

## Recommended Miyajima Lab Audio Systems

Miyajima Lab is a small audio manufacturer with a small team that produces a range of audio products, from cartridges to speakers. It started as an audio shop in 1980, during the booming era of audio. At first, there were many manufacturers that we traded with. Among them, we started selling vacuum tube single amplifiers as original products, which attracted attention, and 10 years later, all products became original products and were sold under the name Miyajima Lab.

At that time, we manufactured a small-sized speaker called the 409 system. This system customized the Altec coaxial 409 unit, and achieved high sound quality by adjusting the edges and changing the capacitor to a special network. Combined with its affordable price, it sold like hotcakes from the first day of its release. We recommended that this speaker be used in combination with our 6B4G or VT25 single amplifier. These products are a combination of a high-efficiency speaker and a pure triode non-feedback single amplifier, which is simple but best.

However, as time went on and mail order became mainstream, the 409 system gradually became less noticeable in the market because the advice given in the store did not reach the customers and the recommended combination with the amplifier was not made. Although we aimed to maximize the sound quality by constructing the entire audio system with a unified design, it was difficult to convey this.

Here I will announce what I imagine. It is an example, and not accurate. I tried to give a score to the sound quality. The best is 5 points and the worst is 1 point. In this case, let's say the above 6B4G single amplifier was 4 points and the 409 system was 4 points. If you connect it, the answer sound quality is 4 points. So if you change the amplifier to one with a score of 2, the sound quality will be the lowest 2 points. Sound quality is always the score of the lowest one. Customers do not know the score of the product. They do not know whether the sound quality of 2 points is because of the amplifier or the speaker. So even if you replace the speaker thinking that it will be a good score, it will remain 2 points. Audio equipment is not only amplifiers and speakers, but also players, transformers, cartridges, and many other things are connected. Do you think it is possible to make it a good sound of 4 points or 5 points?

Therefore, Miyajima Lab decided to create all audio sets with a unified approach, aiming for five points. The small system is low-priced and prioritizes cost performance, and although it deviates from the original sound reproduction, it produces sound quality that music lovers will love. The medium-sized system is a two-way system selected for its highest quality. It is a good size for the average home and attempts to reproduce the original sound. The large system is too large for home use. It is a system for super enthusiasts, adding a large horn from the WE555 receiver to the medium-sized system. The WE555 receiver is too attractive and difficult to combine, and is currently on hiatus because it is difficult to obtain and very expensive.

Research on audio has been done not only on modern technology but also going back 100 years. I would like to tell you that most of the audio technology was established 70 to 90 years ago. At that time, audio developed at the same time as music culture, and as a top industry around the world, it attracted many talented minds. Audio technology had reached its peak. There are many technologies from that era that are very useful references. Since then, while commercialization has progressed, there has been no significant progress. Today, the audio industry has declined, and cheap, bad quality, and high-end products that focus on appearance have increased, and it is no longer a workplace where talented engineers gather. However, the development of electronic components in recent years has been remarkable, and the progress of digitalization and globalization has also been very useful for our audio.

Looking back, we can see that old things are not always inferior, and new things are not always superior. I believe that by learning and implementing the good parts of these things, we can create an audio system that allows you to enjoy moving music. The speakers that Miyajima Lab chose for the low-frequency range were manufactured 80 years ago, and are limited in number and quality, but since they are there, we have no choice but to use them. Currently, there is nothing that surpasses them, and nothing that comes close.

In 2024, Miyajima Lab's medium-sized system was completed as a wonderful stereo system by replacing the EV horn with a zelkova wood horn. All products, which combine mono cartridges, stereo cartridges, MC amplifiers, preamplifiers, power amplifiers, and speakers, contain many ideas for reproducing the original sound. By using these products as a set, you can achieve the sound that Miyajima Lab is looking for. We have been researching and experimenting for over 40 years in search of this sound. And the playback sources are diverse, including LP records, optical lines, USB, and CDs. The reproduction of the original sound here means reproducing the sound quality as it was recorded on the record or CD. The accuracy is determined physically and electrically, and finally by listening to it.

The mid-size system aims to pursue the original sound. This set will always turn your room into a hall of famous performances. It reproduces the correct sound regardless of the genre of music. It is a mistake to listen to a sound different from the original sound. It is not a matter of cheating the sound quality such as good sound for jazz or good sound for classical music.

The sound quality is that of a trumpet blowing forward, the fresh sound of a cymbal, the diverse sound quality expression of a violin, the vivid vocals, the crisp, changing sound of a drum, a clear bass scale, no sense of limitations in low or high tones, the sound coming out of the speakers spreading throughout the room and giving the feeling of clear overtones like a live performance, etc. We believe that by producing a sound as close as possible to the sound played by the performer, the meaning and emotion of the music can be conveyed more.

