



Vermöuth



QUALITON  
APR204



# -Review-

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[ MOONRIVER AUDIO is a Swedish company based in Malmö. Its name was inspired by the famous song by Andy Williams, performed, among others, by Frank Sinatra. The company has been developing the Model 505 phono preamplifier, but at the moment there is only one product in its offer, the Model 404 integrated amplifier. ]

It happens only very rarely that I come across an audio company that offers only one product. It was the case with the Sonus faber Snail speaker system, so it was with the [Franco Serblin KTÈMA](#). And so it is with the integrated amplifier Model 404 of the Swedish company MOONRIVER AUDIO. This is the only amplifier in its offer, and yet information about it, through word of mouth, has spread so widely that it is not a completely unknown brand, but a brand arousing curiosity.

Wondering how would the amplifier sound in my system while remembering how well it had sounded in Warsaw during the Audio Video Show 2019, I listened to a track with it, which will probably would not be the first choice of most audiophiles, *Everything I Wanted* by Billie Eilish (Billie Eilish Pirate Baird O'Connell). This is a digital single, summarizing 2019, created during the concert of this young artist (she is only 18 years old!). **I chose it because her recordings are characterized by excellent production, flawless sound (within popular music idiom), and above all because it is good music.**





As you shall see in a moment, its designer managed to give a contemporary form to a nostalgia for the 1970s. It is an amplifier with a very characteristic artistic design and rich functionality. As we read in the company materials, **Moonriver Audio people love both vinyl and tape, but they also do not get away from "bits"**. On the circuit board, right behind the relays there is a message for those who would boldly unscrew the top of the device:

This amplifier is designed for all music lovers and fans of night listening. All these hidden textures and deeply buried treasures, tiny grooves, forgotten magnetic tapes and stubborn bits - all this is easily discovered. What matters for us is: sustainability, reliability and reparability. Keep music alive!

—A FEW SIMPLE WORDS WITH...—

GEORGE POLYCHRONIDIS  
Founder, chief designer



My family had a hi-fi system before I was born and this had an important impact on me, growing up in-between vinyl records and hi-fi components. The story begins when I was a teenager in the mid 80s; I got my first soldering iron to make a fm radio. I always loved technology and electronics but mainly the music and sound since I was a child. **I got my first album on tape in 1979. Since then I never stopped buying records and CDs.**

I spent most of my free time in my life listening to music, going to concerts and trying to understand the reproduction of the sound. I should have become a sound engineer because I used to sit down and analyse every recording that could "speak" to me for months. Soon, I was drowned in sound and this became an obsession.

**I have a background as an industrial and user interface designer and also as a technical hi-fi engineer.** I have also repaired, tested and listened to hundreds of vintage, tube and solid state amplifiers, turntables, tape recorders etc. My career as a



I was not disappointed. The Swedish amplifier played it as I'd hoped it would. And, in fact, even better than expected. The recording by Billie Eilish is power, rhythm, very low sounds and a specific, "dark" mood. The amplifier handled this very nicely, mainly due to the fact that it is: **dynamic, very natural in rendering colors, but also neutral enough that it is difficult to point out any color, sound attack, etc. modifications.**

This device, which sounds in its own way, **it is neither warm nor cold**, does not resemble a classic transistor amplifier or a typical tube amplifier. Instead, it sends us to designs based on the ZEN amplifier, a design once made available by Nelson Pass. I used to make it myself. This is not exactly *the same* sound, nor a very *similar* one. I could have sworn, however, that somewhere deep within his DNA was a similar idea. **And the point would be to involve as little interference as possible in the spirit of the signal, even at the cost of certain sacrifices and simplifications, i.e. at the expense of its letter.**

The paradox associated with "no interference" lies in the fact that, striving for the greatest possible neutrality of sound, the designers envelope the basic circuit with additional ones, correcting individual stages of amplification by subsequent stages, etc. In the real world, the pursuit of absolute fidelity almost always means complicating the system.

However, you can do it differently. I do not know if you have come across **digital-to-analog converters that use no oversampling**. These are usually devices based on antique, from the point of view of digital technology, Philips TDA1583 chips, but not only them (see - Deneferri Venus MkII). The sound of these devices is captivatingly natural, as if it has been deprived of all digital harshness. You pay for it with lower selectivity, not so great detail and not fully defined soundstage. The same is true for the Model 404.

