

Apertura Edena Evolution, purer sound quality, timbre beauty and real performance texture - Prolo Video Network —

Apertura Edena Evolution, 更純的音質音色美感與真實的演奏質感-普洛影音網

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Apertura Edena Evolution, pure sound quality, tonal beauty and real playing texture

Apertura is a French speaker factory, and you will definitely see them at every Munich audio exhibition. His speakers are not large, but the special thing is that as long as you use a Ribbon Tweeter, there will always be a piece of black felt next to it (traditional tweeters do not have it). Moreover, his speaker woofer is almost always far from the floor, which makes everyone think that his design is different, and it is true. By the way, why is the woofer so far from the floor? Because it is necessary to reduce the interference of reflected sound on the floor.



The appearance of Edena Evolution looks very elegant, with two channels, two drivers, and the cabinet is not rectangular, minimizing parallelism and reducing the impact of the cabinet standing wave.

Speaker design is a big name:

The founder of Apertura is Christian Yvon. In 1978, before he has founded the Apertura brand, he has built his own Prologue Research & Development studio, which did not produce speakers, but conducted various research related to speakers. During this time, he did many acoustic experiments on speaker design himself, including his DRIM (Dual Resonant Intermodulation Minimum) crossover design. Beginning in 1979, he has developed the Dialogue, Apologue, Analogue and Epilogue speakers for Goldmund. Later, he has also worked on design for Focal, Sonus Faber, Point Source, Auditor, Capriccio Continuo (Joseph Szall), Einstein and many other companies, and can be said to be a big name in the speaker design industry.



The appearance of the Edena Evolution is different from ordinary speakers, with an aluminium belt tweeter on the front, and a 22cm diameter mid-bass driver, and a black felt next to the tweeter, which is used to reduce the sound diffraction of the tweeter. The position of the mid-bass driver is very high to reduce the interference caused by floor reflections.

In 1982, Christian Yvon has decided to establish his own speaker brand called Apertura, which implied that he would start a new concept with the goal of creating speakers with the lowest sound contamination, the lowest phase distortion, the lowest pulse delay, and the least cabinet resonance. The first pair of speakers was the Reference launched in 1983, and many models have been released since then, which will be omitted here. During this period, Christian Yvon worked with a speaker manufacturer. In 2009, due to disagreements between the two parties, he stopped working with the speaker factory and began to cooperate with Eric Poyer in 2010 to establish another company, Stentor, with Christian Yvon in charge of design and Eric Poyer in charge of production (he has more than 20 years of manufacturing experience), and continued to produce Apertura speakers. Between 2010 and 2013, five speakers were launched: Armonia, Onira, Ariana, Edena and Enigma. In 2014, Kalya was launched. Currently, there are eight speakers in Apertura's product line, the top is the Enigma MK2, followed by the Adamante, then the Edena Evolution, then the Forte, and then the Armonia Evolution, Stela, Sensa and Swing. The other four models are no longer in production: Kalya, Edena, Armonia, and Ariana MK2. In 2018, to celebrate its 35th anniversary, Apertura has launched the Edena Evolution, which differs from the previous generation Edena in terms of the tweeter and crossover, and of course, the price is more expensive.

The Edena Evolution cabinet is made of multi-layer MDF bonding and is irregular, with arcs on the left and right sides, oblique front and back, and only parallel up and down. The main reason for such a difficult box is to reduce the strength of the standing wave in the box.



Reduce diffraction at first glance at the Edena Evolution, I believe many people may think that there may be a driver hidden inside the black felt next to the aluminium tweeter. In fact, no, the felt is used to reduce the diffraction of the sound wave of the tweeter of the aluminium strip. Speaker designers must be aware of the diffraction of sound waves generated by speaker drivers, but if you use ordinary tweeters, most of them do not handle it, Christian Yvon is a part of those. Among the speakers using aluminium belt tweeters, I only saw Apertura's speakers handling it in this way, which shows that they are very concerned about subtle effects. In addition to reducing diffraction, this felt can also improve offaxis response and high-frequency diffusion, which is Christian Yvon proud invention. The monomer has excellent performance The woofer of the Edena Evolution is 22 cms in diameter, from Seas, Norway, and locks on a metal frame. The diaphragm uses the so-called "Isotactic Matrix" weaving method, which is a diaphragm woven with Polypropylene material, which has the advantages of being lighter, stiffer, and has better damping characteristics. In order to be able to move with a long stroke, the woofer adopts a long voice coil design. What is more special is that its voice coil barrel is made of titanium alloy and has a diameter of 130mm, which means that the voice coil barrel can support a large area of the diaphragm and reduce deformation during movement. Edena Evolution's aluminium ribbon tweeter is from Fountek in Jiaxing, China, which is a new generation of aluminium ribbon tweeter, and the diaphragm is a planar metallized polymer diaphragm (a layer of extremely thin aluminium coated on a polymer substrate), driven by neodymium magnets. You may not know that the mainland has more than 80% of the rare earths needed to make neodymium magnets in the world, so it has now become a major supplier of neodymium magnets, and a large proportion of the Ribbon tweeters seen on the market come from the mainland. Its diaphragm sound area is twice that of the previous generation Edena, and it does not need to be over-driven to generate sufficient sound pressure, resulting in reduced distortion and improved dynamic range and resolution.