The quality of the software is also important in pursuing the original sound. Even if you can reproduce the correct sound, it will not work well if the record, CD, or video is not recorded accurately. However, by choosing famous songs and performances, you can listen to most of them with a sound close to that of a live performance. Even if the recording is not good, you can listen to it with a slightly better sound. You can also play digitally recorded TV and computer audio with good sound. Currently, I have dozens of mono and stereo records and 5 to 6 TV program recordings with sound quality that sounds like a live performance, and they have become my rare software.

There are certain requirements to realize this stereo system. The stereo cartridge must be of the cross-ring type, the amplifier must be of the vacuum tube type with a wide bandwidth of 10Hz to 200,000Hz or more, no transformers must be used in the audio circuit, the speakers must be of the baffle type, and all electrical and physical errors that have been used up until now must be improved. Other special items have been created and put into practice.

The completed medium-sized system is called the Prominent Set. I will explain the Prominent Set in a very simple way. All the products in the set are Miyajima Lab products.

First of all, we recommend a heavy wooden case with a Garrard 301 and a used Saeku Arm 308. If you choose something else, it is better to use a product with a powerful motor and a simple arm with a moderate weight. 90% of the sound quality of record playback is determined by the cartridge, so it is important to choose an arm and motor to maximize the cartridge's capabilities. Stereo cartridges use a cross ring system, generating electricity with the center of the left and right coils as the fulcrum, faithfully converting the sound grooves into sound. I don't think there is any other structure that can faithfully convert sound. Mono cartridges use a vertical concentration system, and the needle tip does not move vertically and only responds to the horizontal grooves of the mono. This product allows you to instantly experience the quality of mono records. These two cartridges are MC type products that Miyajima Lab previously patented until a few years ago. The way this player system is installed is important, and it makes a big difference in the quality of the sound and the signal-to-noise ratio. We will explain in detail when you purchase.

There are two types of MC head amplifiers: the vacuum tube MC-1 and MC-2. Generally, transistor amplifiers or transformers have been used for MC boost, but recently transformers have become mainstream. However, transformers lack energy and frequency band. That is why Miyajima Lab uses vacuum tubes. The vacuum tube MC-1 and MC-2 are amplified by an amplifier, so they have a large amount of energy and a wide frequency response, so there are no problems.

The preamplifier is a vacuum tube type, and uses Wo-1. This preamplifier uses power tubes in the phono equalizer circuit, which has low impedance and large allowable input. The phono equalizer circuit, which requires amplification of more than 2000 times, is amplified without distortion, and the sound is created without relying on NFB. No tone control is required. This amplifier does not have a general resistor type volume, and the volume is adjusted by changing the amplification of the amplifier from 0 to 30 times. Although the circuit and production are very advanced, we were able to eliminate the volume, which is a major cause of deterioration. This is the world's first volume-less amplifier using vacuum tubes. The sound is energetic and has increased transparency. This amplifier has low impedance overall, and is high voltage and large current for a preamplifier. A power transformer of about 30W is generally used, but a 160W transformer is used.

The power amplifier is Model 2020, which is of course an OTL vacuum tube amplifier. Unlike general power amplifiers, it does not use an output transformer. We have been making it for over 20 years, and it is safe and has a long life. Its features are wide bandwidth and high speed without any coloration of sound quality, and there is no doubt that it is the best amplifier in theory. Model 2020 is designed to be close to Class A with a focus on sound quality and a long life. Transistor amplifiers have a slow reaction speed and low voltage, so they are not suitable for high-quality audio amplifiers. Vacuum tube amplifiers that use transformers for output are insufficient as amplifiers for reproducing original sound. Output transformers have problems with frequency characteristics and phase changes, which impair sound quality.

The speakers are Prominent. They are not box-shaped but have a back-opening baffle system, and the woofer is a field-type 30cm full-range speaker from about 80 years ago. The tweeter is equipped with an EV driver mounted on a Miyajima Lab-made zelkova horn, and uses a special Miyajima Lab-made network and power supply that have been listened to and improved dozens of times. The reason for using an old woofer is that modern speakers currently on the market have heavy diaphragms and low efficiency, so there are no usable ones. Most modern speaker systems are box-shaped, but the resonance inside the box is large and it is impossible to reproduce a variety of low-pitched sounds. The back-opening baffle system has difficulty extending the low-pitched sounds, but by using an excitation-type full-range speaker with a light cone paper, we were able to extend the low-pitched sounds. The baffle type does not have back pressure or resonance like the box type, so you can enjoy the sound of the instrument accurately. If you like music, you will easily understand its appeal.

That is a simple explanation. If I were to explain everything in detail, it would fill a book. If you have any questions, I will explain in detail. We also welcome people who are not confident in audio but who love music. People who love music are sensitive to sound quality and are fun to talk to. No knowledge of audio is necessary.

This article is the result of a single thought I have expressed throughout my life dedicated to audio. I would be extremely happy if audio stores around the world could introduce Miyajima Laboratory's audio system sets to music lovers in their own countries.

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