

## Exceptionally Quiet Background extremely refined musical sound



Phono stage

**Aavik**

# R-180

Article | Roger Chung



My introduction to the Danish brand Aavik started with a multi-functional integrated amplifier called U-300 about five years ago. It not only included a Class D power amplifier, but also a digital (USB/SPDIF) and analog (RIAA phono stage) input. I tested the U-300 for a review published in this magazine. I was pleasantly surprised and deeply impressed with the experience of the vinyl record I played. The background was super silent and there was an incredibly rich layered music. If you love music on vinyl, it was a must-have.

In the article it said: "... It is lively and dynamic, full of energy, without performative overlaying emotive effects. The sound is very natural, and the high to low frequencies are well balanced throughout the entire frequency range. This RIAA audio line is very well made."

The review was published in the 350 issue. At that time, I thought, "it would be really something if there were a separate phono stage considering the integrated amplifier boasted such excellently performing RIAA circuits."

### "It's finally here"

Today, U-300 is no longer in production and has been replaced by the 380 series.

The U-380 still comes with digital and analog inputs, supports more digital formats, gain of the phono amplifier have also increased, and all circuits have been adjusted. Its biggest change has been the addition of more Tesla coils and related signal noise suppression technologies.

At the end of last year, I saw Aavik's new product advertised online and noticed it included a phono amplifier - I could not wait to get my hands on it. Finally, I got notice from our editorial department that I could review the Aavik R-180.

It's finally here!

### Aavik's 180/280/580 series all launched at the same time

Aavik has launched not just one but three phono stages! Checking the webpage, the manufacturer has recently released

three series of audio equipment, namely, the 180, 280, 580 series. Each series includes an **integrated amplifier (I)**, a DAC decoder (D), a streaming player (S) and a phono stage (R). The letters in brackets reflect the product code. If it is an **integrated amplifier**, there are three models: I-180, I-280, and I-580; three phono stages: R-180, R-280, and R-580. The larger the number, the higher the level, so each series comprises four models that means all in all an astounding total of 12 products!

According to the promotional material, the various audio models can be stacked on top of each other, because the size of the casings, the buttons, and display screens have all the exact same dimensions. So, I initially thought that they would all be the same model of different series. When I took a closer look, I noticed a large knob on the right side of one of these models. Aha! This is the (I) integrated amplifier, and the only one that can be clearly identified.

All members of the various series, whether phono stage, decoder or streaming player, do not even have a model number on the panel. You have to stretch your neck to see the model name printed on the back of the individual units. Otherwise, it is only when you switch on and see Phono in big letters on the panel that you would know it is the phono stage. According to Aavik, this reflects the Scandinavian design principle that is based on the principle of simplicity.

## First-class product lines and workmanship

Absolutely outstanding! There are three models of the phono stage -- R-180, R-280, R-580 -- representing three different series as described above. The R-580 is the flagship model and naturally the most expensive one. The agent sent the basic model, the R-180, to this magazine for the review.

I set it up and switched it on. While it was powering up, I carefully checked each part and then touched each corner. The workmanship is impressive and each unit is perfectly manufactured. With a width of only 380mm, the casing is slightly smaller than normal for such equipment. However, the large screen on the front panel takes up 70% of the area. The red oversized LED display of letters and numbers is clearly visible at over 10 feet for anyone with regular vision. It is also suitable for people with "presbyopia" like me.

## The signal and noise suppression system makes all the difference

So is it the case that the difference between the top model and basic model is functionality and greater gains? Not in the slightest! Checking the specifications published on the Internet, the phono stages across all three different series have a basic data structure, including impedance setting, gain, and distortion rate, etc.

Basically, across all models of the Aavik 180/280/580 series, whether it is amplifiers, phono stages, etc., the biggest and most important difference lies in the noise reduction technology. All models use Active Tesla Coils, Active Square Tesla Coils and Dither Circuitry, which were created by Ansuz Acoustics (an affiliate manufacturer to Aavik, also co-founded by Michael Borresen, who also founded Borresen Acoustics to develop and produce High-End speakers). The difference between the three

breakthrough technologies lies in the number of coils.



According to the manufacturer, the more coils are used, the more significant is the noise suppression, and the smoother the signal transmission, which results in quieter backgrounds, more clarity and a more vibrant sound in the audio replay. What then is the difference in quantity? Give me the numbers! Here is a simple comparison of the R-180 with the R-580:

R-180~Active Tesla Coils: 36  
 R-580~Active Tesla Coils: 108  
 R-180~Active Square Tesla Coils: 104  
 R-580~Active Square Tesla Coils: 248  
 R-180~Dither Circuitry: 5  
 R-580~Dither Circuitry: 11

Once you lift the casing, you can see the densely packed coils and parts on the vertically inserted circuit board in the middle which is where you find the mystery of the Aavik's phono stage. In fact, the sheer quantity of the respective electronic components that are used for the R-180 is all but not basic. Having said that, in the old U-300 integrator, I had already noticed the use of similar noise suppression technology, but the scale is indeed very different compared to today's models.

smaller than normal for such equipment. However, the large screen on the front panel takes up 70% of the area. The red oversized LED display of letters and numbers is clearly visible at over 10 feet for anyone with regular vision. It is also suitable for people with "presbyopia" like me.

