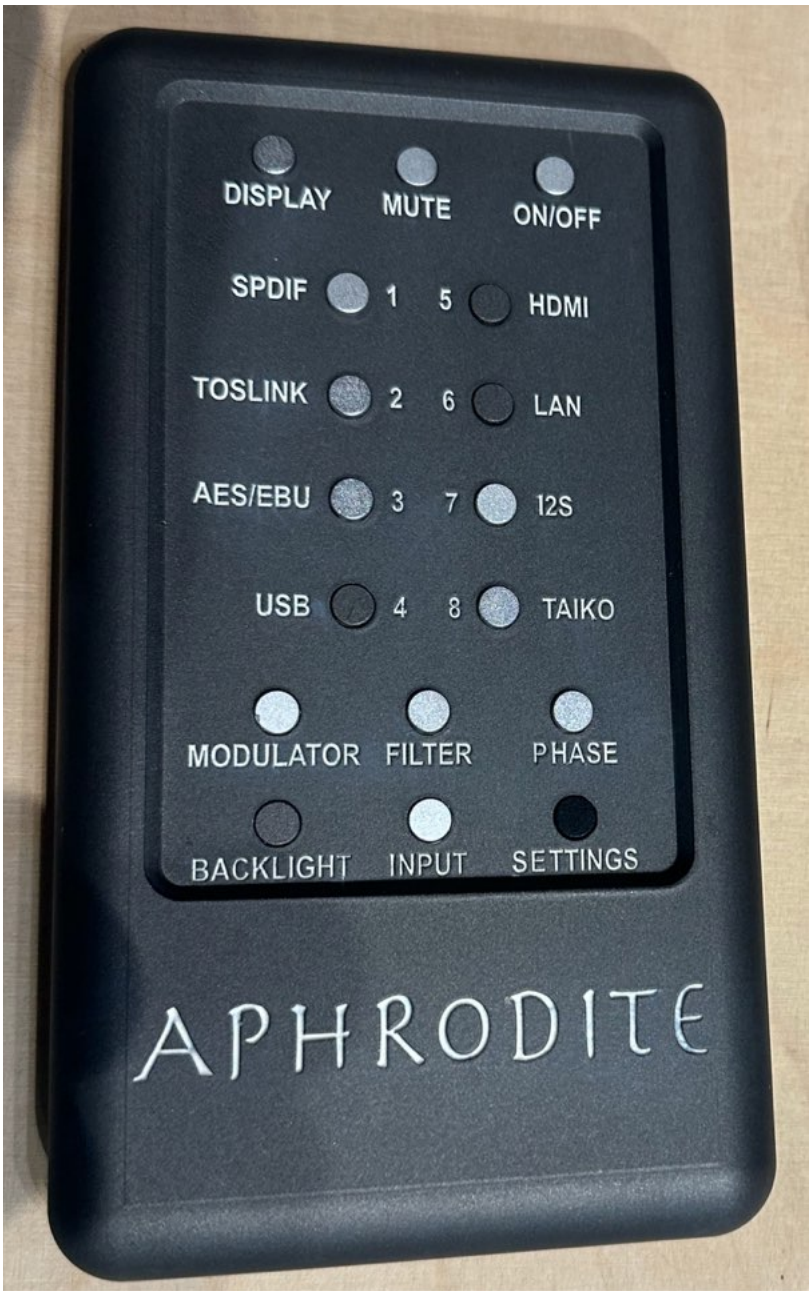
Thank you for choosing Lampizator Aphrodite DAC. We created it with huge research effort to deliver not only world class musical performance, rivalling the most expensive DACS money can buy, but also to offer very long life of the product. Simply speaking – if you adhere to some basic precautions listed below – the product should last a lifetime and hopefully in this period – will never be outperformed by a competing product.

“Whose lifetime?” one might ask – well – let’s not go into details – enough to say it should work flawlessly for the foreseeable future.

The DAC should be future-proof. Shall we ever launch a major upgrade to the digital part – you can get the upgrade at very reasonable cost. Shall you decide you need some added features – you can also get them at reasonable cost anytime in the future.

We can’t be 100% sure, but it is extremely unlikely that the market and the industry in the future will embark any technology of music storage faster than 192 kHz and with more resolution that 24 bits. We already hit the human ear limits, not to mention the real needs of mass consumers. It is good to know that we out perform the music industry file resolution by the factor of 4 (400%).

The description of REMOTE CONTROL unit



Our remote control is made of metal and is custom made for our control system. The batteries are two pieces of “AA” type and they live very long.

Batteries are accessible after un-screwing the bottom of the remote unit.

ON/OFF powers up/down the whole DAC but the Remote Control processing circuit remains powered even after switch off .

The absolute volume level depends on the tube choice and may vary from one tube model to another.

Input - and Input +- changes the analog and digital inputs to the tube section.

1 = SPDIF, 2 = Toslink, 3 = AES/EBU,
4 = USB, 5 = HDMI i2S, 6 = Ethernet
7 = 3xBNC i2S 8= TAIKO XDMI

The input type is clearly shown on the display.

MUTE does just that - mute. After pressing again - the DAC will go back to full level.

Our MUTE is not full 100% down, not completely silent - but 90%. You can hear what is playing before unmuting. Of course the technical muting of the pops and clicks is 100%.

We choose to start the power-on with muting applied to avoid loud surprises. So first you can hear your song on very quiet and only then UNMUTE.

The DAC by default will start on USB (number 4) input.

USER INTERFACE = How you interact with the DAC

We took great care to make sure, that the user has fantastic experience with his DAC. We gave you all possible controls and gadgets, enabling the deepest interaction between the man and the machine. At the same time we wanted to maintain ease of use and intuitive logic.

When you see Aphrodite remote, immediately you know it is extraordinary. We made it from scratch - design the body of the handheld unit, its PCB, the logic, the buttons, the functions, the features, the batteries, the firmware and software - everything down to laser engraving, ceramic coating and backlight diodes - is our own invention and design. Aphrodite has deep functions that would not be operable with off the shelf remote. Please DONT LOOSE IT it is expensive !

This remote has some special features that are worth mentioning:

1. The functions that alter the sound are protected from accidental pressing by the **two-key operation**. You need to hold the function selector and at the same time press feature choice button.

2. The backlight helps you to operate in the dark room, thats how audiophiles listen most of the time. You can toggle it on and off and if forgotten - to save batteries it will go off after a minute.

3. The display is designed for seeing the fonts from 6 meters away - how people with Aphrodite budget like their rooms. At the same time, during initial setup you can change the parameters written in small font from close up. When making “sound related decisions” - you can change the view and the screen turns very large and legible even from most distant listening chair. After the choices are selected - you change to normal listening screen and then maybe to dimmed screen and eventually OFF mode screen.

4. The display has off mode and dimmed mode for your comfort. Most Audiophiles listen in the dark room. We too.

5. Two big AA batteries are chosen to be easily replaced, easily bought and last 5 years.

6. The huge physical size and mass protects the remote from being misplaced or lost.

7. Should you get “lost in the woods” of the many of parameters - there is always the “GO BACK” button which brings back the default “Lukasz Fikus” parameters choice.

8. MUTING is one of the most important features of the DAC. Muting the artefacts of conversion is probably 50% of the R&D effort when building a new DAC. Turntables and preamps don’t have this problem at all. The end user doesn’t notice this effort - it is like the clean air, you don’t notice it when everything is OK. Apart from this technical muting - there is the listening muting - the one that the listener activates by his remote. In Aphrodite DAC we designed the muting thats not full. It goes down 90% but not 100. This way you can select the input and hear what is playing and hear that the connection works and the data flows correctly. Only after you are happy - you UNMUTE and listen. This is important after plugging the DAC to the monster amps that can smoke your speakers in milliseconds.

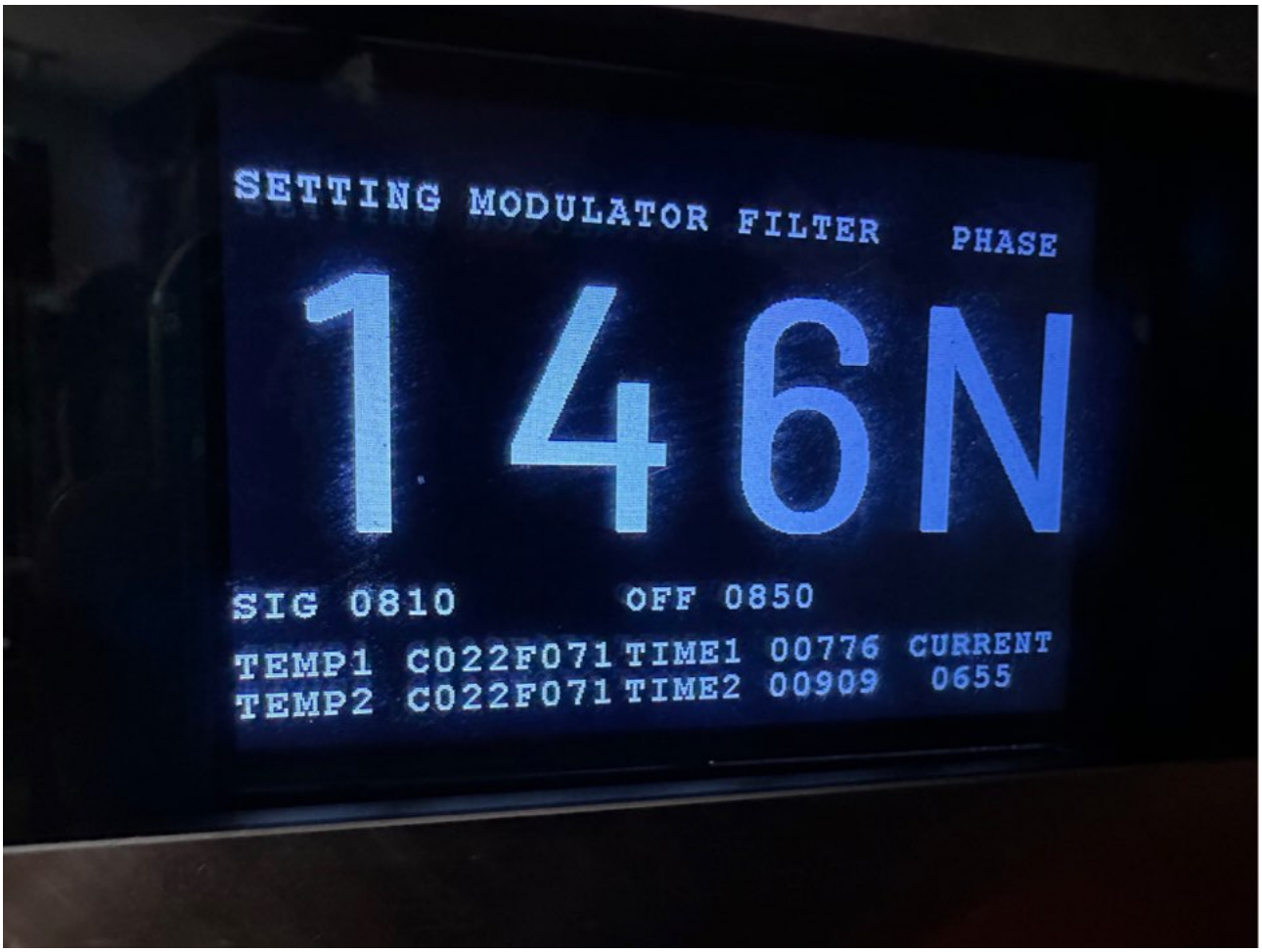
9. When the input is selected, its name is displayed - like USB or AES and this name is blinking. When the signal is detected (a song) the blinking stops.