The Edena Evolution has a bass reflex hole on the back panel, as well as a set of speaker wire terminals.

DRIM crossover : talking about the new crossover, it is even more complicated, although it only has a twoway crossover, but it uses his so-called DRIM structure, which has a triple attenuation slope and can cut off the frequency at 90 degrees, and can also control phase distortion. The capacitors used in the crossover are selected high-end products from companies such as Jantzen, Mundorf, LCR, Intertechnik, etc., and the choice of capacitors to use is only decided when pairing and measuring. The inductor is Jantzen, which is really high-end. What is even more admirable is that each set of crossovers must be adjusted with the set of treble and mid-bass driver measurements. Instead of using a direct scaffolding, the crossover is wired by hand on a 140 µm thick copper foil. When placing the crossover elements, special care is also taken not to generate magnetic interference. The speaker wire terminals are made of pure copper and silver plating.

In addition to the foot base, the bottom of the Edena Evolution has a square cone in the center, which is used for mechanical grounding.



Irregular cabinet

The case of the Edena Evolution is not made in France, but on the continent. It is undeniable that the mainland has a large production scale and dares to invest in manufacturing tools, especially in terms of surface paint, which is difficult for European and American manufacturers to achieve. Due to its cost advantage and really good quality, most of the speaker cabinets in Europe and the United States are actually manufactured in mainland China and then shipped back to Europe and the United States for assembly. Irregular cases like the Edena Evolution, if made in France, will definitely be expensive. If you look closely at the Edena Evolution cabinet, the left and right sides are curved, and the front and back are oblique, only parallel up and down. On the one hand, this irregular method is to break the parallel wall inside the box and reduce the strength of the standing wave in the box. On the other hand, it is equivalent to making an inward Toe In angle in advance, of course, if you don't like the Toe In angle, you can also make the speaker position. The walls of the box are laminated with thin MDF boards in multiple layers, which can reduce the vibration of the box itself. And in more important parts (such as panels), the thickness will be twice that of other places. There are three types of damping materials to meet different vibration suppression needs.

Fifth pin mechanical grounding

There is also a base at the bottom of the Edena Evolution, which has four feet. However, if you open the bottom, you can see that there is an independent square cone on the central axis of gravity to generate mechanical grounding, so that the vibration of the box can be transmitted to the ground more effectively (could it be that Goldmund's concept of mechanical grounding comes from Christian Yvon?).) 。 By the way, Edena Evolution also has a grille cover, which uses five-point magnet adsorption to make it invisible from the outside.



AUDIONET

This is Edena Evolution's proud DRIM crossover network architecture, which only does two-way crossover, which can reduce the phase distortion that may be caused by one more channel, and also improve the balance of the music. The components used in the interior are all famous manufacturers.

The second sound channel has its advantages up to this point, you can feel that although Apertura Edena Evolution does not have a luxurious and spectacular appearance, its various designs are actually in place. For example, the two-way design is used to simplify the crossover and make the connection between treble and mid-bass simpler. For example, the box is designed to be irregular to reduce the strength of the standing wave in the box. Also, set the mid-bass driver at a very high position to prevent floor reflections from affecting the clarity of the midrange and low frequencies. In addition, it is also designed with mechanical grounding, which is rare for speakers. These designs give people confidence in Edena Evolution. If the two-way speaker is made into a small bookshelf type, it will not be difficult. However, if it is made into a large floor-to-ceiling style, it will be difficult. Why? Generally, in the floor-standing design, the size of the woofer must be larger than the bookshelf design, and if the size of the mid-bass is enlarged, the extension at the upper end of the midrange will not be as good as that of the smaller mid-bass driver, so you must look for a mid-bass driver with excellent extension at both the high and low ends.

