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Another loudspeaker! Crosszone's Improved External Localization "CZ-8A" × Heisei Gamera

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Various state-of-the-art technologies are emerging in the audio field even in the modern age. There are many popular headphone-related technological innovations. Regarding playback by headphones, forward orientation and out-of-head orientation which are unchanged from speaker playback are pursued, and innovative products and technologies are appearing from various manufacturers. Sony's "360 Reality Audio" and "Tempest 3D Audio" and Creative's "Super X-Fi" have realized fairly realistic out-of-head localization using a HRTF (head transfer function) model that is optimized for individuals by taking and analyzing a user's face/ear with a smartphone.

JVC's XP-EXT1 also uses proprietary EXOFIELD to optimize HRTF modeling. This unit not only supports stereo playback but also supports surround sound standards such as movies, allowing you to enjoy stereoscopic surround playback compatible with Dolby Atmos and DTS:X. This method uses the built-in microphone inside the headphones to make measurements. In "spatial audio" of "AirPods MAX" of Apple, surround playback is realized by utilizing the motion sensor built in the headphones.

These effects are tremendous. Though there are differences according to the systems of each company, surround playback at a level different from that of the virtual surround headphone technology until now is certainly possible. Even the author who actually had a surround environment with speakers of 6.2.4ch configuration felt almost inferior to speaker reproduction if they used these technologies. A crucial difference is that speakers can be viewed together by more than one person, but headphone playback is inevitably dedicated to individual viewing. Though it is desirable for full-fledged surround playback, it became an excellent age for those who gave up surround playback because of the difficulty of placing many speakers in their rooms, and the trouble of the surroundings when the volume is raised, etc.

These technologies, due to the sophistication of digital audio technology and digital signal processing, require terminals such as smartphones for signal processing and individual optimization, or have been commercialized as active speakers with built-in functions in headphones.

Contrary to this, one manufacturer pursues out-of-head localization in headphones with entirely acoustic technology. It is the Crosszone. Their flagship CZ-1 model (around ¥250,000 MSRP) attracted many audiences, and the second "CZ-10" realized a fair price of about ¥100,000. The third product is CZ-8A (about ¥190,000 MSRP), which we will introduce in this review.



CZ-8A。 The basic form is close to CZ-10

External Localization with Acoustic Technology

CZ-8A also has the same product concept as the previous models. This is to pursue the reproduction of natural sounds and a natural wear. The same applies to the use of an acoustic approach to localization, which is close to speaker reproduction. As a basic mechanism, the left and right housings contain a total of three drivers: a main channel playback screwdriver (for treble and bass) and a channel playback screwdriver on the opposite side.

Although not limited to speaker reproduction, the human ear is listening to the sounds emitted by an object in both ears to recognize the position of the sound. The sound of the object on the right first reaches the ear, and then turns a little farther to reach the left ear. In addition, volume is also lowered by the buzzing attenuation in the far-round direction. This means that the position of the sound can be determined by the difference in time and volume when it reaches both ears. In addition, there are effects of reflection due to differences in the shape of the face, head, and ear. By recognizing these differences, human brain can grasp up to three-dimensional sound source positions such as front and rear, height, etc. rather than right and left. HRTF (head-related transfer functions) is a numerical representation of the mechanism by which people perceive the directions of sounds.

Until now, HRTF model has been a typical human head, and thus there has been a variation in effectiveness among individuals. Now, we have optimized HRTF modeling for individuals by measuring, etc., and have greatly improved its effectiveness.

In order to reproduce this, CZ-8A reproduces the sound that is close to HRTF model. This is done by playing back the sounds from the opposite channel that comes in detouring from the main channel. The playback of the sound of the main channel is basically similar to that of a common headphone, but the sound from the other side passes through a dedicated duct to achieve a reduction in volume and a delay in arrival time.

This method is almost the same as in the CZ-1, CZ-10. While Crosszone's symbolic duct is usually visible outside the housing as a design, this is modified in the CZ-8A to become a built-in type. It's exterior becomes comparable to ordinary headphones.



Left is CZ-8A, right-hand CZ-10. The basic form is similar, but the difference is that there are no gold-colored pipe-shaped parts on the housing.



Drivers used in CZ-8A. All diaphragms are beryllium coated. The bass driver of the main channel is 40mm, which is close to the configuration of CZ-1.