**This is an amplifier that sounds in such a natural and so effortless way that even very expensive devices from other companies can envy it.** Only such expensive amplifiers as [Vitus Audio SIA-030](#) are able to show much more, they are from another world, and yet they are based on a similar idea of sound. A similar level of sound saturation and effortlessness are shown by the [Leben CS-300X](#) and Ayon Audio Spirit V <http://highfidelity.pl/@main-923&lang=en> tube amplifiers. With a difference being, that both devices are more saturated and offer better definition, they also describe sound layers in a more precise way.

But the difference is not so big and both of these devices **are not so dynamic and do not show the impact of the sound, its attack**, as well as the Moonriver Audio amplifier. Which was really obvious with the Tsuyoshi Yamamoto Trio *Midnight Sugar*. It is an album recorded perfectly, despite the fact that with the help

technical hi-fi engineer and industrial designer gave me the opportunity and the necessary experience to develop the Moonriver Audio brand.

The Model 404 project started 4 years ago. In the past, I have designed and manufactured many amplifiers, preamplifiers and phono stages using tubes or solid state circuits for personal use or for certain customers. **The decision to start developing Moonriver 404 was taken when my ideas and my experience was mature enough to release a serious product in the market.**

**The idea was to make a pleasant, easy to use, very flexible and affordable amplifier that will give to an ordinary, inefficient speaker the sense of real life performance.** This wasn't an easy task, mainly because of the price restrictions and that the construction should be made in Europe.

The Moonriver 404 has been researched into every possible detail: **I think that the dynamic range is the most important parameter in sound reproduction systems** followed by transparency and tonality without colorations. For example, if the recording/production allows, a piano should sound as a piano, meaning the scale, the distinction between the notes, the decay of the note and the micro-contrast between a higher and a lower level. In an acoustic guitar you should be able to hear easily the difference between the nylon or metal strings as well. In an orchestra or a big band you should be able to follow any instrument separately and positioning the musicians in space.

Low level information like tape hiss in old recordings, record surface noise and small mistakes in the mix or different takes should be revealed as well without being over emphasized. Transparency means that every record or CD should sound different and this is a quality test for sources and speakers. In order to achieve this level of quality, every component of Moonriver 404 was chosen after extensive listening tests, in a level that everything is critical for the sound.

**Another study was accomplished in order to achieve sustainability, reliability and repairability.** Unlike many other amplifiers, Moonriver is made to last for many decades due to my experience in repairing and it is very easy to service. For this reason we used only through hole components because there are more options and they are more reliable. There is no *standby* function as well for reliability reasons.

Unlike the external appearance of Moonriver 404, the internal part is extremely minimalistic and it follows a hi-end approach: very short signal path, very few and high quality components in the signal path, no cheap serial regulators and power supply oriented design. **The power supply is the heart of any serious design.** We use separate supplies for each section of the amplifier starting with separate windings on the transformer. The balance pot is connected in parallel and it doesn't affect the sound at all. It can be disconnected even on the fly without noticing anything!

Despite the stereotypes about integrated circuits, **we used integrated, class AB power modules** that they are extremely flexible and sensitive to the external components and power supplies. This means that you can manipulate the sound to your taste if you know how to use them. They aren't fixed modules with a certain character.

Another benefit is that they are extremely stable, electronically and thermally, they have very short signal path, the transistor halves are laser trimmed and they include all the protections like thermal shutdown, servo DC offset, over voltage protection, short circuit protection etc. They offer a level of safety that you can't get with discrete designs.♦

| MODEL 404

## High Fidelity

of multiple microphones and a multi-track tape recorder. But with this amplifier I could clearly hear the mastery of this recording. I could hear strong, dense and heavy cymbals with it, the piano had a vibrant, dynamic and strong attack, and the double bass had a nice reverberation.

Unlike many NOS (Not OverSampling) D/A converters, the **Swedish amplifier does not warm up the sound.** So it does not roll off the treble or emphasize the upper bass. Its sound is dense, but it is the density resulting from good resolution and coherence, not from coloration. Therefore, it does not make warm recordings even warmer. Madeleine Peyroux's voice from the *Careless Love* was strong, clear, but still had a low tonal balance. Interestingly, the tonality of this CD was closer to what the Mobile Fidelity company proposed in its vinyl version.