The philosophy of the display

Four modes of the display

We simply acknowledge that the display can provide vital information, and we would like to give you AS MUCH AS POSSIBLE, at the same time if you look from the listening position a few meters away - you probably need just a bare minimum providing it is at lease legible.

So we decided to create 4 modes of display - different for detailed and informative setup procedure and different for listening enjoyment.



Mode 1: informative

The fonts are very small and we assume you look at the screen from close up.

On the picture above as an example you can see that the SETTINGS BUNDLE is 1, the modulator type inside the chip is 4, the digital filter applied is number 6 and phase is negative (digitally). Since our tubes are phase inverting - the N is the positive way of listening.

The main settings - phase, modulator and filter - also have large font information. So the decision can be taken from the listening chair. The only way to do it.

Setting the absolute signal phase: according to personal preferences - the user can set phase for POS or NEG and listen how he prefers.

Technically this means nothing

Subjectively these modes sound very slightly different (this changes per song).

The choice is remembered in the SAVING BUNDLE (1 to 8)

Setting the Digital Filter

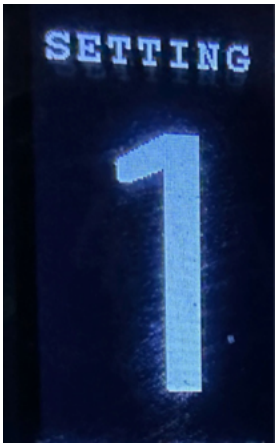
The digital filter has various frequencies and steepness of cutoff. The user can choose which sounds best. There are filters from 1 to 6. It doesn't matter which is which, technically it makes little difference - it is what YOU prefer.

The choice is remembered in the SAVING BUNDLE (1 to 8)

Setting the Modulator shape

The converter has various shapes of the so called MODULATOR. The user can choose which sounds best. There are modulators from 1 to 4. It doesn't matter which is which, technically it makes little difference - it is what YOU prefer.

The choice is remembered in the SAVING BUNDLE (1 to 8)



SAVING THE BUNDLE: the three choices - Modulator , Filter and Phase - after you decide which you like best - can be saved as a SETTING 1 to 8. If you have different preference for jazz female vocals and different for Led Zeppelin, you can save 8 sets (bundles). If your friend has another favourite - he can save 3 or 4 or 5 etc.

The bundle number is always visible on the large digit screen (right) and it can be re-called with one button press on the remote. So you don’t need to choose the parameters - just call the whole bundle at once.

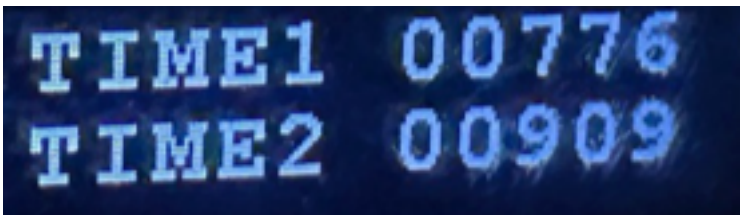
If you want to know what we like or if you simply want to **go back to default** - simply choose bundle zero. This was pre-selected by Lukasz Fikus, and it can not be modified by user. to recall it - press simultaneously the bottom row right two buttons on the remote (right and center button - INPUT and SETTINGS)

To add a bundle: simply call on the remote the SETTING number for example 4. The number 4 will be displayed with three associated choices (whatever they are). Just choose Filter 2, Modulator 1 and Phase NEG and the bundle 4 is just automatically saved. Then you can simply recall it from your listening session at any moment.

Setting the User Timer for tube life

If you re-tube your tubes or simply want to measure your listening time from day zero - you can restart the HOURLY timer TIME1 using the buttons on the front panel.

The counter shows real time of DAC use (hence the tube usage).



The end user can restart this timer with new tube set.

Here are some hourly example

calculations:

Table 1-1

Time (calendar)	Hours non stop	If using the DAC 4 hours per day	2 hours per day	10 hours per day
1week	168	28	14	70
1 month	744	124	62	310
6 months	4464	744	372	1860
1 year	8760	1460	730	3650
2 years	17520	2920	1460	7300
3 years	26280	4380	2190	10950
5 years	43800	7300	3650	18250
10 years	87600	14600	7300	36500
Our lifetime of 88 years	770880	128480	64240	321200

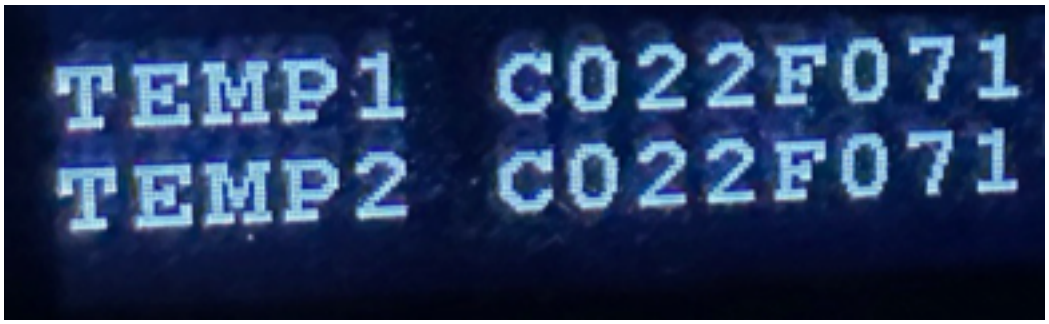
Checking the absolute DAC life clock

There is a second clock counter TIME2 (also hourly) showing the absolute total time since birth. This is non resettable so in fact this can help to value the DAC in a second hand transaction.

Checking the transformer temperature

The temp of the mains transformer is visible on the bottom of the left screen only in detailed INFORMATIVE mode. If the TEMP1 temperature exceeds warning levels the screen will turn red and will start flashing. You can cool down the DAC and you can be warned that perhaps you did something wrong, like for example used wrong experimental set of tubes. You can see Celsius as well as Fahrenheit numbers.

If the temperature keeps growing - the DAC will signal TOTAL SHUTDOWN and it will switch off completely to protect the expensive repair situations.



Checking the PSU temperature (TEMP2)

The temp of the power supply is visible on the bottom of the left screen only in detailed INFORMATIVE mode. It is marked TEMP2 . If the temperature exceeds warning levels the screen will turn red and will start flashing. You can cool down the DAC and you can be warned that perhaps you did something wrong, like for example used wrong experimental set of tubes.

If the temperature keeps growing - the DAC will signal TOTAL SHUTDOWN and it will switch off completely to protect the expensive repair situations.

Both temperatures should not exceed 60C under any conditions or circumstances

Setting the PSU current overload limits

The total power current is monitored internally and checked non stop by the microprocessor. If the user wants to install different tubes - he can set the warning levels JUST ABOVE the nominal steady current. The closer you set your warning the easier it will be to “catch” a dangerous current increase.

For example: if with given tubes set the total current is 655 mA - you will see that in the bottom of the left screen.

Set your threshold of warning at 10 mA more (665) and the switch off threshold at another 20mA more (in this situation 685 mA.) So a dying tube and short circuit scenario can be monitored and damage - prevented.

Remember we are dealing not with a small ECC82 tube but with 8 power tetrodes.

Remember to check the startup sequence - look at the screen if the current doesn't exceed your threshold only during few seconds of the startup. Then increase warning levels by another 10V.

You can use two left hand side buttons on the front panel to adjust the thresholds. They are stored without "saving" action.

We never found a healthy tube set that exceeded 700 mA.

SIG means signalling threshold (warning, but DAC still works) and OFF is a shutdown threshold. (here OFF is 850 mA)

Mode 2: “Listening distance” screen mode

This mode of the screen is for normal every day use.

The user only sees what matters for the listening: Input name (like USB) Muting or not, the bundle number of pre-saved parameters (like 1) and the frequency of the file being played (like 48 kHz) and the file type (PCM or DSD) (the file parameters are not photographed above). Nothig else is important in this scenario. You can go to other modes by the remote button DISPLAY.

Mode 3: Dimmed mode

It is just like Mode2 but with 1/4 of backlight

Mode 4: Dark mode

The screen is black altogether.

Front panel BUTTONS

We have 4 buttons on the front panel which are made invisible, flush with the display. These buttons are firmware controlled and perform contextual roles - different in every screen situation. That's why there is not a written descriptor next to the buttons.

After start sequence the buttons have following roles

A= Input UP

B= Input DOWN

C= MUTE / UNMUTE

D= Power ON/OFF

After the startup sequence - the screen is in INFORMATIVE DETAILED MODE and the buttons allow to set up the over-current warning levels and also the protection shutdown levels. You do it only once every tube type change (not re-tubing but type change). See the manual elsewhere above for detailed info.

A quick guide to a smooth start

THE BUTTONS

The whole DAC can be operated simply by the four buttons on the front.

Right bottom button is a POWER ON while DAC is in STANDBY mode and power OFF to Standby mode. Same as the remote button POWER.
Left two buttons are INPUT SELECTORS - up and down (not circular - just one way)

The OLED display will show the selected input number and type.

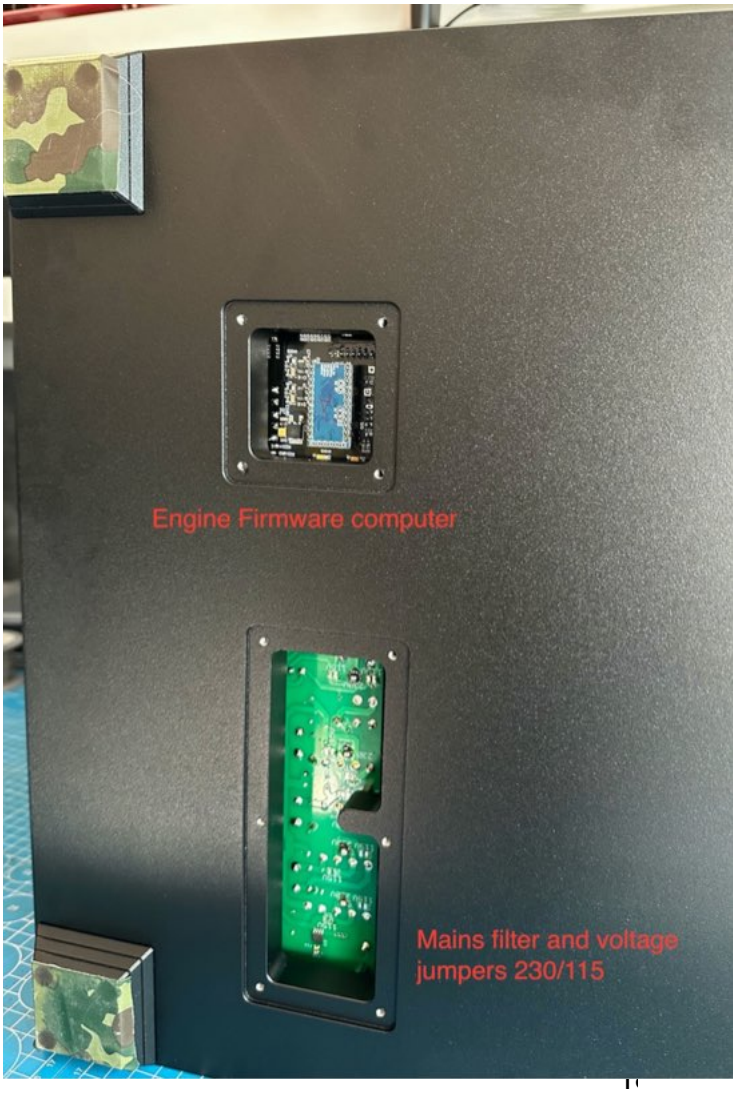
1 = SPDIF, 2 = Toslink, 3 = AES/EBU, 4 = USB, 5 = HDMI i2S, 6 = Ethernet
7 = 3xBNC i2S 8= TAIKO XDMI

The DAC will always start in MUTE mode to protect your system.