In addition to incorporating many drivers, the construction inside the housing is very complicated because the HRTF model is realized by an acoustic method. In addition to having a path of sound using ducts, etc., in order to reproduce the sound of a room with good quality like stereo reproduction, sound absorbing materials are used by combining multiple materials such as silk in Okaya City, where Crosszone's factory is located, and fine tuning for natural sound quality. Asia Optical, the parent company also contributed to the production of precision equipment and its elaborate design.

Pursuit of external localization approaching state-of-the-art digital headphone surround sound

"A" at the end of CZ-8A means Advance. That is to say, the main development theme was to make further progress in the external localization effect. However, HRTF modelling needs to be made even more precise, as many modern technologies are making full use of digital technology and performing the optimization of HRTF models to individuals. What we worked on is the reproduction of a HRTF that covers sound ranges above 3kHz. When HRTF modeling of individuals is measured and compared, the difference by individuals becomes larger in the high frequency range exceeding 3kHz. This is due to the greater influence of different ear shapes. Therefore, HRTF modelling in CZ-1 and CZ-10 is restricted to the sound range below 3kHz. Therefore, there is no dispersion in the difference of the audibility by the user.

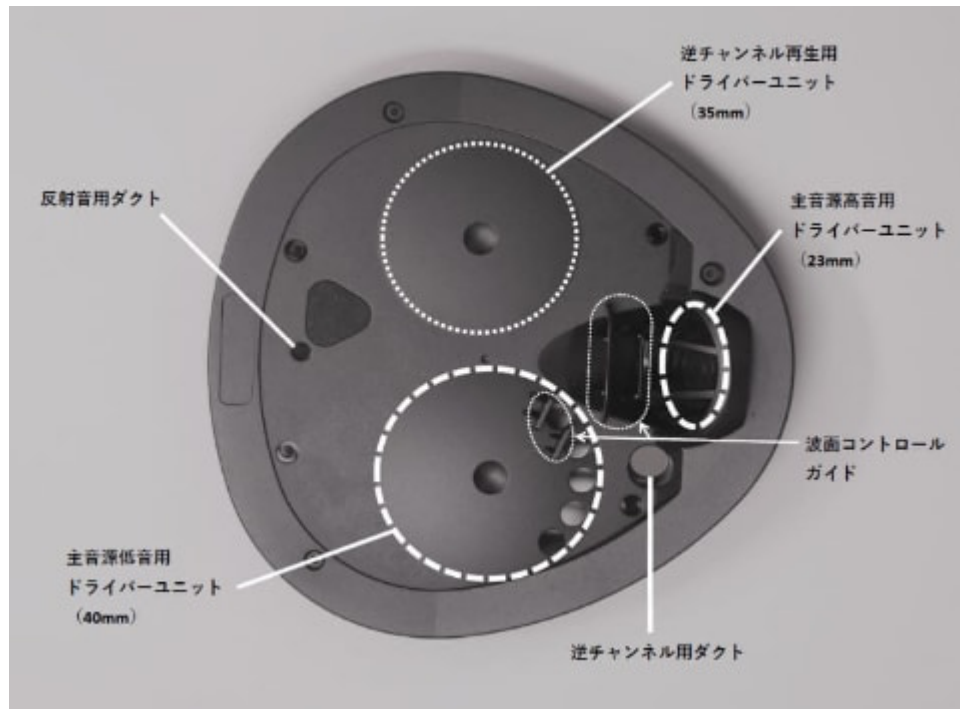
CZ-8A is improved here. It is certainly effective to try it by electrically correcting the sound when being reproduced to a sound range of 3kHz or more. However, even if HRTF is expanded to more than 3kHz, the effectiveness will vary depending on the user. The issue of optimization of HRTF to individuals needs to be solved. Can acoustic methods be used to optimize for individuals? Repeated experiments and surveys were performed.

Incidentally, there is no such variation when listening to the sound in the speaker. There was a hint for the solution here. In the case of speaker playback, there is a considerable distance to the ear, but there is little distance in the case of headphone playback. The true nature of this difference is the wavefront. Both speakers and headphones produce a spherical wave from the sound emitted by a high-pitched driver. It is an image of a sphere of ripples when a stone is thrown into the water surface. The larger the ripple, the wider the diameter. When a part of the ripple is cut off, it becomes close to a plane wave. The human ear is listening to a portion of it. That is, if the sound close to the plane wave reaches the ear even in headphone playback, it should be heard just like the speaker.