The mid-bass driver mainly sounds the crossover point of the Edena Evolution is set at 2800Hz, and it is 8 inches (22 cm) large, so it is not easy for an 8-inch mid-bass driver to extend up to 2800Hz, let alone down to 35Hz. Therefore, the performance of the Edena Evolution mid-bass driver must be very good, and the above design advantages can be established, but obviously this Seas driver is up to the task. What can you hear at 2800Hz? When listening to Edena Evolution, I listened to it on this mid-bass driver, and most of the instruments and vocals were sung from it, but the aluminium belt treble could not hear the instruments and vocals, only hissing. Does the hissing sound matter? Very important! Because it is responsible for the reproduction of overtones of musical instruments and vocals, if

overtones are missing, the timbre of the instruments and vocals will be wrong, and the lust, sweetness, moisture, silkiness, etc. that we like to listen to will disappear. You may ask, isn't the average tweeter also able to achieve crossover of 2800Hz and extend to 30kHz? Of course, diamond tweeters or ceramic tweeters can even reach 60kHz, and I believe Christian Yvon's consideration of the tweeter is focused on "margin". The sound area of this aluminium ribbon tweeter is several times that of ordinary convex tweeters, and it can produce enough instrumental and vocal overtones more loosely, making the timbre more correct rather than a stronger treble sound.

The Emerson Quartet is a high-level string quartet, and their Mendelssohn string quartet not only plays beautifully, but also has excellent recording effects.



The high frequency band is not aggressive

The venue to listen Edena Evolution is in the open space of my house, with a Spectral DMC 30SS preamp, a Pass X350.5 rear, and a Weiss DAC 502 4ch. I have heard Apertura's speakers many times at the Munich Audio Exhibition, and I don't remember any unpleasant sounds. This is what I said at the 2024 Munich Audio Exhibition: "The sound performance of the Apertura Enigma MK II, which is so large as a 50-watt rear booster, is not bad, it should be said to be quite good." Being able to say such an evaluation at an audio exhibition should not be bad for this pair of speakers. The design of the Edena Evolution is one less woofer than the Enigma MK II, and the sound should be purer. Sure enough, when I listened to Edena Evolution at home, my first impression was that the high frequency band was not aggressive at all, but was clear and soft, which broke many people's incorrect impression of the prominent high-pitched sound of aluminium bands. Secondly, I found that the performance of the piano is particularly good to me, the pianos presented by Edena Evolution are not only very solid, but also have a strong wood flavour, and you can tell that it is the sound played by a real piano, not made by an electronic keyboard. In addition, I also found that the Edena Evolution's piano overtones are rich, the treble keys are sweet, the bass keys extend naturally, and have a loose listening feel without being stiff.

The piano is real and beautiful

For example, when I listened to Chopin's "Cello Sonata" played by Maria João Pires, although the piano was the accompaniment, the beautiful sound and real texture of the keys were not inferior to the cello. When listening to Mozart's "Piano Concerto No. 21" (English Chamber Orchestra) played by Murray Perahia, the piano has a particularly strong woody flavour, which makes people feel that the piano is very real. When listening to Barenboim play Liszt's "Consolations", the piano is also very beautiful and beautiful, as if you can feel the texture of the fingers in contact with the keys, and the sounds of the

piano seem to roll out, which is both round and solid. As for the beauty of the sound, it is not to mention that it is created by the rich overtones. Next, when it comes to the cello performance of Edena Evolution, I often say that after listening to the piano, violin, cello, and string quartet, you can get a general idea of the expressive ability of this audio equipment, because these three instruments plus the string quartet are the foundation of the audio equipment, which is the foundation. If these instruments don't sound good, not only classical music, but even pop music and jazz won't sound good, because the sound of the instruments is distorted from the very beginning. **The cello is** charming. Among these instruments, the cello is more difficult to perform than the piano and violin, and the nasal sound and loose feeling are difficult to express, and many people's cellos sound lifeless, lacking brilliance, and dull. How does Edena Evolution's cello perform? As mentioned earlier, Chopin's "Cello Sonata", Edena Evolution's cello is very lively, loose, and the nasal sound is in place. When listening to the "Muse" album performed by Sheku Kanneh-Mason and Isata, Edena Evolution's cello is very lippy, loose, and you can hear the subtle elasticity of the strings, and the subtle noise produced by the bowstring transition is clear and rich, adding to the authenticity of the cello.