MAINS VOLTAGE:

All DACs are shipped with the voltage of MAINS according to the country of destination. If you bought the DAC second hand and you are in different voltage zone - the DAC can be converted by a soldered jumper at the bottom, allowing even the solder-savvy user to select mains voltage. It requires placing the DAC on the side and opening the 115/230 “door” to the bottom provision and follow the instruction.
240 or 230 V AC is the same for the DAC, it will be indifferent to these small differences. 100V however is not the same as 115V which means that the DAC may not work properly in Japan.
50 or 60 Hz makes no difference to the operation or quality of sound of our DAC.

Pictured on the right is also the MICROCOMPUTER processor that contains all digital engine firmware - if we ever need to change that - you just pull the blue rectangle card and plug in the new one which we will mail.



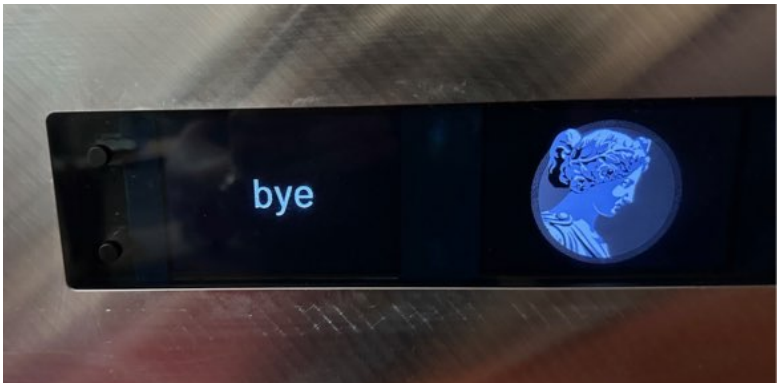
POWER CABLE (MAINS) and WALL FILTERING (conditioners)

It is not necessary, but advisable that the power cable used is a quality one, not simply a computer cable. It is also advisable NOT TO use any AC filter – in many cases this brings nice results to other products but Aphrodite has full filter inside and doubling the filters may be too much. Use it straight from the wall. Generally under-filtering is better than over-filtering.

Due to multitude of AC plugs around the world - we dont supply any AC cable at all.

The MAINS FUSE
The fuse is the most important element of protection.
While you may be tempted to mess around with the fuses in a solid state DAC, where voltage does not exceed 5 V, in Aphrodite DAC the supply voltage is 450V DC which is 100 x higher and it bites as strong as 3000 V AC, so the kick you get would be 30x that of the USA mains direct. Thats why we forbid to mess with the fuse - full stop, end of story.
Pleas don't email us about the usage of aftermarket fuses. We will not answer and you are on your own to decide.

If the DC somehow makes the way to appear on the chassis - the fuse will switch off in a thousandth fraction of a second. So nobody can get a surprising shock. But if the fuse is wrong - god knows what happens.



Aphrodite design

This DAC is like no other, mainly due to the fact it is using pentodes as DAC output converters to voltage and power pentodes as triode loads. The power pentodes seem to be much too large and much too expensive to be used as “small signal” tubes. Thats why the decision to use them is so beautifully radical and extreme, worthy of high end status.

Big power pentodes like EL34, KT66, KT88, KT120, 150 and 170 are ridiculously over-specified for the job in this circuit but thats the key to this big, bold, effortless sound that no one else can match, they offer in return a sound signature that is simply craved by high end audiophiles and music aficionados around the world. The sound becomes effortless, powerful but delicate, smooth but detailed, well controlled but musical, three-dimensional and gorgeous at the same time. This is partly due to the fact that the radiation and absorption areas of these triodes are tens of times larger than those found in small tubes, making electron density much smaller and the flow is much easier. This for some reason sounds better.

The heaters of our DAC are DC type, precisely controlled and safely limited in both voltage and current. Our heater circuits provide good protection for long life of these tubes. They are also over-specified enough to handle all but most radical tubes out there. Generally 2A of tube heater is an advisable upper limit - please check the specs of the given tube. All power tetrodes from KT66-88-90-120-150 range fall under 2A of heating at 6,3V DC.

The Anode High Voltage is supplied with our proprietary tube power supply, consisting of a very high grade EI transformer, Dual Diode directly heated rectifier, a choke and capacitor filter and passive filtration and energy storage stages. All this is monophonic - PER CHANNEL.

Balanced Operation is possible because we employ a fully balanced digital engine that produces 4 analog outputs simultaneously:

Left Negative, Left Positive, Right Positive and Right Negative.

All four outputs are treated equally, with individual filtering, signal shaping, and amplification by one tube each. Thats why we have 4 tubes per DAC and additional 4 big pentodes for Active Anode Loading.

Tetrode, pentode and rectifier swapping (rolling) is described elsewhere in the manual.

The KEY DIFFERENCES VERSUS THE HORIZON ARE:

1. Lack of volume control
2. Added user access to all vital internal parameter setup via remote
3. Gigantic and informative dual OLED display
4. One stage of amplification versus 2
5. One series capacitor versus two in Horizon
6. EI transformers user throughout instead of toroids
7. dual mono construction - everything except the mains fuse
8. LAN Ethernet input with endpoint bridge module
9. Three wire i2S available (without need for masterclock!)
10. Femto clock inside that is 10 x more precise than before
11. Full protection from user or self damage
12. Advanced mains filtering directly copied from Kraftwerk unit
13. Full support for three most advanced inputs : XDMI/Taiko, HDMI i2S and 3xBNC/i2S
14. Resistorless tube stage based on active loading, triode mode SET amplification and Shottky diode tube biasing reference point. Biasing of tube is automatic and the user doesn’t need to worry.
15. Temperature control in vital positions
16. Tube life clock counter

and many many more

Data formats

The DAC is capable of automatic recognition of all sampling rates from32 to 768 kHz and bit rates from 14 to 32. Since few if any transports offering S/PDIF format of the 192 kHz exist in the consumer market, it is hard to guarantee the operation but on the professional ones which we tried – it worked. From our experience the transmitters of S/PDIF are incapable of making good square wave over 48 kHz, so if you play a 192 kHz file, be aware that on one hand you “play” more detailed data, but at the same time your signal is waaay more distorted so at the end of the day for this reason alone it may not be worth it to chase the hi-rez rabbit via S/Pdif. USB is made for that.

If you use USB connection, all our DACs will play up to 768 kHz and 32 bits. This theoretical limit does not imply that you need RECORDINGS of that resolution, which don’t exist by the way, but that you can use up sampling to play regular files. We however listen to all recordings at the resolution settings they were recorded.

By PCM files we mean all known file formats like: MP3, MP4, Aiff, Flac, WMA, WAV, Ogg, and many more less known types. PCM abbreviation stands for pulse code modulation.

DSD

Direct Stream Digital, also known as DSD format - this format is not new as many people think, it is as old as digital but it wasn’t used for consumer audio or home audio - before. It became very popular after 2010 and continues to make its way into our homes. It is VERY different than our well known PCM format as found in our CD files, MP3, FLAC or WAV - AIFF. It encodes the music in the data stream differently, looks different and sounds different. It is the format in which the SACD discs were recorded and a format in which the analog master tapes were backed up by record companies.

In Aphrodite DAC - we use AUTOSENSING and automatic switch from DSD to PCM and back. User doesn’t need to do anything, just enjoy.

Our DAC will automatically recognize and switch all DSD speed rates from normal 64 SACD format to 2x (128x) and quad 256x format or 512x shall you need it. Everything will be displayed on the OLED screen.

Audio volume level

Tube technology allows us to set practically unlimited volume level at the output, up to 20 x higher than from a normal CD player. We have decided to adhere to one internally set standard: the test tone of 1 kHz at -20 dB produces an output of sine wave 300 mV AC under the amp load of 47K. Thats equivalent of circa 3 V pp in SE mode. Balanced signal is double that.

Generally - we prefer the sound of the DAC with high output levels, and most amps don’t have any problem with that. A simple potentiometer or stepped attenuator in the

amp's input stage takes care of that. LampizatOr DAC **should not be** used with opamp based preamp, no matter how good. Because the op-amp feedback loops will in our opinion remove the whole joy of music as delivered by the tubed DAC. The Aphrodite is simply speaking way too good for that.

The heat issue

Many people are concerned about the heat inside the player.

We want you to relax about it - that this is NOT an issue. The DAC operates well below half of its maximum allowed temperature. Tubes are DESIGNED to be hot, this is their very nature. Thats why they have internal heaters and when they are not at optimal operating temperature – they sound bad.

The other components are guaranteed up to 105C and we are expecting no more than 45 degrees Celsius in the air inside the DAC.

Our only advice is do not heat the box additionally by placing it - for example - on top of a hot class A amplifier. Give it some space around to allow free air flow and adequate cooling.

There is SO LITTLE HEAT inside the DAC that we decided to provide no ventilation at all, which is unnecessary and only invites the dust to penetrate and settle in.

Optimal placement

Apart from the heat issue as described above, the DAC has no special placement requirements. Just remember to keep the S/PDIF cable not longer than 1,5 m (5 feet) and RCA chinch cables – not longer than that either. USB cables should not exceed 2m and MUST NOT have ferrite filters on them.

Since tubes are microphonic, they hate vibrations. Therefore it is forbidden to place the dac on top of the speakers or a sub. Choose least vibrating location, preferably at least one foot behind the plane of the speakers.

Power on-off cycle

The tube lifetime, almost like the life of a car engine in cold climate – is determined largely by the on-off cycle. The heat expansion coefficient of the glass is so much different than that of the metal, that the air-tight seal of the metal pins can leak oxygen inside the tube and eventually kill it. Even if it is just one molecule per day. So in other words it is better to keep the DAC always on, than to switch it on and off more than necessary.

Cabling and cable handling

Just to be sure that we know what we are doing:

- AC cable can be freely plugged and unplugged during operation. It is OK for the DAC but NOT OK for the amplifier and speakers. A loud thump may appear after switch off. Please use standby off before switching off the DAC from power cable.
- S/PDIF cable should be plugged and unplugged when the transport is powered off. The DAC can be on. However doing it on „hot" when all is working – is not dangerous for the DAC as long as the AC power supply has the GND for all products (DAC, transport, amps).
- RCA Signal cables can be plugged / unplugged with the amplifier volume turned fully down. XLR cables can be unplugged and plugged at any time because it is in their professional nature to do so.