The basic concept of the CZ series is the reproduction of natural sounds similar to speaker playback. Pushing this forward was the key to the right answer. How can a spherical wave be brought closer to a plane wave at a very short distance? Experiments to generate plane waves have long been carried out, and there are various research and experimental data. As a result of further studies, the answer comes down to acoustic lens.

Acoustic lenses are used to improve the directivity of high-frequency units. If you look at the old speakers, you might remember that there were various shaped parts on the front of the treble unit. Instead of having the sound coming out of the unit reach the ear straight, we control the wave front of the sound by creating a passageway. In fact, this acoustic lens is often used with modern speakers. This is because acoustic lenses can now be designed appropriately through the evolution of acoustic analysis and simulation technologies. Today, some speakers have not only improved directivity, but also acoustic lenses with effects such as reduced distortion and improved frequency characteristics.

In CZ-8A, it was realized by attaching acoustic lenses (wave front control guide) of the shapes like standing up to a part of the driver. Instead of allowing the sound of the driver to reach the ear as it is, this mechanism causes the sound of the part close to the ear to turn far. This makes the sound of the part close to the ear and the sound of the far part reach at the same time, and it becomes a way to hear it close to the plane wave. The trial manufacture was repeated with the aim of this, and it enabled the regeneration with little dispersion of the individual, though it was a HRTF model which reproduced the sound over 3kHz. This is the biggest difference in CZ-8A.



Inside the CZ-8A housing. The basic unit layout is almost the same as before, but a shock-like wavefront control guide is newly installed at the driver of the main channel.



Inside the CZ-8A housing. Slightly difficult to see, but there is a small bump near the lower part of the silver screwdriver.

It's an unexpectedly simple idea when you know the results, but it's easy to imagine that it took a lot of time to make happen. Of course, that's not all. For the generation of HRTF model which covers the sound range over 3kHz, all the network designs have been changed, and the tuning is more thorough than the tuning for the high sound quality.

In CZ-8A, the main part of the housing is made of resin, while the circular part of the housing is made of aluminum. It acts as an electromagnetic shield. It is said that radio waves, noise, and other factors have eliminated the impact on network circuits, etc. This further enhances the reproducibility of the minute level signal. This was probably the reason why they built in the symbolic duct. Everything is thoughtfully designed.

Modified ear-pad shape with good fit and enhancement of natural wear.

Looking at CZ-8A, the characteristic headband shapes and other features remain intact. This is a system using a torsion spring, because the side pressure does not change regardless of the length of the slider. Therefore, anyone can obtain a favorable wearing feeling regardless of the size of the head. In

addition, CZ-8A features a 3D geometry that improves the fit and holding characteristics of the ear pads. Looking closely at it, the front side is thin and the rear side is thick. Not only does it match the shape of the head, but it seems that the thickened part is softened.

Therefore, it has a good fit. While relatively heavy at 435g, you don't actually feel the heaviness while you are wearing it. It is also effective to increase the rigidity of the headband and the torsion spring mechanism. This is because it does not distort, and does not result in fatigue because it does not create uneasiness and can fit perfectly to the head.