On the other hand, **it never happened that the amplifier slimmed or sharpened sound.** It didn't slim Neil Young's voice from his new album *Colorado*, that is available in Tidal Master in MQA 24/192, but also did not brighten up the recordings of Dua Lipa and Taylor Swift, i.e. highly compressed recordings. It behaved like a pro, showing differences in their class, in the way they were prepared, and even in how the disc was produced, i.e. what they wanted to achieve with it. So it'll show you a better releases of a CD (SACD) and **you will want to have these better ones, regardless of their price.**



Fortunately, we will not have to discard the less perfect discs. After all, they are the vast majority of available ones. As I said at the beginning, **it is an amplifier that does not discriminate between recordings due to the quality of the sound.** It indicates the quality differences, but it doesn't push these differences onto the listener. It rather goes deep into the sound, making superficial problems no longer so important.

On the other hand, as I said, there is a cost to it. This is an amplifier that **does not define the lower bass very precisely.** I didn't have any problem with it, just like people didn't during the AVS, and there the amplifier drove difficult, full-range Wilson Audio loudspeakers in a large room. And this is because it is not about a lack of control, but simply the bass attack is not fully shown, the body is not quite developed. You have to keep it in mind.

The bass itself is not as massive as with other amplifiers that I mentioned earlier. The Polish distributor, **Audiofast, together with the amplifier sent the Shunyata Research Alpha NR power cable** which adds some weight to the sound (it also powered the amplifier during the AVS2019). And it is a good match, a move in the right direction. But it will not change the amplifier itself, it will not change the sound enough to talk about a completely different device. Therefore, you will not make a mistake by powering it with other cables, because no matter what

**The Model 404 is an integrated power amplifier with moderate output.** You add to it a D/A converter module with an USB input, as well as one of two phono preamplifier modules - either for MM and MC cartridges or only for MC ones. The amplifier costs 13 200 zlotys, the USB DAC module 2550 zlotys, the MM/MC preamplifier 2100 zlotys, and the MM 1280 zlotys. So far, it's nothing new, many manufacturers offer similar solutions, for example the [Accuphase](#) in their amplifiers. However, as it turns out, this device is slightly different than the others.

**External design** | The first thing that draws attention is his external design. **The front panel was stylized for the 1970s.** To find out how different interpretations of this decade can be one can put side to side devices produced by companies such as Accuphase, [Leben](#) and Moonriver Audio. **Compared to Japanese products, the amplifier from Sweden seems extremely low-key and conservative.** Which is what is has in common with the Mark Levinson MLP-2L preamplifier.

Its front wall is black and has been flush beyond the side panels outline. Knobs with this shape, it is round, but with a milled center, we know from other products, but here they take on a new sense, because they are adjacent to metal switches and orange LEDs. Small wood plates are screwed on the side, which additionally embeds this design in the 1970s. **The user has not only the volume and input selector at his disposal, but also the balance between channels and a recording loop.** The latter can be used also for incorporation into an audio system, for example, of a device correcting room acoustics. There is also a mono/stereo switch there.

**Technology** | The device is controlled by a remote control, which was not the case in the 70s, it also features a modern electronic circuit. But modern in its own way. **In short, a large power supply, with five separate circuits and separate secondary windings for the left and right channels.** The preamplifier section was made in through-hole technology, because, as we read in the Model 404's manual, it was about getting the best sound and reliability.

The power amplifier works in AB Class. **For such a large device, the output is not high, it is only 50 W per channel.** But thanks to the output limitation manufacturer didn't have to use large and expensive heat sinks, and the housing is tight, which prevents dust from getting inside. **The output stage is based on integrated circuits, not discrete transistors,** which significantly reduces manufacturing costs. But it was not only about that - there is a large group of designers and music lovers for whom such designs are almost "iconic" because of the sound they offer.