Please use a decent AC cable. We suggest spending around 100-500 Euro for a good AC cable, not much more but not much less. The free AC "computer grade" cables are not good enough for serious audio.

Please use a decent digital interconnect. In our DAC it is completely unimportant what is the wave characteristic impedance of the cable (the famous 75 Ohms). Just use the cable that sounds good to you. Analog as well as digital interconnects can be tried. Best results are obtained with silver cables. Let your ears decide, not specs of the cable.

Lampizators produces all types of cables for audio systems - you can order them from us with confidence of tremendous value for money. To beat our cables you need to spend 2000 Euro per one.

TUBES

Table 1

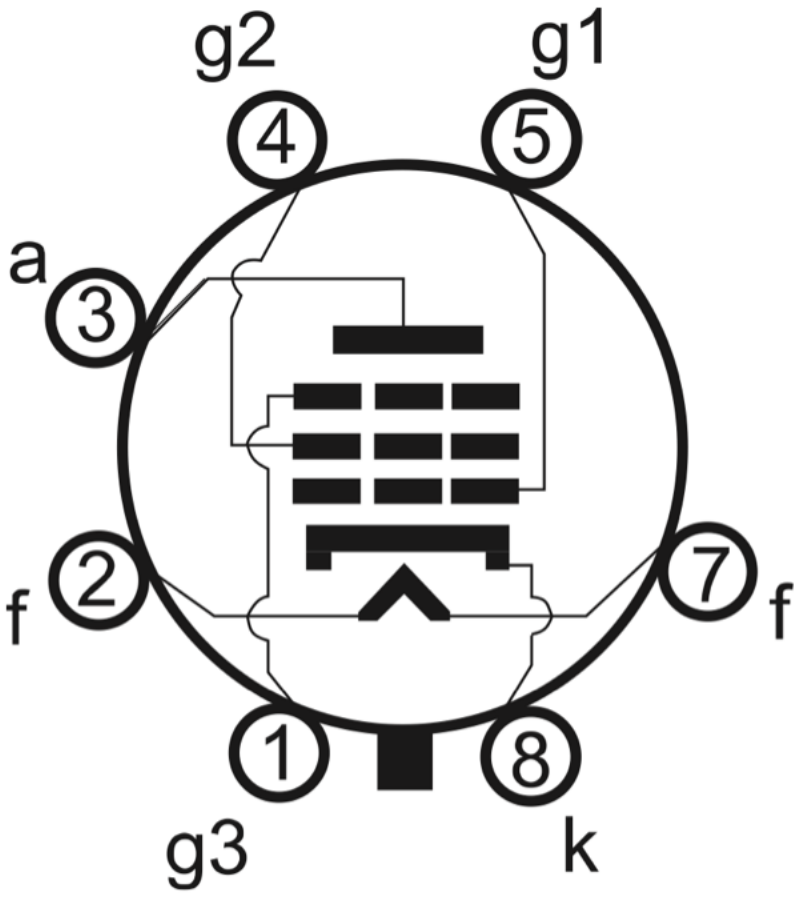
Tubes for the Aphrodite - all eight music tubes	SOCKET / adapter NAME	KT88	6922	12AU7	VT99
The name of the Aphrodite default socket is OCTAL and the pinout is EL34.	6j5	6C2C			
	6L6	**EL34**	6CA7	KT77	6550
	6V6	KT66	KT88	KT90	5881
	KT120	KT150	KT170		
	With adapter	EL84	6888		
Rectifiers - no adapters needed	5R4WGA	5Y3	5C3S	274B	5U4G
	GZ480	GZ34	GZ37		

The Lampizator DAC with tube rectifier creates naturally a slow start feature which brings the high voltage supply gradually up, at the rate of two- to five volts per second, as compared to full DC after just 0,02s in silicon diode rectifiers. The PSU reaches 450 V DC after 60 seconds. This helps to extend tube life and capacitor life. The DAC is also equipped with voltage down feature (bleeders) which reduce the power voltage upon switch-off at roughly the same rate.

On top of that – the tubes are operated around 25% of full nominal power, which greatly increases their life expectancy. Combining all the factors together, the tube lifetime should be anywhere between 10 and 20 years, assuming the player is switched off only once per day, for the night. Our circuit goes way beyond the tube datasheet recommended protection. It extends the tube life at least double to tenfold versus the datasheet specs.

You CAN operate the DAC with just half of the tubes if your listening is primarily Single Ended. You can also use any cheapest tubes in the “balanced” position just to maintain power supply balance.

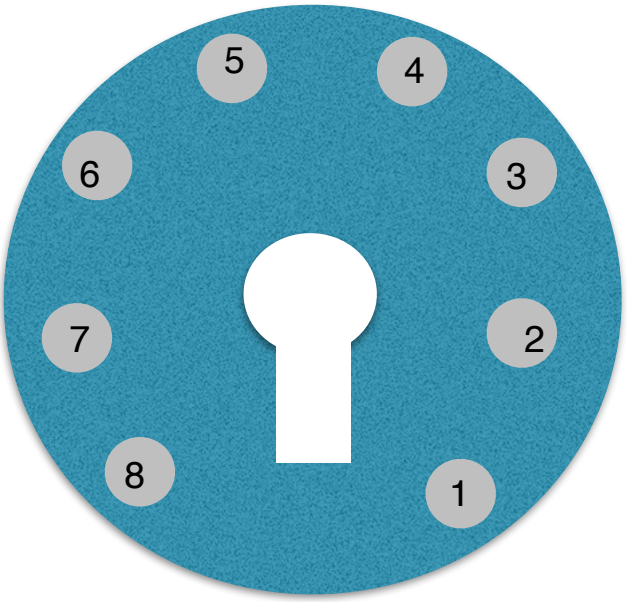
You can experiment - in which row you prefer two different tube types. For example EL34 in the front row and KT66 in the rear row or vice versa.



Above: EL34 and KT88 pinout,

below: Octal socket seen from the top:

The music tubes (all eight) have following pinout:



1=Grid 3

2=Heater 1

3=Anode

4=Grid 2

5=Grid 1

6=Nothing

7=Heater 2

8=Cathode

The Ohmmeter shows only single ohms between TUBE PINS (not DAC pins) 2 and 7. Circa 5 Ohms

In the DAC without tubes the Digital meter will show:

6,3V DC between pins 2 and 7

450 V DC between pins 3 and 2

The rectifier tubes (both front tubes) have following pinout:

1=nothing

2=Cathode and heater 1

3=nothing

4=Anode 1

5=nothing

6=Anode 2

7=nothing

8=Cathode and heater 2

The Ohmmeter shows only single ohms between TUBE PINS (not DAC pins) 2 and 8. Circa 2 Ohms

In the DAC without tubes the Digital meter will show:

5V AC between pins 2 and 8

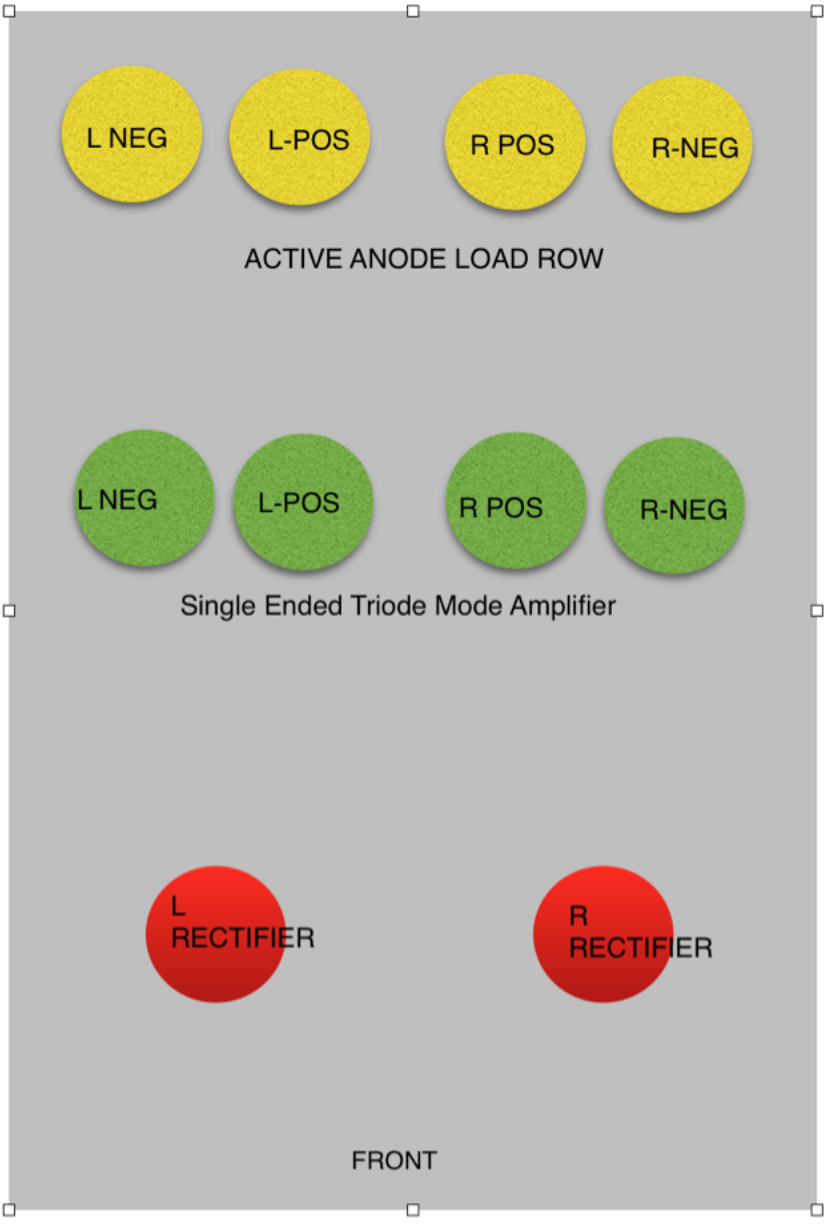
450 V AC between pins 4 and 6

Tube positioning

Left channel - positive phase, Right channel positive phase, Left channel - negative phase, Right channel negative phase, are the power pentode tubes (must all four be equal and the same). The basic tube there is EL34 or KT88

i**f you plan to use single ended outputs only** - then you can:

1. Use the DAC as intended
2. or use your best tubes in positions POS and less fantastic tubes in positions NEG
3. or eventually don't use any tubes in positions NEG
4. In any scenario you need two rectifiers of the same type and brand
5. In scenario 3 - you should adjust the threshold levels for tube protection (current) as described elsewhere. Because the total PSU currents with 4 tubes removed will be at least 30% lower and thresholds will be too high (it doesn't matter but it is just. a neat and nice thing to do. It doesn't affect the sound or safety or tube longevity. It just gives you a chance to minimise damage if a failure occurs.)



Tube rolling and replacement

W took an expensive and painful decision to sell the DAC with the best tubes we can find in consistent sustainable supply. Therefore we feel you should not be tempted to change them for any reason. If you feel that you must try tubes other than supplied, please follow the guidelines below. Just to give a perspective - we bought quads of ALL tubes available in the world and tested them in Aphrodite and with tube testers and we chose the best we could. You can experiment yourself and **good luck beating our choices**.