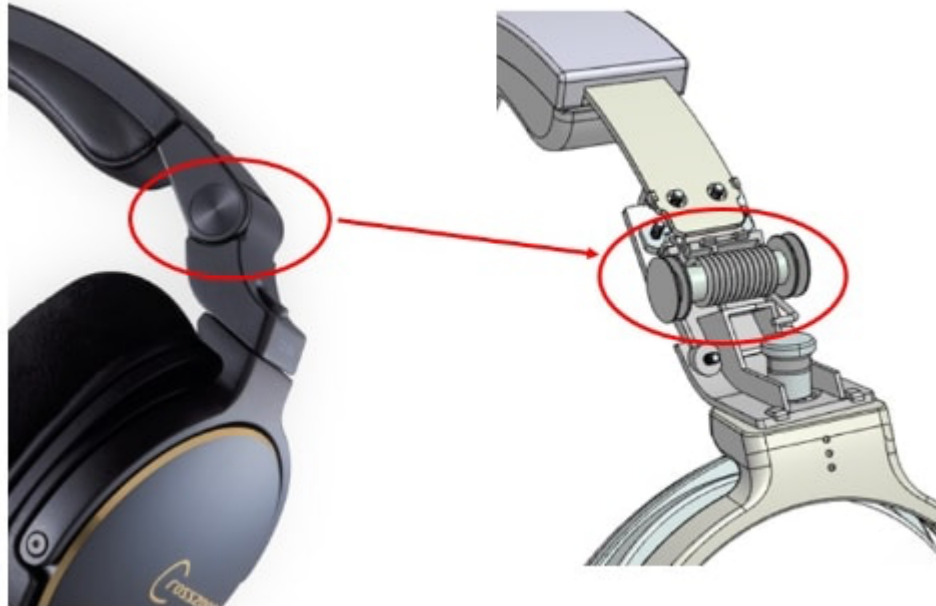


Illustration of moving parts of CZ-8A. A torsion spring mechanism is built in to realize smooth movement of each part and with high rigidity.



CZ-8A housing (side-view). The picture shows that the thickness on the left side is increased.

Observation with Japan's famous trilogy "Heisei Gamera"

This time, "Heisei Gamera". As a big monster of special photography, the character is the same as Gojira, and Mazutsu Higuchi participates as a special skills supervisor, leading to "Sin Gojira" (supervisor and special skills supervisor) and "Sin Ultraman" (supervisor). Even in Godzilla, there are not a few descriptions that realistically consider the ecology of monsters as living things, but in the Heisei Gamera series, fantastic elements such as the setting as a weapon created by ancient civilizations and legends in myths are incorporated, and the existence of Gamera is depicted in depth, and the interpretation of the law of attacks by the Self-Defense Forces depicts monsters from a realistic

point of view. On the other hand, he has also inherited the traditional character of acting as a guardian deity of the earth and reviving with prayers by children, and he is loved by many fans as a monster movie.

Last year, on the 55th anniversary of the Gamera, the Dolby Cinema version of the Gamera Monster Aerial Determination was projected in November, and this year, the Gamera 2 Legion and Gamera 3 Wake were also projected on the Dolby Cinema version. These three works are 4K HDR(Dolby Vision recording), and UHD BD edition is also marketed in Dolby Atmos speech. This viewing is also a UHD BD version.

I listened to the Original Soundtrack of the Heisei Gamera Trilogy. Though it has not been relaunched since CD BOX in 1999, it was re-packaged with UHQ CD specifications after digital remastering. You can enjoy plenty of music from Yuki Otani, who is known not only for games, but also for anime and games.

I listened to from the soundtrack soon. CD BOX is ripped in advance and Mac mini/Audirivana Plus is used as the playing device, and USB DAC is "Hugo2". This is a system for watching headphones at home. "Opening-Predicting" and "Main Title" of "Gamera 1" can be said to be a theme song of Heisei Gamera in which a song floats at the head immediately if it is a fan. Though it was a work in 1995, the sound quality was good thanks to the remastering. A thick melody was reproduced with dynamic sound.

The author has usually used CZ-10 and is accustomed to the out-of-head localization of Crosszones. However, the impact when listening to CZ-8A for the first time is not forgotten. "It's just like a speaker!"

Specifically, a CZ-10 is an image that sounds in a headphone-specific head (headphone localization) and extends out of the head, and a vocal that is centered, such as a vocal image that localizes slightly ahead. However, CZ-10 feels that sound localization is not in or out of the head, but positioned at the front.

Of course, the loudspeaker is in a fairly close position. The distance is so long as you play back music while operating the computer with the active speakers on both sides of the notebook computer. There are few images where the sound source is very close to the ear. The sound is quite different from the sound of conventional headphones, and looking for an image close to it means the loudspeaker is the closest.

The stereo image is rich and close. When listening to an orchestral gamera accompaniment, it's an image of listening around the conductor stand rather than sitting and listening to it in the concert hall seat. The proximity of a string, wind, or percussion instrument is identifiable. This is probably the best feature of this headphone. Since the distance between the sound source and the ear is close, sound attenuation and external noise are less affected, and it is better to listen clearly to fine sounds. However, because common headphones are head-localized, rather than listening to the sound of an orchestra in front of the eye, a realistic sound is felt to float in the head.