And there is something to it, because I listened to several devices of this type that made a very good impression on me. It was, for example, the [Block V 250](#) amplifier, and above all the excellent (and inexpensive) [Stein Music AMP 2 Stateline Signature Version](#). Similar solutions are also used by the 47 [Laboratory](#) and [Clone Audio](#).

I must say that I like such devices. **They are not impersonal, a specific person is responsible for them, who was not afraid to bet on what seemed right to him/her.** Press materials say that the Model 404 project was being developed for three years and it probably was. Everything seems refined, from the external design, to small things, such as the delayed start system, which protects our speakers. **The device is made in Sweden.**

| HOW DID WE LISTEN TO IT

The amplifier was tested in the "High Fidelity" reference system, where it replaced the Ayon Audio Spheris III preamplifier and Soulution 710 power amplifier. There were two signal sources – the Ayon Audio CD-35 HF Edition SACD player (№ 1/50) and

High Fidelity

you use you will not get to the moment where the sound will be too light. But if you want to, we can try to make it a little bit more weighty.

| SUMMARY

I simply loved the external design of this amplifier, i.e. its front panel, I wouldn't change a thing about it. It is balanced, calm but unambiguous. The choice of LED color only highlights these advantages. The sound of this device is, in my opinion, equally well thought out. **The amplifier sounds in a very natural way, saturated and incredibly vivid way.** It does not accentuate any of the sub-ranges, it does not color anything, and we still have an impression that it offers a saturated and "tight" sound.

The Model 404 does not show clear bodies of instruments, does not shine in terms of selectivity, nor does it render clear sound planes. But for the money the result is better than good. And everything else, i.e. what I wrote about above - is above average. **It offers a refined sound for relatively small money.**

## - Design -

**Chassis** | The chassis is made entirely of bent, thick steel sheets; **only the front is made of aluminum (and knobs).** But even it is reinforced from the back with a steel element. The use of steel results in high rigidity at a relatively low price, but also affects the formation of eddy currents in the chassis, which is largely counteracted by the use of aluminum housings. But, as usual – you get something for something else. The amplifier features four, small plastic feet. One can easily improve this element using a specialized product of one of many manufacturers.

**Features** | There are four knobs – volume control, balance control, one to activate recording loop, and an input selector. The last two are accompanied by nice orange LEDs. On the back we find RCA inputs and outputs, as well as gold-plated speaker terminals. **There are four line inputs, the fifth is connected to the recording loop.** There are also three outputs here – one for recording and two pre-outs. All RCA sockets are gold-plated. The company claims that it is a **modular amplifier, and this is because you can optionally install a DAC and a phono preamplifier modules in it.** Inputs number 1 and 4 become inputs for these modules then.

**Inside** | The modules in question are screwed inside the device - the one with a phono preamplifier is fully shielded. **The rest of the electronics are assembled on one large circuit board.** And here you can see the attention to detail that makes small audio companies successful.

Nest to the inputs one finds DIP switches, which determine whether they function as line inputs or whether they are intended for modules. The active source is selected using Omron relays. The signal then goes to the potentiometer - it's the blue Alps with a motor. The attenuated signal then goes to the preamplifier section. **This is a separate stage featuring transistors as well as nice Wima and Vishay capacitors.** The products of these two companies can be seen in the whole system, also in the power supply. Some of the capacitors are additionally dampened against vibrations with little pieces of bituminous mats glued on their tops.

Mytek Brooklyn Bridge streamer. The device was placed on the top shelf of the Finite Elemente Pagode Edition rack on its own feet and was powered using the [Hijiri SM2R "Sound Matter"](#) cable. The distributor also asked for a listening session with the Shunyata Research Alpha NR cable - a few words about this part you will find at the end of the test.