Generally, among our tubes the level of significance for the sound quality is: Rectifier 10%, Input SET stage = 40%, anode loading pentodes 20% , synergy between the two stages and also rectifiers = 30%.

The sign that the tube needs changing is that there is no sound and/or the tube is cold and doesn't glow red filaments in the dark,

White powder inside the glass means oxygen inside = dead tube.

Tube ADAPTERS

The pentodes and rectifier generally dont need adapter.

Some rectifiers come with a 4-pin UX4 sockets and these can be converted to OCTAL (pins 2 and 8 heaters and cathode, pins 4 and 6 - anodes)

Tubes like 6J5, 6C2C, 6V6, 6L6 - go in without adapters.

You CAN operate the DAC with just half of the tubes if your listening is primarily Single Ended. You can also use any cheapest tubes in the "balanced" position just to maintain power supply balance. Just ignore the NEG marked positions and use only POS.

You can experiment - in which row you prefer two different tube types. For example EL34 in the front row and KT66 in the rear row or vice versa.

Here are some GENERAL practical tips for tube rolling (not limited to the case of the Aphrodite:

1. Tube compatibility- many people ask “is the tube X compatible with Y?” and the answer is of course - it depends. Tubes can have completely different bases but be compatible by parameters and can be swapped by means of an adaptor. A good example are ECC40, and 6SN7GT - different bases but very close parameters. Or ECC88 and 6DJ8. Or 6H8C and 6N1P.

2. Other scenario is when the tubes have same base (say - noval) but they have different pinouts. So we CAN NOT inter-change the two tube types but we CAN use an adaptor. Same base type and same pinout DOES NOT MEAN that the tubes are interchangeable - best example is cc81 and cc82 - same base, same exact pinout but completely different parameters. Or octal 6SN7 and VT99 - both octal, same parameters, different pinout.

3. Some tubes can have same base, same pinout and same parameters except the different heaters. Best example is ECC82 and 12BH7 - the former uses half heating of the latter. They can be used with a switch or within limited timing or with extra care, depending on the heater arrangement in our DAC. Another example are completely different tubes that miraculously are perfectly interchangeable - like E182CC with 5687.

4. **Pentodes used in ourAphrodite DAC are yet another can of worms. Most Pentode tubes have the same base (Octal) and the same pinout (Heaters on 2 and 7, anode at 3, cathode at 8) The problem is that these tubes have completely different heater demands. Our DAC is designed to accept ALL KNOWN pentodes from this group. People keep discovering more and more compatible types every month.**

We supply the tubes that are purchased new from reliable sources. They are tested and matched.

WE DO NOT DEAL WITH NOS TUBES, leaving this fun entirely to YOU.

Rectifier Rolling

Please note that Aphrodite is our only DAC (and perhaps worldwide) that uses two rectifiers.
They must be identical type but don't need to be "matched".
If you have an emergency like waiting for a new rectifier to replace one broken - it is OK to use any rectifier you can find in the mean-time. So in other words - to use two different ones.

If you Rectifiers are generally less rolled but many customers report that huge leaps in synergy can be achieved when, **after** choosing the optimal music tubes, we also choose optimal rectifier.

Directly heated dual diodes are older in design, physically larger, and have 4 pins versus 5 and use 5V heaters versus 6,3 compared to Indirectly heater rectifiers.
PINOUT: 2-8 is heater 5,0 V AC. Pin 8 (or 2) is also a cathode. Pins 4 and 6 are two anodes. To test - just use a meter and check resistance in ohms between the pins. IN A RECTIFIER THE ONLY TWO PINS WHICH SHOW ANY OHM READING AT ALL, ARE HEATER PINS. THE READING SHOULD BE IN SINGLE OHMS like 2 Ohm between pins 2 and 8.
Some people report back that the directly heated diodes sound better than their indirectly heated counterparts, but this hasn't been verified in any semi scientific way. Generally we expect the directly heated diodes to have up to 400% higher current capability as well as

voltage max. It al depends on the DEMAND of our circuit. Some Lampizator tube stages demand only 2 mA in total, some can demand 40mA and more. Aphrodite DAC demand in total per one channels is 100 mA.

Rectifiers compatible: 274B, 5c3s, 5Y3, 5r4, 5U4G, GZ34, 5c4s, 5u4c

To change music tubes you must switch off the DAC, a muted amplifier / preamp can continue to work.

To change the rectifier tubes you must switch off the amp. DAC can continue to work.

Ageing problems

As already explained above, the DAC should age very very slowly.

The digital PCB should last a lifetime. The transformer, the paper in oil caps, the cables, plugs, sockets – should last a lifetime. There are electrolyte caps which we selected from premium brands and they should last circa 25-30 years. Other than that we suggest to change tubes every 10 years.

So - short of a thunder-strike – we expect no failures or ageing problems before 20 years.

Fuse Change

The DAC is equipped with a non-repairable 20 mm glass fuse circuit breaker inside the IEC-AC socket at the back. There is also one spare fuse provided in the little drawer removable when changing the fuse. The fuses are 3,15A (or 5A for USA/Japan/Taiwan) they are slow blow, and overrated by the factor of 2. Therefore it is impossible for the fuse to blow without a specific reason - a failure inside the player. Consequently, if the fuse burns, it is a signal to send the dac for service and NOT change the fuse. Obviously the second fuse will burn as well.

Spare fuse is here

WE ABSOLUTELY DO NOT ALLOW changing the fuses for any larger size than 3,15A (USA-5) or installing the “audiophile silver bolts” in place of the fuse. Fuses are there mainly to SAVE YOUR LIFE. And we mean that. You can experiment with audiophile grade fuses but not DEAD BOLTS please.

Volume control

in this DAC we decided to offer puristic simple DAC circuit without the additional complication of volume control. We wanted to invest everything in a cutting edge sound quality and leave the preamp up to you.

The digital input selection is available from the remote in direct mode - just press the remote INPUT to choose input or use left - right panel buttons.

There are NO analog inputs - it is not a preamp.

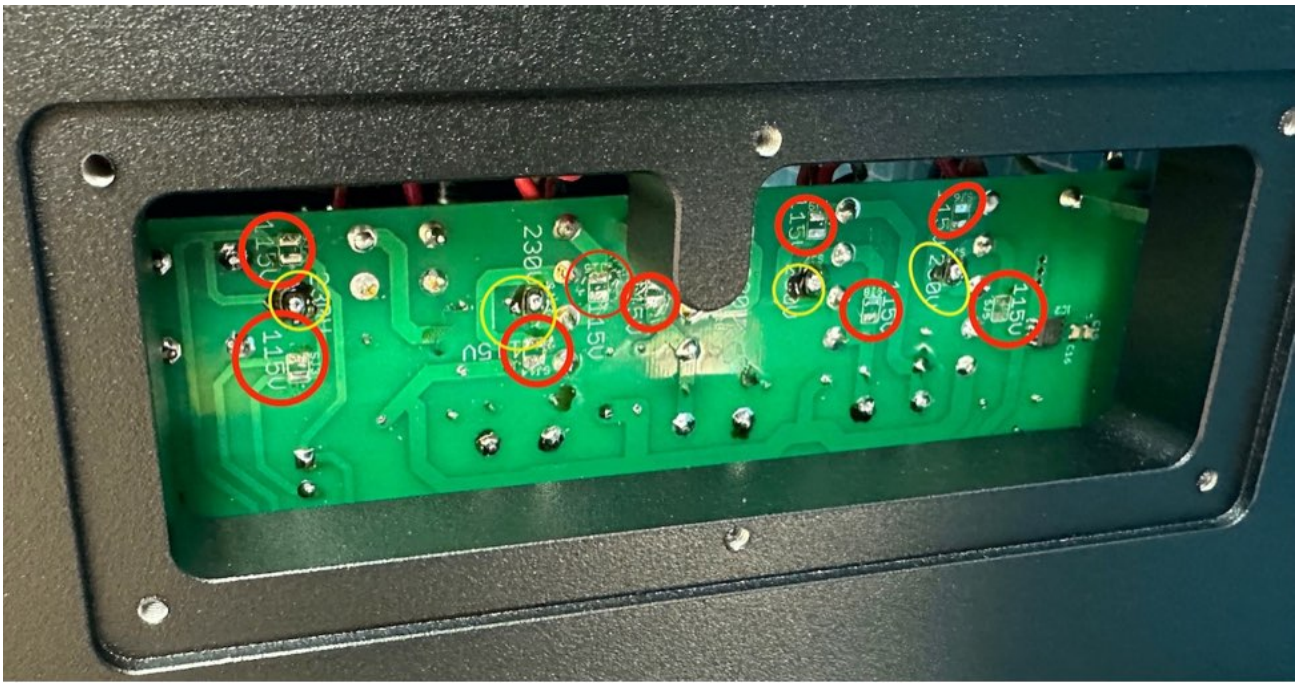
MUTE function: this is useful to use instead of turning the volume all the way down. Available ONLY via remote.

POWER OFF - the DAC will be switched off fully but the remote module will be always alive to enable you to power it ON again.

MAINS VOLTAGE CHANGE

In Aphrodite DAC, unlike in all other products that we make, to assure the ultimate reliability we decided to do away with the 115/230V switch.

The provision is there inside the DAC and the change is a simple 5 minute soldering job but it is NOT accessible without opening the little rectangle door under the DAC floor plate and using soldering iron to move the shorting pins. (the provision is easity accessible and does NOT require opening the whole DAC). In our statistics of repairs the 230V/115V switch was number one trouble maker for whatever reason. We want the Aphrodite to stay on the continent it was sold first, and if it HAS to travel to another mains zone - there is one in a lifetime need for small service by any local person who can solder. We provide detailed guideline how to do it correctly and it doesn't invalidate the warranty.



For 115V operation - all 8 kumping pads must be joined (by means of a solder blob) - see red circles where 115V word is printed.

At the same time the 230V jumpers in YELLOW CIRCLES (also described 230V) need to be open.

To open the jumper please heat it with the soldering iron and suck it with special solder pump or clear it with the copper rope for desoldering.

To put a blob - it sometimes refuses to make a bridge - in such case please increase solder temperature to 350C and hold the drop of solder hanging at the soldering iron tip. After 30 seconds the excess flux will burn out and smoke out and the solder will be more “willing” to form a bridge and not split in half.

COOPERATION WITH THE PREAMP

The DAC without volume control should sound audibly cleaner and more direct going straight to a preamp between the DAC and the amp.

The load presented by the preamp or amp or simply the next analog component that the DAC sees, should be as high as possible. It is measured in kilo-Ohms and 100Kilo Ohms is a perfect ballpark value. More is VERY rarely seen. 47K or 50K is next common value, and it is great too. 20 K is kind of on a low side, but we can handle that. Lower than 10k is bad news. The bass extension may suffer a few hertz of the lowest octave.

The DAC will not be damaged in any way, but at around 6K of load the dynamics of the dac will start to fade away.

Having said that - every properly designed amp or preamp keeps the load value above 40k. And if it doesn't - we simply don't choose such amp because it was not designed with audiophiles in mind.

DIGITAL INPUTS

There are three data types that our DAC can read internally: biphase, i2s and USB plus the additional LAN Ethernet port.