If it is CZ-8A, there is a sound screen in front of you as if you were listening to it on the loudspeaker, and you feel that music is being projected there. This is an image in which the good parts of the speakers and headphones are integrated, and it is a completely new feeling that is different from both.

When you listen to the "myth" of the blast slump, which is the theme song, a vocal comes to mind in front of you. The orientation is indeed clear. The localization of sound is fairly clear, and CZ-10 feels that sound is riding in a non-unnatural area, and the whole music feels that a reverberation feeling like listening in a rich-sounding hall is added. CZ-8A also have a reverberant feeling on their vocals, etc., but they can hardly notice it if they continue to listen only at the beginning.

When you step into a resonant place, such as an art museum or gymnasium, the sound of the place overlaps, whether it's the sound of your feet or your own voice. Too much of the sound makes it hard to hear the conversation, but in less than a few minutes, your ears (or your brain) get used to it and become able to converse normally. That's what it feels like.

When you exchange headphones and hear them, you feel that there is a little more reverberation component. However, the sound is not too undue, and it doesn't look strange because of the natural sound, and you get accustomed to the sound immediately. It is a sense when you enter a musical hall with good sound. Once you become familiar with CZ-8A, you'll hear some common headphones that sound less dry.

The same is true of Wolfes' Sora, the theme song of Gamera 2: The Legion Strikes. The simple knitting of guitar, bass and drum, and vocals makes it clear not only for vocals, but also for the orientation of each instrument. Therefore, the positional relationship of each instrument is clearly understood, and the feeling that the vocals in the center come out in front is well understood. The rust part contains the chorus of the children, but the feeling of the children gathering together and singing along with the vocals is beautifully expressed. The sound field in headphones tends to be a subjective image rather than a visual one, whereas CZ-8A is a visual sound field as it looks at.

The sound of the theater trailer is also recorded in Santora of Gamela 2. It feels nostalgic as if I were listening to a drama from a long time ago. As it is the sound of a movie, the voices of the actors are vivid, and the theatre companion unfolds widely in the back. This feeling is just the sound of a movie being displayed on a screen. Moreover, it is as close as possible to the front row. The trailer collects the delicious part of the main story, so the real scene comes back to my head and I really enjoy it.

"Gamera 3: Friendly Awareness" is at the heart of the story, the sister and brother who lost their parents in the fight between Gamera and Gaos. The perspectives of those who hate Gamera, who were the guardian deities of the earth and protectors of people, are depicted in a rich manner. That's why the tune is serious. Historically, the majestic and grave main theme has also been arranged into a seriously mysterious song while suppressing its powerfulness. Such a restrained performance is also very expressive.

The sound quality is neutral, the bass sound is fairly powerful, and the lowest range extension is excellent, but not noticeable. The mid-and high-frequency ranges are rich in information and clear in color. It is a straight tone that can be said to be colorless and transparent. This is the same for CZ-10, etc. CZ-8A has a 40mm aperture for the main channel driver, so the bass performance is excellent, but this is the only difference. CZ-10 sounds more powerful than the bass, but CZ-8A sound has the same level of bass power, and the energy feeling of the mid-and high-frequency ranges is also enhanced, so the difference in the impression is that the sound is balanced flat.

As it is a monster movie, some songs can be said to be themes of not only Gamera but also Gaos, Legion, and England, but naturally it is a song that incorporates each character. It is easy to understand, because it is legion, and it has the property of communicating with group bodies using radio waves, it can be seen that the electronic sound like radio noise is slightly overlapped even in music. When you watch only the movie main part, it is very difficult to notice it, and you can reproduce such fine parts in detail, so you can enjoy the attractiveness of the Suntra machine firmly.

"The theme song for ""Gamera 3"" is ""Tell me again"" by Juliana Shano." A moist ballad of female vocals, the voice appears vividly before your eyes. The orientation is clear even in the high voice of a woman. It extends cleanly to the high frequencies, and it is rich in information, but it never makes a crisp sound, and it is pleasant to listen to. The basic sound quality tendency is high fidelity with a lot of information, and it is a sound with a slightly different listening comfort than the monitor tone. Natural sound quality that is long listening and hard to fatigue, despite its superior capabilities. As for the height of this completeness, it feels a mature finish with a series of layers.