As for the piano at this time, it is also very beautiful, both sweet and rounded. At this point, I can say that the cello performance of the Edena Evolution is very real and very pleasant, which should also be due to the fact that the Edena Evolution only uses a mid-bass driver to reproduce the cello, and there is no connection between the midrange driver and the bass driver, and there is no problem of crossover phase.

Warm, transparent and sweet

How does the Edena Evolution's violin perform? Let's talk about the overall string group first! When Christian Li performed Vivaldi's "Four Seasons", sometimes I felt that the string group was a bit hard and too bright. However, this time I listened to Edena Evolution, and found that this recording became warm, sweet, and restrained, but the resolution did not decrease. Obviously, the aluminium ribbon treble used in the Edena Evolution is loose, so it doesn't make the treble sound tight or even aggressive. To be honest, the string ensemble should be warm, transparent and sweet, if it sounds aggressive, it should be a student orchestra, the sound quality of the instruments is not good, the playing skills are jerky, and it is impossible for a regular string orchestra to play this kind of sound. Therefore, Edena Evolution's string ensemble performed really well. Next, I chose Bomsori Waxman "Carmen Fantasia". The violin can also be a bit catchy on some systems, so I deliberately chose this one to test Edena Evolution. Vomit! Edena Evolution's violin is also beautiful, not irritating, not aggressive, sweet and a little restrained, and has a strong wood flavour, you can hear the softness and elasticity of the strings. It seems that Christian Yvon has real "kung fu".

The piano cavity is rich in resonance. Then listen to Michael Rabin's performance of Paganini's "24 Beautiful Songs". There is only one violin, but Edena Evolution shows the various sound effects of the violin without a doubt, the piano sound has a woody flavour, the cavity resonance is very rich, and there are a lot of subtle bow rubbing noises, but it does not sound noisy, but adds authenticity. Of course, the most beautiful thing is the sound quality and timbre of the violin itself. After listening to the whole picture, my ears are not tired at all, and I even leave a sweet taste in my ears. This kind of violin performance is nothing more than a million-level speaker!

Then there is Perlman's Dvořák "Romance" (Seiji Ozawa conducts the Boston Symphony Orchestra), the soft, restrained and sweet violin solo, and the orchestral accompaniment are really delicate, silky

and sweet. Also, the low frequencies of the orchestra sound very elastic, soft, and can sink naturally, almost like seeing clouds outside the window on a plane. I know this description is abstract, but there are no more specific words.

Round and fleshy

How do the vocals perform in Edena Evolution? When I listened to the "Duet of Love" from Offenbach's "Hoffmann's Story" sung by Edita Gruberova and Claudia Eder, not only did the two singers' voices be beautiful, sweet, mellow, and fleshy, but the background accompaniment was very distinct in terms of harmony and instrumental performance, especially the woodwind sound!

Listen to Marina Rebeka's "Ave Maria D. 839", her voice is really charming, and the phrase "the vocals are the most beautiful instruments" is very appropriate here. Twoway speakers have their advantages in many ways, and vocals are one of them. Edena Evolution's 22cm diameter driver has been able to fully present the entire vocal range, and there is no interference from the bass driver again, making her voice appearing more complete and beautiful with a sticky feel; how does Edena Evolution's string quartet perform? When I have listened to the Kodály Quartet's performance of Haydn's String Quartet No. At 62, the four stringed instruments were able to present a beautiful harmony with a bit of stickiness. And every playing texture of the instrument is very real, the cavity resonance is very rich, and the violin does not tighten when pulled to the high register, and can still maintain a loose and sweet sound.

Listening to Mendelssohn's "String Quartet No. 2" performed by the Emerson Quartet, to be honest, the beautiful listening sensation can be described as a silky and subtle vibration with a texture of string rubbing. From such subtle and vivid performance, we can also get a glimpse of the Edena Evolution's treble and mid-bass drivers that are very flexible, and any subtle musical signal can be reproduced. Especially when listening at low volumes, the details of Edena Evolution are not degraded at all, which is very suitable for audio fans who are afraid of disturbing their neighbours.

The momentum is limited How is the orchestral performance of Edena Evolution? I would like to say that I apologize here, but compared to the large system I am used to, Edena Evolution's orchestral momentum and sense of scale are limited. For example, when I listened to Bernstein's Mahler's "Symphony No. 2" conducted by the New York Philharmonic, if the screen size of my sound system is a 100-inch TV, then the "sound field picture" of Edena Evolution is about the size of a 65-inch TV. In terms of the dynamic range and explosive power of the overall music, Edena Evolution is also limited and cannot emit shocking energy.