The bi-phase can come in many forms, but the most common are:

S/PDIF (Sony/Philips data inter face) by means of single ended square wave of amplitude around 0,5 V pp

AES/EBU - the same as S/PDIF but the signal is a mirrored (balanced) pair of square waves around 2,5 V pp (max. 5 V pp). This has absolutely NOTHING TO DO with the balanced operation of an audio device like balanced DAC, balanced preamp and balanced amplifier.

TOSLINK - a fiber optic transmission of S/PDIF producing at the DAC the 5 V TTL electrical signal.

The i2S is the same as biphase but separated into 3 or 4 signals - each carrying only one type of information. Biphase encodes 4 groups of informations in one signal stream. Specifically they are: System Clock, Bit Clock, Left/Right Clock and Data. We can install these four in any type of connector, because there is no standard. Most customers use HDMI, or RJ45 LAN socket or simply four RCA sockets just like in TV RGB. We applaud using 3x BNC as the best connector in all audio world.

When you want to use our 3xBNC you can take any signal i2S from any source , coming out on any cable - and just by splitting any cable you have there, you can go to 3xBNC with BCK, LRCK and DACA streams. It will be automatically recognised, synchronised, reclocked and played.

The TOSLINK connection

Is Toslink bad or not ? That is the question. Like everything in life - it can be bad or it can be good.

By using own experiments and oscilloscope observations we concluded, that Toslink is not bad and not inferior to RCA SPDIF if implemented properly. Toslink is EXTREMELY demanding about the internal 5V power supply quality. That’s why we build for Toslink separate dedicated power supply and with this supply the response is instantaneous and there is no deformation of square wave. Usually Toslink ports are installed in cheap low end gear and the power supply to Toslink is completely neglected. Not in LampizatOr DAC. If you have Toslink in your DAC you can be sure it will sound good and not degrade the sound. Of course providing that the transmitter part of the link is at least semi decent.

NOTE: All Apple products which have headphone output (iMac, MacBook, Power MAC, MAcMini, iPhone, iPad, iPod) - have a secret toslink transmitter hidden inside that port. Just buy the special cable - Toslink Minijack and when placed in the headphone output of

an Apple product - will emit light with SPDIF in it. That is a very good way of using MAC computers as transports.

on HDMI
It is important to understand, that HDMI is a special digital connection standard for mainly TV and Video applications and what is used in audio world IS NOT REAL HDMI, We only use a convenient plug, socket and cable from HDMI but the information transmission is completely different and it is called i2S

Our i2S can be balanced or single ended (data transmission, not audio system) and it can be high level (5V pp) or low lever 0,5 V pp. In addition, pinouts differ between manufacturers of transports.
In Aphrodite as default we use low level balanced i2S with low impedance drivers and it is exactly PS-Audio standard.

USB playback

USB data uses an internal converter module to convert the “packet” data into a steady i2S stream. Our asynchronous converter has internal RAM and two own clocks and own power supply and own power transformer secondary winding. It has opto-isolation between the computer and the DAC section, it has two separate own transformer windings and two separate PSU units on floating grounds.

Our DACS (all of them) work on a 3-wire USB cable without the 5V power line (although it is ok if it is there we just don’t connect it at all.)

The USB module requires a driver for Windows to recognize it. MAC OS and LINUX work without any need for extra drivers.

To download the Windows driver go to
www.jlsounds.com and the drivers are there:

http://www.jlsounds.com/drivers.html

Our USB converter is capable of working with 32 bit files with 768 kHz signal frequency.

Only USB2 rated cables will work. The USB standard printer cable will always work but sound-wise - not optimally.

USB cables with ferrite filters (the “thingie” on the cable) will not work.

From JL website:

“Asynchronous USB to I2S interface

I2SoverUSB v.III board is especially designed for asynchronous audio transfer. It can transmits PCM and both DSD512 native and DSD256 DoP audio data. This board provides bit-perfect playback at sampling rates from 44.1 kHz up to 768 kHz with up to 32 bit resolution.

i2SoverUSB v.III uses reclock to reduce jitter significantly. I2S, S/PDIF outputs, oscillators and reclock are galvanically isolated from XMOS processor and USB ground. The galvanic isolation eliminates common noise originated by the computer. There is an galvanically isolated external master clock input. The board is equipped with NDK NZ2520SDA ultra low phase noise oscillator 45.158MHz and 49.152MHz. LP5900 ultra-low noise linear voltage regulators are used. “

USB driver

The USB driver is necessary only for Windows system and you can get it from that page:

www.jlsounds.com - in specification there are DRIVERS:

http://jlsounds.com/drivers.html

Thesycon JLsounds_USBAudio_v5.58
Download File

Connection to TAIKO Olympus

Many of our customers have Taiko Extreme music server and they will be perfectly happy using USB connection . Just please use a high end cable (we love our Polish cables from our ultra high end vendors: Laboga Cables and KBL Sounds. Both stellar cables.)

Those of you who have the Olympus Taiko server can enjoy our Aphrodite on many different ways and we did our listening and evaluation and here is what we can say:

Our best ways of connection are in no particular order:

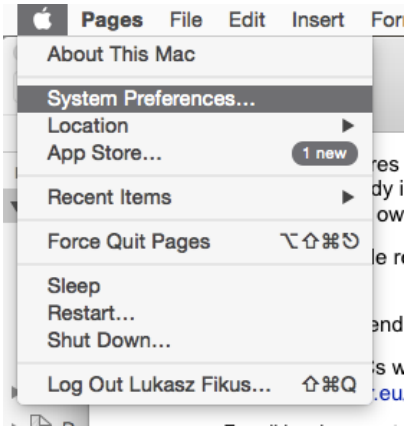
1. i2S with 3xBNC or HDMI cable (if you have such Taiko card)
2. LAN Ethernet RJ45 from Taiko router (switch) (or any router/switch you use)
3. USB via short cable no more than 1,2 m
4. XDMI proprietary link (if you have such Taiko card) with 5 pin XLR cable. Most our users swear by this link and you need a dedicated cable which we can sell.

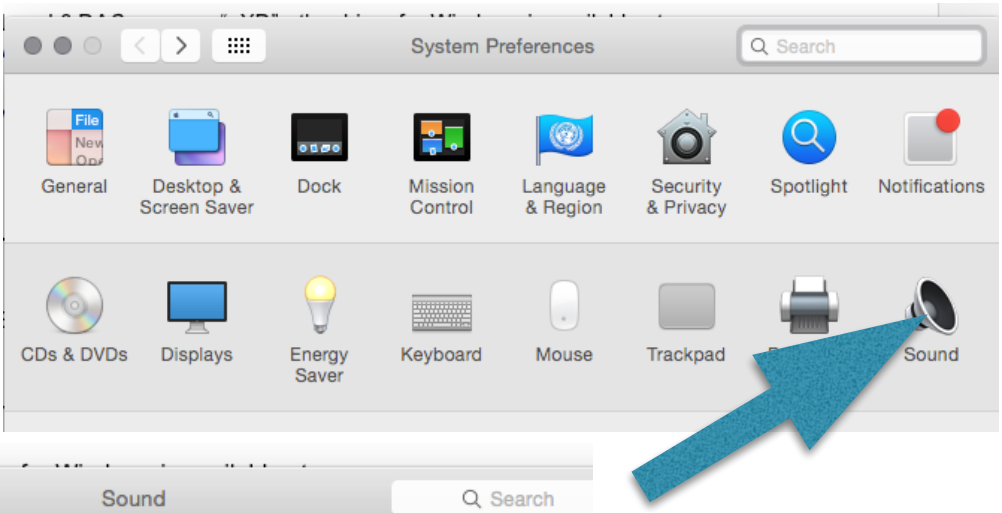
MAC OS operation of USB output:

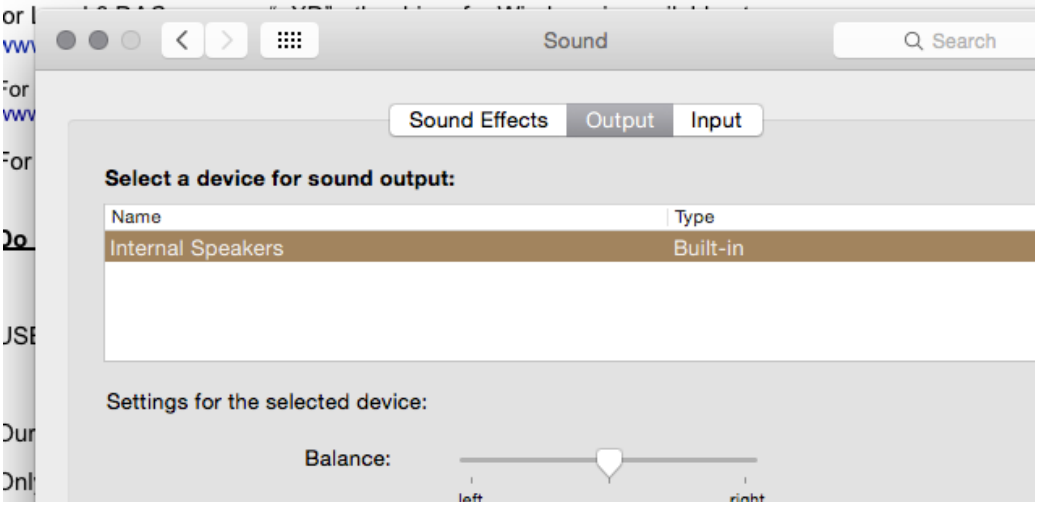
MAC OS dos not require any driver installation. Somehow miraculously the MAC computer knows how to handle all USB devices. Microsoft, even 15 years later, still cant figure out how to do it. They are probably still scratching their heads.

After plugging the DAC by the USB cable and turning it on, within 3 seconds the device should show up on the MAC.

To verify what is going on, please go to the “apple sign” in top left corner of the screen and choose PREFERENCES and then the loudspeaker icon - SOUND.