Finally watch the Heisei Gamela three-part crop

This is the projection of the three parts of UHD BD plate. This work has also been made Dolby Atmos in terms of sound, and has become very high-quality. As mentioned at the beginning of the article, the surround sound of these headphones is now making incomparable progress. On the other hand, CZ-8A is a headphone that only supports stereo sound. Nevertheless, if you listen closely to the speakers, you may want to try what happens when you listen to the surround sound of a movie. Panasonic's DP-UB9000 is used for playback equipment. A HDMI is connected to the Yamaha AV preamp and CX-A5200, and you are listening to the headphone out.



Large Gamella Monster Aeronautical Decision

"First, from ""The Great Gamera Monster Air Decisive Battle,"" we looked around the Gamera landing from the Gaos capture operation at the Fukuoka Dome." The sound at this time is the downmix 2-channel playback of the straight decode. When there is an image, the viewing angle is concentrated on the screen, so it approaches the feeling that sound is still coming out of the screen. It is only headphones that can hear fine sounds such as footsteps and slight sounds that were not noticed when playing back through speakers.

The sound field is fairly well reproduced in the space ahead, and it has a sense of envelopment. The rotating sound of the propeller can be heard from the top of the helicopter, such as the scene of a helicopter following a galley in flight, but it is also a two-channel downmix, so it doesn't feel very high. The guided Gaos descends to the Fukuoka Dome, and the SDF's scene of capturing an anesthetic gun also has sounds arranged in all directions, but it doesn't perceive much sound penetration into the rear. The sound is similar to downmix playback using two speakers in front. Nevertheless, there is no feeling that the sound is sounding in the head, even though the image is in front of the eye, and there is no feeling of discomfort that you feel accustomed to speaker playback, and it is really preferable that the sound is sounded in a way that combines picture sound.

When the Gamera emerges, it first goes to the Fukuoka Dome while destroying the harbor area, but the explosion sound in this situation and the sounding sound of the unique high sound can also be enjoyed with a realistic feel. And the bass of the film also sounds powerful enough. The actual strength of this area is too high.

As an aside, at first I intended to use music movies and live movies instead of "Gamera", but I gave up because there was no work that was just right. Monster and action movies like Gamera are also powerful enough to enjoy, but music movies like "Bohemian Rhapsody" and concerts and live movies seem to be more fun in the sense that they display their real identity. As live footage can be heard from the front unless it is a special performance, downmix playback doesn't feel insufficient.



Gamera 2 region arrival

This was followed by "Gamera 2 Legions." This is where you listen with CX-A5200 "Surround: AI" activated. At this time, the headphone output is Yamaha's original headphone surround sound. I'm trying it around here in CZ-10, but it's more compatible than I expected. Out-of-head localization is a virtual surround finish, but it is an acoustic finish, and it doesn't always try to reproduce the surround sound field (just the sound field of stereo playback by speakers). Therefore, even if an electrically surrounded signal is played back, the sound will not be excessive or unnatural.

CZ-8A was also able to enjoy the surround sound reproduction because the sound image of the sound localized in the forward direction became clearer. The enveloping feeling becomes rich, and it feels that it is surrounded by sound including not only the front but also the rear. The surround signal is increasing the amount of reverberation, but it is by no means excessive, and it does not make the dialogue, sound effects, or music blurry.

However, the sound in the back is as close to the sounding atmosphere and the sound can be localized to the side. It feels a little higher, but the sound orientation is vague. Comparing the surround on/off settings, it is certain that the surround off setting will give the overall sound clearer, so it would be better to use the surround sound mode with emphasis on the surround feeling or the naturalness of the sound field ahead.

In the "Gamera 2", countless swarms of Legion strike the Gamera, but the scene in which a flying legion swarm flies will fly overhead with a sense of heightness rather than flying back and forth and left and right by Dolby Atmos. I think some people are difficult to hear just the unpleasant sound that is close to the feathering sound of insects. The feeling of flying around is fairly well reproduced. The feeling of turning backward is too much. It was better to get a little higher feeling, but this may also be due to the surround sound at the AV amplifier side.

In terms of sound, it sounds very carefully, and the scale of the sound field is large even with surround sound, so it is quite easy to hear. The ultimate force of the Ultimate Plasma in the final confrontation with the giant regions is also tight. On the contrary, the giant has been able to retain it once and survive, and it has a clear and tremendous sense of presence to the finely tuned sound that it is trying to surpass. The size of the scale of the monster motion picture was fully experienced.