## - Sound -

Recordings used for the test (a selection)

### | Compact Disc

- Henry Purcell, *O God, the King of Glory*, Eufoda 1329, Super Bit Mapping CD (2002)
- Madeleine Peyroux, *Careless Love*, Rounder Records 9836601, CD (2004)
- Pat Metheny, *What's It All About*, Nonesuch Records/Warner Music Japan WPCR-14176, CD (2011);
- Tsuyoshi Yamamoto Trio, *Midnight Sugar*, Three Blind Mice/Impex Records IMP8308, Gold HDCD (1974/2004)

### | Tidal

- Billie Eilish, *Everything I Wanted*, Darkroom | Interscope Records/Tidal, SP, FLAC 16/44,1 (2019)
- Dua Lipa, *Don't Start Now*, Warner Music Group/Tidal, SP, FLAC 16/44,1 (2019)
- George Michael, *This Is How (We Want You To Get High)*, Virgin | EMI Records/Tidal Master, SP, MQA 24/96 (2019)
- Neil Young & Crazy Horse, *Colorado*, Reprise Records/Tidal Master, MQA 24/192 (2019)
- The Beatles, *Abbey Road*, Apple/Universal Musi/Tidal, MQA 24/96 (1969/2019)



The output stage is quite minimalistic, and this is because **the whole system has been closed in the National Semiconductor LM3886TF amplifying modules**, one per channel. This is one of the most often used integrated amplifiers in DIY designs, one can find it, for example, in Gainclone amplifiers. The modules were bolted to a small, aluminum, U-shaped element.

The power supply is quite advanced. It is **based on a large toroidal transformer with several secondary windings**. The company says there are five separate power supplies. And one more thing - on the PCB I found several empty places in the power supply and preamplifier sections. Perhaps one day we will see the *Special Edition* of this amplifier.

**Remote** | The remote fulfills its role, features volume control and input selection, there is also a *mute* button. But it is not very beautiful.

In general, it is a **solid design featuring numerous good solutions**. The amplifier is not expensive, because its designer made some technological choices and came up with some smart ways to lower the costs. **After all what matters most is the performance and it is really good.** ■

Technical specifications (according to manufacturer)

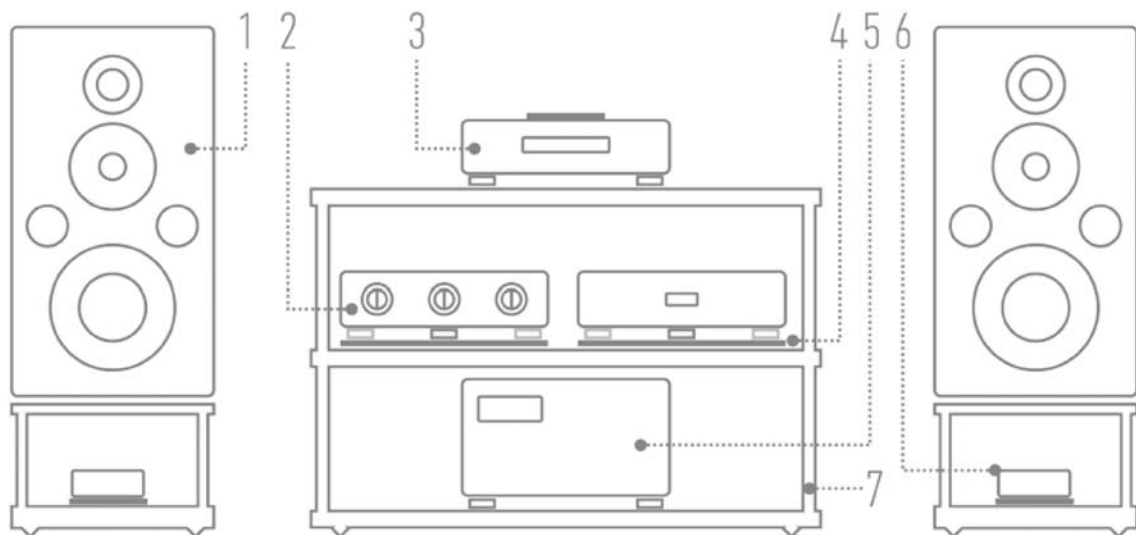
Nominal output: 2 x 50 W/8 Ω  
 Frequency range: 10 Hz - 50 kHz  
 THD: 0.05%  
 S/N: 95 dB  
 Power consumption (idle): 22 W  
 Dimensions (W x D x H): 430 x 390 x 135 mm  
 Weight: 12 kg