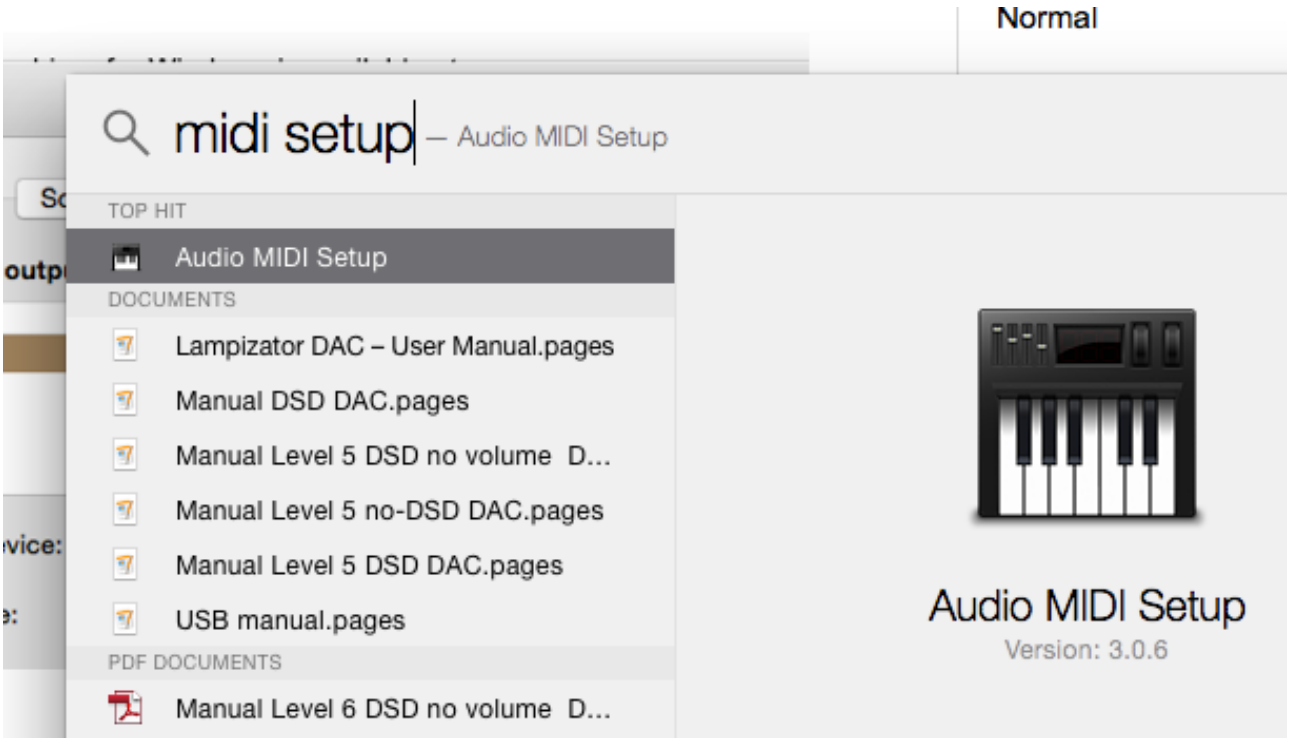


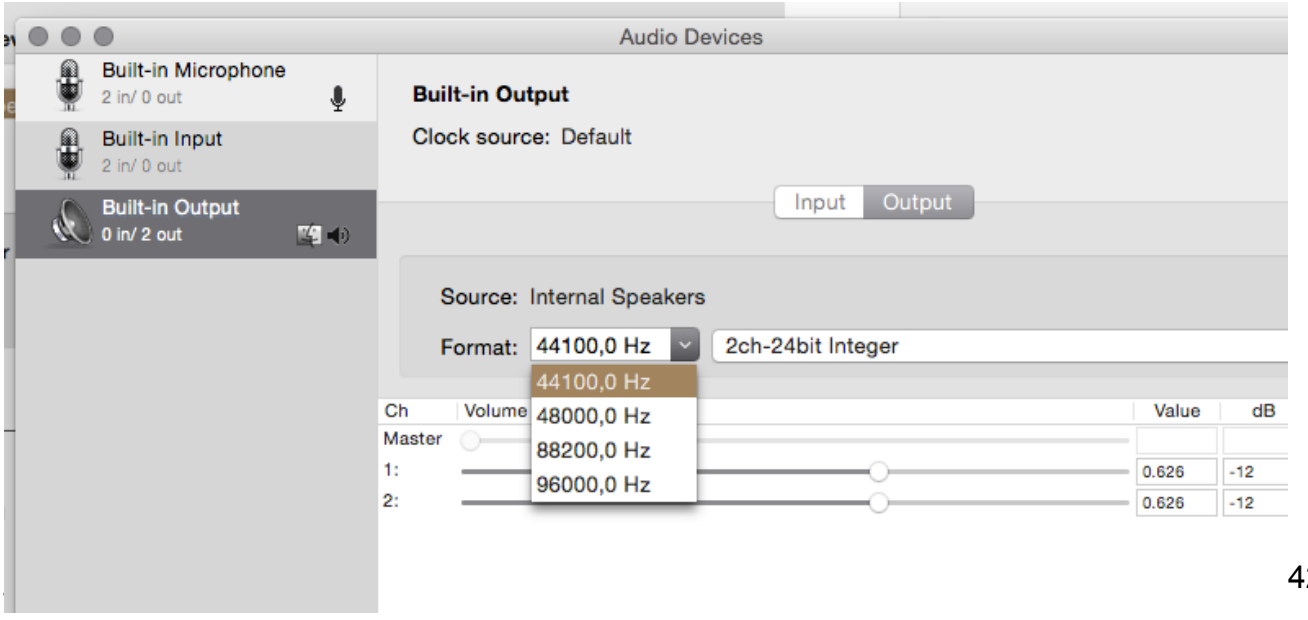
Above: on that list the USB Lampizator should appear under INTERNAL SPEAKERS.

Next thing to check is MIDI SETTINGS of the MAC computer. We go to the top right corner of the screen and press SPOTLIGHT (Loupe):

We type in the search line MIDI SETUP and -> enter.

In the MIDI setup we can choose frequencies of sampling we use for the Amanero output. We don't think that the higher the better but your own test should confirm that.

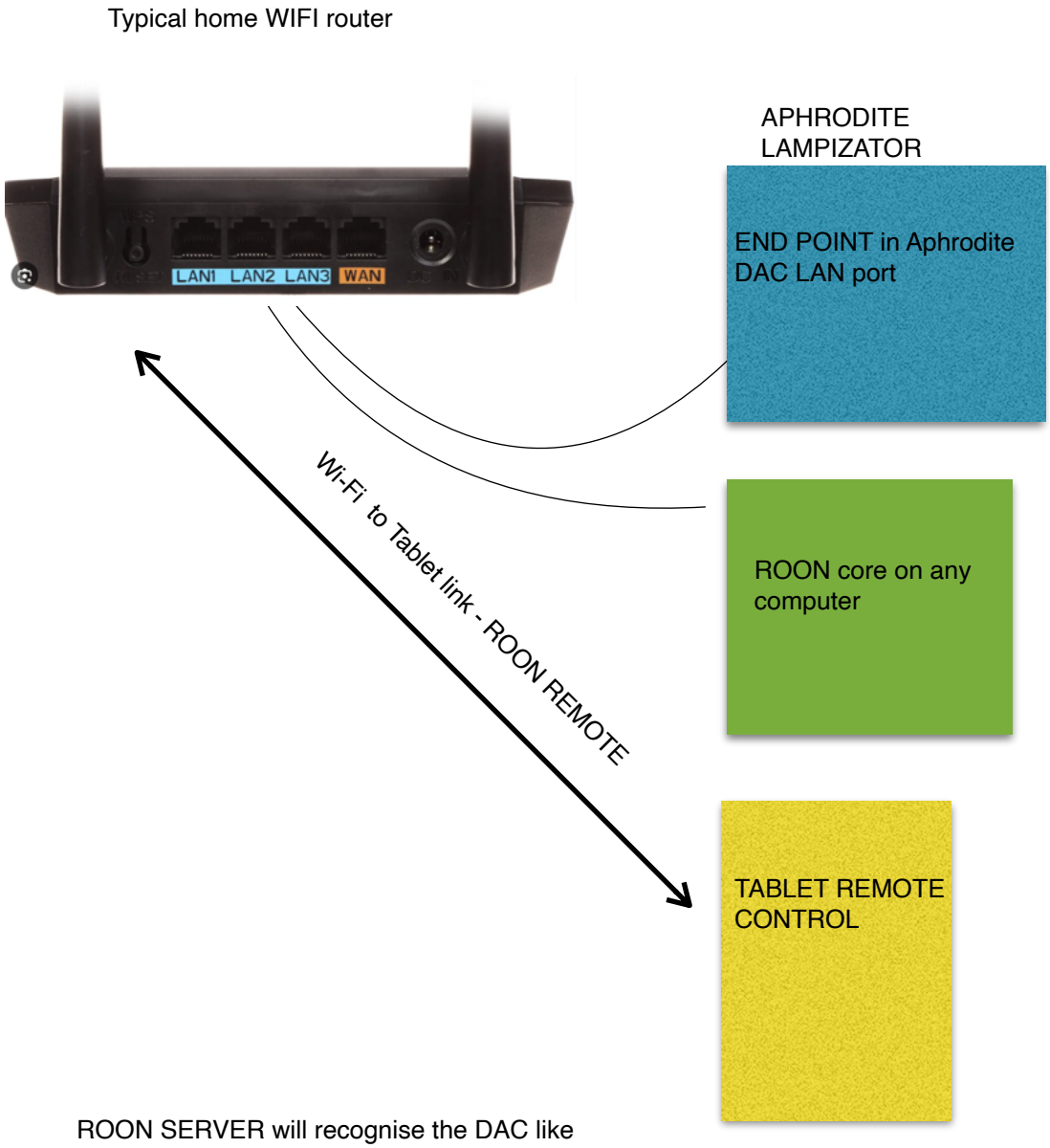




LAN Ethernet input

LAN is a new addition to our DACs, We installed an entire LINUX PC computer with its complete power supply inside the DAC in order to enable the LAN input.

:



ROON SERVER will recognise the DAC like “Lampizator LAN player” .

ROON settings:

Roon seems to be the number one preferred software for music streaming. It is really a GUI only, while streaming is done by the services like Tidal, QOBUZ or just Hard Drive. That's why we make sure first and foremost that the DAC works perfect with the Roon.

Most of our customers are familiar with Roon so we are not quoting here the entire manual, lets just list the most common issues here:

1. The new player must be ENABLED: new devices like our USB link or LAN port - must be enabled in Roon or else they dont play and are not "seen". Go to LEFT TOP MENU LIST -> CHOOSE TOOTH-WHEEL (settings) -> choose AUDIO -> find on the list your playback link like LAMPIZATOR USB, give it a name like USB and ENABLE.

2. The volume must be FIXED not just 100%. This is very important. The sound is twice as good on FIXED as on MAX 100%. Go to RIGHT BOTTOM icon of loudspeaker driver -> CHOOSE TOOTH-WHEEL (settings) -> choose Audio Device - your selected player ling (like USB LAMPIZATOR) and choose ->. DEVICE SETUP Toothed wheel and select -> Volume control -> FIXED VOLUME and SAVE and exit.
   While you are there make MQA no support , Volume Levelling OFF, Crossfade time 0 ms.

3. Go to RIGHT BOTTOM icon of loudspeaker driver -> CHOOSE wave line (settings of the digital processing) -> and select -> Headroom Management OFF, Sample rate conv. DISABLED, all filters DISABLED, MUSE presets NO PRESET SET, and exit (no SAVING is needed).

LISTENING TO THE MUSIC

some practical tips

Please use good shelf for the DAC. Do not place it on speakers, subs, or even on transports or amps. Again - tubes hate vibrations.

If you try the special devices for placement, we feel that: granite or marble is bad (ringing). Ceramic ball bearing feet are great. Good wood is great if thick. Others - please try.

The way stereo sound is created inside the DAC can - under optimal condition - re-create the musical experience as it sounded live. It means that two speakers can cause us listeners to hear sounds everywhere around us, above, below, far in front, almost close to our face, and also behind us. This type of imaging is our goal. The sound must be able to get detached from the speakers (so called disappearing act) and the more our DAC helps doing it - the higher we value it (and price accordingly). We voice our DACs to be as 3-D as possible with the beginning point of that 3D scene being as close to listener as possible.