## Ansuz uses the same technology in their power cables and in other audio products

I mentioned Ansuz Acoustics above. So, I went to the company's website to learn more about it.

Even after reading up on this noise suppression technology for a while, I was still none the wiser and no further forward in understanding! All I know is that Ansuz's proprietarily developed power cords, network cables, network splitters, and even their 5-pin DIN connectors which are specially made for Naim systems, all use the same or even more complex technology. The unique winding system of the coils form mutual repulsion and create different levels of noise suppression.

Darkz Resonance Control is another technology that comes from Ansuz Acoustics. It suppresses mechanical resonance, using a titanium alloy surface. Darkz Resonance Control accessories are employed as foot stands, to hold up both equipment and wiring. In Aavik products, Darkz Resonance Control technology is used for both the top and bottom plates, which can very effectively suppress mechanical vibration caused by spontaneous or external transmission emanating from the cabinet. This is particularly beneficial for sensitive, extremely fine voltage MC signal sources.

## Can only be connected to MC phono pickups, fixed gain 65dB

In terms of circuitry layout, the R-180 is connected in parallel with multiple pairs of ultra-low noise bipolar transistors and has a floating ground, balanced voltage amplification structure. Based on the original characteristics of the MC dynamic phono stage, the gain increases to 65dB@1kHz.

The maximum voltage input of R-180 is 5mVrms, and the impedance load is set from 50Ω-10kΩ, with 18 steps in between (50, 75, 100, 200, 300...10kΩ). Note: According to the description on Aavik webpage, the R-180 gain is 62dB and the impedance is 50Ω-5kΩ, which is different from the user guide that I downloaded. According to my actual test results, the trial unit has a choice of 10kΩ; as for the gain, it matches the Air Tight PC-1 Supreme. Based on listening experience, it must be more than 62dB, leading me to think 65dB is more correct.

In addition, note that R-180 "cannot" be connected to MM moving magnet pickups.

## Since the Phono stage has such a good sound, it is worth matching it with a suitable pickup

Perhaps, Aavik's idea is not to make the user system too complicated and apply a simple, Scandinavian design concept. It's not easy to find a full-feature, good-sounding, and easy-to-use phono stage on the market. The R-180 has a gain of 65dB which, as I just mentioned, is fixed and there is no increase or

decrease adjustment. The manufacturer claims that it is suitable for matching some MC dynamic pickups with "low to medium" output. I believe that with an output voltage of about 0.4mV (1kHz), the R-180 will have an ideal dynamic contrast and a high-level balanced tonality. Actually, most of today's advanced MC pickup designs, are based on similar output data, and fall into the "mainstream" specification. When you listen to a demonstration of Aavik's phono stage, you will be impressed by its sound, but considering that the pickup used in a home system is not in the above range, then you're wasting the potential of Aavik's phono stage. It is worth getting a compatible pickup for it.

## Easy to operate

The magazine boasts a large studio so I chose STST Motus II DQ + Moersch DP-8 (red dot) + Air Tight PC-1 Supreme Disk Arm Head analog combination for the source, Solution 325 + 311 front and rear stages driving the reference speaker B&W 802D3.

The R-180 has only one set of input and one set of output (perhaps, this is one of the reasons for the good audio), which are RCA. I connected the GND and turned on the main power supply. Returning to the front panel, I gently pressed the first Standby button. The system automatically enters Mute. To un-Mute, you need to press the middle button. If you want to select the impedance, press the lowest Menu button, the display then will show Input load and the Standby and Mute buttons will become the "up/down" setting keys. This is very easy to operate.

In addition, the R-180 comes with a small remote control, so you can configure everything from the comfort of your chair (including Mute of course). Another advantage of using the remote control is that you can change the impedance setting while listening from a distance. For example, what is the difference in the sound between 100Ω and 200Ω? You'll know when you listen to it. You don't need to run up to your system. One remote is all you need.

## Signal-to-noise ratio: 94dB

As I have done in recent months, I put on the "Izu no Odoriko" LP first, and chose 100Ω as the impedance load. I listened to check whether the basic settings were correct, and then I checked the bass. You can get a general sense once the stylus drops. During the playback, I raised the stylus without any adjustment to the volume. I pressed my ear close to each unit of the speaker. After listening to the left and then right, I found that the quietness of the R-180 was far beyond my expectation. I increased the volume a little bit, and I heard only a very faint hissing sound from the tweeter. As for humming and rumbling in the treble, there was definitely none of that.