# Vinyl Club **AC** Records



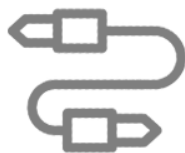
HighFidelity.pl

Reference system 2018



- 1) Loudspeakers: HARBETH M40.1 [\[REVIEW\]](#)
- 2) Line preamplifier: AYON AUDIO Spheris III Linestage [\[REVIEW\]](#)
- 3) Super Audio CD Player: AYON AUDIO CD-35 HF Edition No. 01/50 [\[REVIEW\]](#)

- 4) Stands (loudspeakers): ACOUSTIC REVIVE (custom) [|ABOUT](#)  
 5) Power amplifier: SOULUTION 710  
 6) Loudspeaker filter: SPEC REAL-SOUND PROCESSOR RSP-AZ9EX (prototype) [|REVIEW](#)  
 7) Hi-Fi rack: FINITE ELEMENTE Pagode Edition [|ABOUT](#)
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### Cables

Analog interconnect SACD Player - Line preamplifier: SILTECH Triple Crown (1 m) [|ABOUT](#)  
 Analog interconnect Line preamplifier - Power amplifier: ACOUSTIC REVIVE RCA-1.0 Absolute-FM (1 m) [|REVIEW](#)  
 Speaker cable: SILTECH Triple Crown (2.5 m) [|ABOUT](#)

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### AC Power

Power cable | Mains Power Distribution Block - SACD Player: SILTECH Triple Crown Power (2 m) [|ARTICLE](#)  
 Power cable | Mains Power Distribution Block - Line preamplifier - ACOUSTIC REVIVE Power Reference Triple-C (2 m) [|REVIEW](#)  
 Power cable | Mains Power Distribution Block - Power amplifier - ACROLINK Mexcel 7N-PC9500 [|ARTICLE](#)  
 Power cable | Power Receptacle - Mains Power Distribution Block: ACROLINK Mexcel 7N-PC9500 (2 m) [|ARTICLE](#)  
 Power Receptacle: Acoustic Revive RTP-4eu ULTIMATE [|REVIEW](#)  
 Anti-vibration platform under Acoustic Revive RTP-4eu ULTIMATE: Asura QUALITY RECOVERY SYSTEM Level 1 [|REVIEW](#)  
 Power Supply Conditioner: Acoustic Revive RPC-1 [|REVIEW](#)  
 Power Supply Conditioner: Acoustic Revive RAS-14 Triple-C [|REVIEW](#)  
 Passive filter EMI/RFI: VERICTUM Block [|REVIEW](#)

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### Anti-vibration

Speaker stands: ACOUSTIC REVIVE (custom)  
 Hi-Fi rack: FINITE ELEMENTE Pagode Edition [|ABOUT](#)  
 Anti-vibration platforms: ACOUSTIC REVIVE RAF-48H [|ARTICLE](#)

#### Isolators:

- PRO AUDIO BONO Ceramic 7SN [|REVIEW](#)
  - FRANC AUDIO ACCESSORIES Ceramic Classic
  - HARMONIX TU-666M "BeauTone" MILLION MAESTRO 20th Anniversary Edition [|REVIEW](#)
- 



### Analogue

#### Phono preamplifier:

- GRANDINOTE Celio Mk IV [|REVIEW](#)
- RCM AUDIO Sensor Prelude IC [|REVIEW](#)

#### Phono cartridges:

- DENON DL-103 | DENON DL-103 SA [|REVIEW](#) and [|REVIEW](#)
- MIYAJIMA LABORATORY Madake [|REVIEW](#)
- MIYAJIMA LABORATORY Zero [|REVIEW](#)
- MIYAJIMA LABORATORY Kansui [|REVIEW](#)

Tonearm (12"): Reed 3P [|REVIEW](#)

Clamp: PATHE WINGS Titanium PW-Ti 770 | Limited Edition

## Record mats:

- HARMONIX TU-800EX
- PATHE WINGS



## Headphones

Headphone amplifier: AYON AUDIO HA-3 [\[REVIEW\]](#)

## Headphones:

- HiFiMAN HE-1000 v2 [\[REVIEW\]](#)
- Audeze LCD-3 [\[REVIEW\]](#)
- Sennheiser HD800
- AKG K701 [\[REVIEW\]](#)
- Beyerdynamic DT-990 Pro (old version) [\[REVIEW\]](#)

Headphone Cables: Forza AudioWorks NOIR HYBRID HPC

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