From our experience speakers should be positioned following the basic rules of LampizatOr Nirvana Room:

1. Speakers and listener's head form unilateral triangle (3 x 60 degrees) with the distance between speakers being exactly equal to distance head-speaker.
2. Head must be in exactly middle of the speaker base and the speaker base must be exactly symmetrical versus side walls. We place speakers and measure the distance from side walls with 1 cm accuracy.
3. The distance of the speakers to the side walls and speakers to rear wall should not be equal. We recommend 1,4 times smaller or 1,4 times larger distance- but not equal. We measure that counting from the magnet of the bass driver.
4. Distance from rear wall of speaker and rear wall of the room should be no less than 0,5 m or 2 feet.
5. Ideally, the tweeter should be at the height of the ear or up to 10 cm higher, but nOT LOWER. Speakers with tweeters lower than 90 cm sound terribly wrong. In such event do everything you can to elevate the speaker by means of stands, bases or just cement block or at least lower the listening seat as much as possible.
6. The chair or sofa should not have the back support higher than the person's shoulders - in other words - should not be just behind the ears
7. Feet are the second ears of our body. They receive a lot of vibration stimulation and the brain combines this with the hearing. So we advise to have a piece of floor without any carpet directly where our feet are. Listening with feet (preferably bare) on the hard floor greatly enhances our perception of music. It is advisable to have rug or carper between listener and speakers but not under the feet.
8. It is advisable to put something soft directly on the wall behind the speakers
9. The so called toe-in - the degree by which the speakers face the listener and not alongside the walls straight - is very critical. The rule of thumb is to toe in half way between standing straight and aiming at the listeners ear. Or slightly more straight, but not more towards the head. Over- toe-in kills the soundstage.

BURN IN PERIOD

The DAC comes straight from our factory after around 200 Hours of testing so it is not exactly “new” but it is not burned-in enough. Our customers report back, that after 3 days of constant powering (playing or not) the DAC opens up significantly. Further improvements are observed after up to 7 days from the start, when things stabilise into plateau. Playing music accelerates the burn-in even if the amp is not connected of course

If in doubt: you can check the total hours clock on the bottom of the service screen. This clock is NON RESETTABLE (like in the car) - see TIME2

Additional one day burn in is needed after every time the DAC: travels somewhere (vibrations), or is disconnected for over a month or is subject to cold temperature - like in the car trunk, when left overnight.

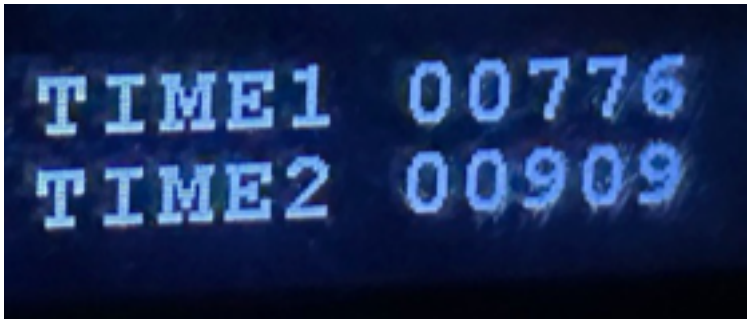
When the DAC is fully burned in, the sound quality is stable, and we only need to warm it after powering every day.

The DAC starts to play after 30 seconds.

The tubes reach full technical parameters and stabilise after 60 s. but that does not mean that the DAC sounds it’s best yet.

The whole system reaches operating parameters plateau after circa 20 minutes and it is ready for serious listening.

ENJOY YOUR MUSIC LIKE NEVER BEFORE !



SOME Q & A

1. Why Aphrodite?

Atlantic and Pacific names were the first naval names to commemorate Lukasz Fikus sailing voyage across that ocean in May 2016 where he took the decision to take more focus on extreme improvements in the DACs, focusing on it during the endless sailing shifts of duty. The successor of Atlantic - was of course the Pacific. Since we run out of oceans, Horizon seemed like the next logical step, followed by the Greek god of the sea - the Poseidon, and then we drifted into a digression from the sailing to the Greek Gods and thats how Aphrodite was born. Also Aphrodisiac is derived from the same source.

2. Why no longer DHT ?

The decision of not using directly heated triodes comes from three main decisive factors - the fact that the more popular tubes are getting rapidly harder to get and more expensive, problems with rolling DHT with different heaters and also the listening tests made us choose the current pentode/triode scenario. We simply wanted the best sound at any cost.

3. Why Copper capacitors?

Since there are only 3 series components in total in our signal path - it is important to use these 3 parts from the highest quality group. the output capacitor is one of the three so we wanted to use the best available at any price. So here it is - Duelund Cast branded copper cap which is unmatched amongst the 6 known copper brands in quality of sound. In addition this cap is bypassed by the US made Jupiter Silver Foil 10nF.

4. Why do you claim this to be your best DAC ever?

Well, the above explanations sum up to the statement - that the Aphrodite is the only known DAC that combines that level of digital section sophistication with an in-Directly Heated pentode tube output, copper capacitors (with real Cu foil versus the metal vaporised plastic) and last but not least 18 years of Lampizator's expertise in DAC technology. Add to it the DSD 512 capability, the Femto-Clocks, and excellent test / purchase / warranty / upgrade policy and you get as a package the best DAC in the world.

We MOST DEFINITELY never heard anything better anywhere!

I PLUGGED EVERYTHING BUT I GET NO SOUND

Quick check list:

Is the voltage at the under the floor switch selected to your country?

Is the display on the front illuminated ?

Are tubes warm to touch after 1 minute ? Glowing in the darkness ?

Is Amplifier powered, connected, input selected correctly, un-muted, with speakers connected ?

If you use a computer with USB connection - is the driver recognised ? Is Windows driver installed (JL Lampizator USB).

Is the computer's output device properly defined to be Lampizator USB and not speakers, SPDIF, Toslink or Intel?

Is the computer's digital volume control set to maximum ? or much better to FIXED?

Is the USB cable not of USB1.0 type, not longer than 2 m and not with ferrite rings on it?

BY ALL MEANS IT IS BETTER to NOT USE DIGITAL VOLUME CONTROL, EVEN SET AT 100% - PLEASE GO TO SETTINGS AND CHOOSE FIXED VOLUME INSTEAD.

SPECIFICATION TABLE

APHRODITE DAC - SPECIFICATION

SECTION	PARAMETERS	DESCRIPTION
PHISICAL	Weight netto with tubes / TARA package / GRO=SS SHIPPING	48 kg (100 lb) / 30 kg / 70 lb Tara / 80 kg (175 lb) with palet : 95 kg (200 lb)
	Dimensions - body W-H-D	430 x 220 x 500 [mm] (depth is 500 plus plugs and cables)
	Height with biggest tubes	340 [mm]
	Footer rectangle footprint	400 x 450 [mm]
	Special footers additional height	footers are 50 mm but they add only 30 mm because when added - old footers are less of 20 mm.
Signal parameters	PCM compatibility range	32 kHz - 768 kHz - every frequency/ every bit depth 16 bit - 32 bit
	DSD signals	64x to 512x , autosensing, all native playback
Electrical - power	Voltage range	115V and 230 V user selectable. 240V included, +/- 5%
	Current consumption on idl / on standby/ Power	0,8A (USA 1,6 A). / 0,01 A (USA 0,02. A) / on normal use 190 W
	Fuse	for USA / 115V 5A Slow 20mm type glass (T5A). Fuse for 230/240V: 3,15A Slow 20mm type glass (T3,15A) for 230 and 240 V countries
Electrical - music	Signal output at -20dB / 0dB (PCM)	0,3 V pp. 3V pp
	Output impedance	600 Ohms
	Muting action	-62 dB
	Minimum recommended load impedance	10k Ohm (per phase when balanced) optimal 47k Ohm upwards
	Frequency response - analog section	0,5 Hz - 200 kHz
	Frequency response - digital section	20 Hz to 1/2 Fs (21kHz minimum)
TUBES	Rectifiers (two)	5U4G x 2 (5Y3, 5R4, 5C3S, GZ34, GZ37, 274B)
(in brackets allowed alternatives)	Active anode load (four)	KT88 (KT66, 6L6, 6V6, EL34, kt77, KT99, kt120, kt150, KT170, 5881, 6J5, 6C2C, 6550)
	Amplification and conversion analog stage (four)	KT88 (KT66, 6L6, 6V6, EL34, kt77, KT99, kt120, kt150, KT170, 5881, 6J5, 6C2C, 6550)
Tube parameters	Rectifier	Heater 5V 3A, voltage minimum AC350-0-350 V @100mA (minimum)
	Active anode load	Heater max 2A 6,3V , anode 300V DC @ 50mA
	Amplification and conversion analog stage	Heater max 2A 6,3V , anode 150V DC @ 50mA
Colors	Body	Matt Black (alternatively with artistic engraving - patterns)
	Top masking plate	real copper, black copper with engraving, matt black, fake copper coating
Inputs	S/PDIF coax	RCA connector, 0,5V PP square, from 32 kHz to 192 kHz / 24 bit
	TOSLINK (optical)	TOS178 connector, 5V PP square, from 32 kHz to 96 kHz / 24 bit
	AES/EBU	XLR female 3 pin connector, 2 V PP square, from 32 kHz to 192 kHz / 24 bit
	HDMI (i2S)	i2s standard PS-AUDIO
	USB	Type B- USB2.0 audio port with reclocking and optoisolation
	XDMI (taiko olympus)	Taiko link for Olympus (or other XDMI ready Taiko servers) with 5-pin female XLR port.
	3xBNC (i2S)	Universal i2S super link (without the need of a Masterclock) 3 x BNC
	LAN / Ethernet RJ45	Standard LAN port with internal PC computer running on Linux. Preinstalled LOGITECH SLIMDEVICES SQUEEZE end point playback software.
OUTPUTS	RCA pair	Stereo pair with 0,6k Output impedance and noninverting phase.
	XLR two pairs identical and connected	Stereo pair with 0,6k Output impedance per phase and noninverting absolute phase.
	Grounding lug	Chassis ground with a connection to the AC cable ground and 60 Ohms to the analog signal ground.
REMOTE	Remote control unit	Handheld IR remote, aluminium CNC body, 2x AA batteries, distance 6m.

The special footers:

There are thousands of after market footers out there and you can attach your own footers via a M8 threaded bolts that we provided for that purpose under our stock footers. To attach the M8 bolts - please put the DAC on its side, using allen key unscrew the four M4 bolts that hold the original footers in place, after one “pyramid” footer is removed - put the M8 bolt from behind and re-attach. Screw the new footer on (Graphite or Magaudio)

We recommend the following footers which we tested very well:

1. MAGAUDIO Resonance ELEVATION LR16-NA (a set of 4) which are made in Germany, they work on magnetic levitation principle and can be used as attached or not attached. (50 mm high). They fit our M8 threaded provision for fixed mount.

2. Graphite Audio from Poland the IC-35 Premium (loose cones) - stiff cones made from ultra rare graphite composite - work magic, unknown principle. (Pictured below)

3. Graphite Audio big cones - specially made for Aphrodite (Threaded M8 Female) As above but with possibility to attach on M8. Much bigger than IC-35’s

GRAPHITE AUDIO
PREMIUM ACCESSORIES

The Rear Panel (inputs and outputs)