However, Edena Evolution has no problem with the layering, resolution, and transient response of the inner voice. In addition, listening to Shostakovich's "Symphony No. 4" performed by the Philadelphia Orchestra conducted by Zheng Mingxun, Edena Evolution can achieve "no chaos", but the momentum and low-frequency energy are limited. Perhaps, for ordinary people, Edena Evolution's momentum and low-frequency energy may be enough.

Bounce alive

What about Edena Evolution singing pop and jazz? It's bouncing, alive, and real. For example, when I listen to Dhafer Youssef's "Sevdah", the soft double bass texture is very real, and the drum kit is also very real, especially the beauty of the subtle vibration of the cymbals is charming. When listening to Domonic Miller's "When I Close My Eyes", because the original low frequencies of the recording are very full, very low, but not violent, Edena Evolution's low-frequency performance is very charming, soft Q drills down, and has a tail. The other instruments are also soft and real, and this kind of performance sounds very comfortable. If you're not looking for pop music, Edena Evolution has you covered. Of course, if you don't listen to non-heavy metals, then Edena Evolution is not for you.

After I listen to this pair of Edena Evolution, it will be exhibited at the TAA Grand Hyatt Hotel Audio Exhibition in August, Room 1125 of Yuncheng. After the audio exhibition, I heard that it will be sent to Taichung Shangfeng Audio, if you live in Taichung, you might as well go to Shangfeng Audio to listen to it.

The quality is beautiful, the tone is good, and the texture is real

After listening to AperturaEdena Evolution, I felt that the French have a different taste in sound than the Germans, Americans, and even the British. Taking Edena Evolution as an example, it pays great attention to the overall balance and detail reproduction of the music, as well as the sound quality and timbre beauty. From the perspective of Edena Evolution's two-way design, the designer wanted lower distortion, purer sound quality, tonal beauty, and more realistic playing texture. If you are buying a speaker that focuses on these elements, the Apertura Edena Evolution should be a good fit for you.

Specifications: Apertura Edena Evolution

Product Type 2-channel floor speaker

Launched in 2018

Uses drivers 8x12mm Ribbon tweeter 220mm mid-bass driver
frequency response 35Hz-30kHz

Crossover point 2,800Hz

Sensitivity 89dB (2.83V/m)

Average impedance 8 ohms

Weight 22 kg

Dimensions (WHD) 235x.1110x.317mm

Reference price 498,000 yuan (including tripod)

Import general agent Yuncheng (02-27397889).

Reference equipment:

Digital source: Weiss DAC 502 4ch.

Preamp: Spectral DMC 30SS

Rear: Pass X350.5

Focus & Recommendations:

1. The cabinet adopts an irregular shape.
2. Two-way design to reduce crossover phase distortion.
3. Unique DRIM structure crossover.
4. The sound is balanced and mellow.

Recommendation: A neutral amplifier above 100 watts is the most suitable.

Illustration audio 20 essentials:

Sound quality: 5
timbre: 5
High band sweetness: 5
Mid-band fullness: 5
Low frequency band solidity: 5
Sound field width and depth: 5
Density and weight of sound: 4
Transparency: 5
Layering: 5
Positioning: 5
Musical Image power and body sense: 5
Resolution: 5
Sense of speed and transient response: 5
Contrast of strength & weakness
and dynamic contrast: 4
Ratio of instrument to vocal volume: 5
Instrument & Vocal Texture Airiness: 5
Detail Reproduction: 5
Space: 5
Overall Balance: 5

Ten assessments of instrumental vocals:

Violin line: Slender, neutral, strong 1
Female voice body: slender, neutral, plump 3
Female voice maturity: young, neutral, mature?
Male voice form: refined, neutral, huge 2
Male voice maturity: young, neutral, mature 3
Cello form: refined, neutral, huge 1
Kick drum shape: tight, neutral, fluffy1
Bass shape: tight, neutral, massive1
Piano bass key string vibration: refreshing, neutral,
voluminous1
Orchestral scale: refreshing, neutral, massive2

Audio Five Elements Personality Chart:

Metal: 3
Wood: 3
Water: 3
Fire: 4
Earth: 4

Metal: Lively and hearty outside. Wood: Warm and restrained and friendly. Water: soft, neutral, warm. Fire: Quick and passionate impact. Earth: thick, full and stable.

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