Gamera 3 Friendly Awakening

The last "Gamera 3 Wakeup" replaced the regeneration equipment with a PS5. PS5 planned to experiment with 3D audio "Tempest 3D Audio" for headphones. PS5 (normal version) is compatible with UHD BD reproduction, and the Dolby Atmos sound can also be played in UHD BD reproduction, so I thought it would be great if the Dolby Atmos sound could be played as a three-dimensional surround in "Tempest 3D audio." Unfortunately, "Tempest 3D audio" is used only for gaming sound and not for UHD BD reproduction, etc. On this point, I would expect an upgrade in future versions.

Therefore, the necessity of playing back games on PS5 has disappeared, but it is certainly a popular gaming machine that many people can enjoy playing UHD BD closely, so let's introduce it together with an impression of playing UHD BD on PS5.

As a sound, it seems to be played by downmixing Atmos sound, but it has a richer feeling of surroundings than I expected. There is a sense that the sound in the same direction as the surround sound of the AV amplifier can be heard from the four sides, and the feeling of height is also considerable. If not "Tempest 3D audio," techniques like "Dolby Atmos for Headphone" may be used.

The scene in which Gamera, who appeared after Gaus, destroyed the city of Shibuya, was truly three-dimensional reproduction of the voices of the fleeing crowd and the sounds of the debris pouring down, and enjoyed the sound field as it was Atmos. Compared with ordinary headphones, the advantages are that the space is rich and the scale of the sound field is large, and that sound localized in the center in front of a dialogue etc. is more clearly localized. In the case of common headphones, the reproduction of a fairly three-dimensional space is remarkable, but the space itself is rather narrow. In addition, not only the feeling of height but also the localization of the sound in the rear can be felt firmly in CZ-8A. Strongly speaking, the sound localized directly behind it becomes vague. In addition, the space spreading is a little narrower behind, and if it is correct that the space of a positive circle is reproduced, it feels a slightly longer elliptical space horizontally.

The scene of the British attacking Kyoto and burning the city brightly red also gives a spacious sound field suitable for the scene overlooking the whole city. The sound of the burning and spreading flame is imminent, so that I feel frightened. The battle in Kyoto Station is also visible. Since the gamela has very many cuts to look up from the human viewpoint, the sense of realism increases when the sense of height is added to the surround as well.

The Dolby Cinema show of Gamera, which commemorated its 55th anniversary, was originally planned to be "Gamera 1" only, but partly because the sounds of Atmos were more popular than expected, both "Gamera 2" and "Gamera 3" would be postponed for launch to make Dolby Atmos sounds. When viewed in this way, movies in which massive objects like monster movies run out can be felt that a three-dimensional surround sound field like Atmos is indispensable.

UHD BD reproduction of PS5 is sufficiently powerful as a UHD BD compatible player of ¥50000, and it can be reproduced properly including the informational quantity, though the bass is a powerful intensive sound. The headphone output provided by the controller is never worse. However, because the amplifier output is not very high, models with high load on the amplifier, such as luxury headphones and earphones, do not produce sufficient volume, and the only disadvantage is insufficient power. CZ-8A also sounded adequately, but in the case of monster movies, explosive sounds and pauses were likely to be lacking. Wiring may be blurry, but it may be more enjoyable to use a headphone amplifier in combination.

The competitor is a speaker. Expensive but not necessarily expensive.

CZ-8A is a headphone that can be competed with speakers. It can be said that the way of listening is a natural reproduction of speaker playback, but there may be a sense of discomfort for those who regularly use headphones and are familiar with this type of listening. The sound you hear might confuse you if you think of it as a headphone. Since this headphone fall into a fairly expensive category, it is not the most likely to be recommended. In that sense, I think the competitor is a speaker. A pair of speakers of about 200,000 yen would be expensive. However, no stand is required and there is no need to make room space. That said, it is by no means expensive.

Many people now tend to spend more time at home and want to get high-quality audio equipment, but the system with speakers is a daunting task. While headphones are well suited for this purpose, CZ-8A is ideal for those who prefer a loudspeaker-like sound. In any case, I would definitely invite you to experience the sounds of CZ-8A. It should be an extraordinary experience for headphone lovers, and may be a long-awaited model for those who are not used to headphones. Definitely give it a try.