Aavik lists the S/N ratio of the phono stage as a signal-to-noise ratio of 94dB@1kHz. Forget the vacuum tube circuit of a phono stage, even for those with a high-end transistor design, as they may not necessarily have the relevant data nor a substantively quiet performance. Fans who have had experience playing with MC dynamic pickups will understand that this is an invaluable design achievement.

## Listen to live recordings

The R-180's high frequency is open and clear without any humming or other disturbing noises which is highly relevant to this topic. Alan Tam's "Galactic Years" (Slovak Radio Concert Hall recording) is an easy piece to play but to be played well, the accompanying instruments must be clear enough, creating the experience of a soundstage that has an authentic backdrop behind it to evoke that feeling of a live atmosphere. I have listened to this record on several system setups and very few have ever met my standards.

I listened to LP2 Side A, which has four lyrical signature golden tunes in a row. The accompanying arrangement uses pure orchestral music with a focus on the string section. The R-180's sound performance has been incomparably crisp, profound and moving. The high-frequency details have been very subtle and the emphasis on each note has been clear, with no haze or distractions.

In terms of human voices, it provides a full and powerful sound with an astounding clarity. The voices sound almost touchable, creating a sense of a live performing atmosphere where every tiny movement, and exaggeration such as air flow and fragmentary noise will be included. The live pickup level has been pushed to a very high level. It is no accident that the R-180 has the capability to reproduce all this. The designer must have a wealth of knowledge in electronic audio engineering and a huge amount of supporting R&D to accomplish all this.

Playing your live records on the R-180 will transport you straight into this sensation. There is very little timbre diffusion, which means that the sound is closer to the actual performance.

## Sufficient gain, strong dynamics with a Wow-effect

With a suitable pickup, I used the PC-1 Supreme this time, with 0.4mV/1kHz output voltage, directly connected to the R-180 and played some live recordings. The dynamics are exceptionally strong, which proves that the gain of 65dB is really more than sufficient. When I listened to a number of rollicking music passages, "The Power of the Orchestra" really got me excited. I started Night On Bald Mountain, boldly increased the volume of the Solution preamp, and the R-180 demonstrated its unparalleled analytical power, the background remained dark and quiet, highlighting the many details. With the strong dynamic contrast of the brass and percussion music and the explosive tension and power of the music from low to high, I was caught off guard. It was like listening to a completely brand new recording. After a turntable + R-180, I understood what was lacking in my enjoyment of recordings in the past. I am now really happy with the dynamics. At the same time, its high-mid frequency playback has such fineness of timbre, mellow and smooth, the musical sense is rich, and the bass is also colourful.

## Listening to Chinese, English and Japanese mixed albums from the 1980s

Over time, I have collected a lot of miscellaneous albums once popular in the 1980s. I recently re-discovered them and carefully cleaned them one by one. I took the chance to listen to them using the R-180 to see if I could recapture any of those nostalgic "ghetto punk" vibes. The first album was CBS/ SONY "Super Stars Super Hits Vol.4", Michael Jackson sang Beat It, Bonnie Tyler sang Total Eclipse of the Heart. And... Just... Wow! My initial impression of the R-180, being sophisticated and refined was simply blown away by the bold and unrestrained style of the pop. The beat was strong and it filled the entire studio with its musical energy.

Now it was Polydor's "Polystar 8" turn to take the stage. This album contains mostly English songs, with two Cantonese and one Japanese. These songs are absolutely outstanding. First, I listened to "The Evil Girl" (Miyuki Nakajima). The R-180 maintains its clear rhythmic character. It plays this familiar female voice with a sound that is natural and smooth, and with a style that remains authentic. I feel that this kind of recording doesn't need to change and needs no new interpretation. The R-180 has performed so well in reproducing a casual and spontaneous atmosphere that moves the listeners heart. The easy-going and free-wheeling atmosphere it reproduces is truly immersive.

Another evocative tune on the record, the song I've Never Been To Me by Charlene has a wonderful vocal orientation which is natural and high-fidelity. The melody is beautiful, and the R-180 tastefully reproduces the seductive feminine voice, so soft and gentle, fully expressing the romantic feelings and charming appeal of the song.

Conclusion: There is no doubt that the R-180 is another masterpiece of Aavik. The R-180 phono stage boasts an intricate and sophisticated design, and its quiet, refined, clear sound, high analytical power and strong dynamics are extremely satisfying. I would love to review their top model, the R-580, to see if they can

achieve something even better. General Agent: Peugeot Audio  
Co., Ltd.

Retail price: HK\$52,000

