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SUSVARA

Owner's Guide



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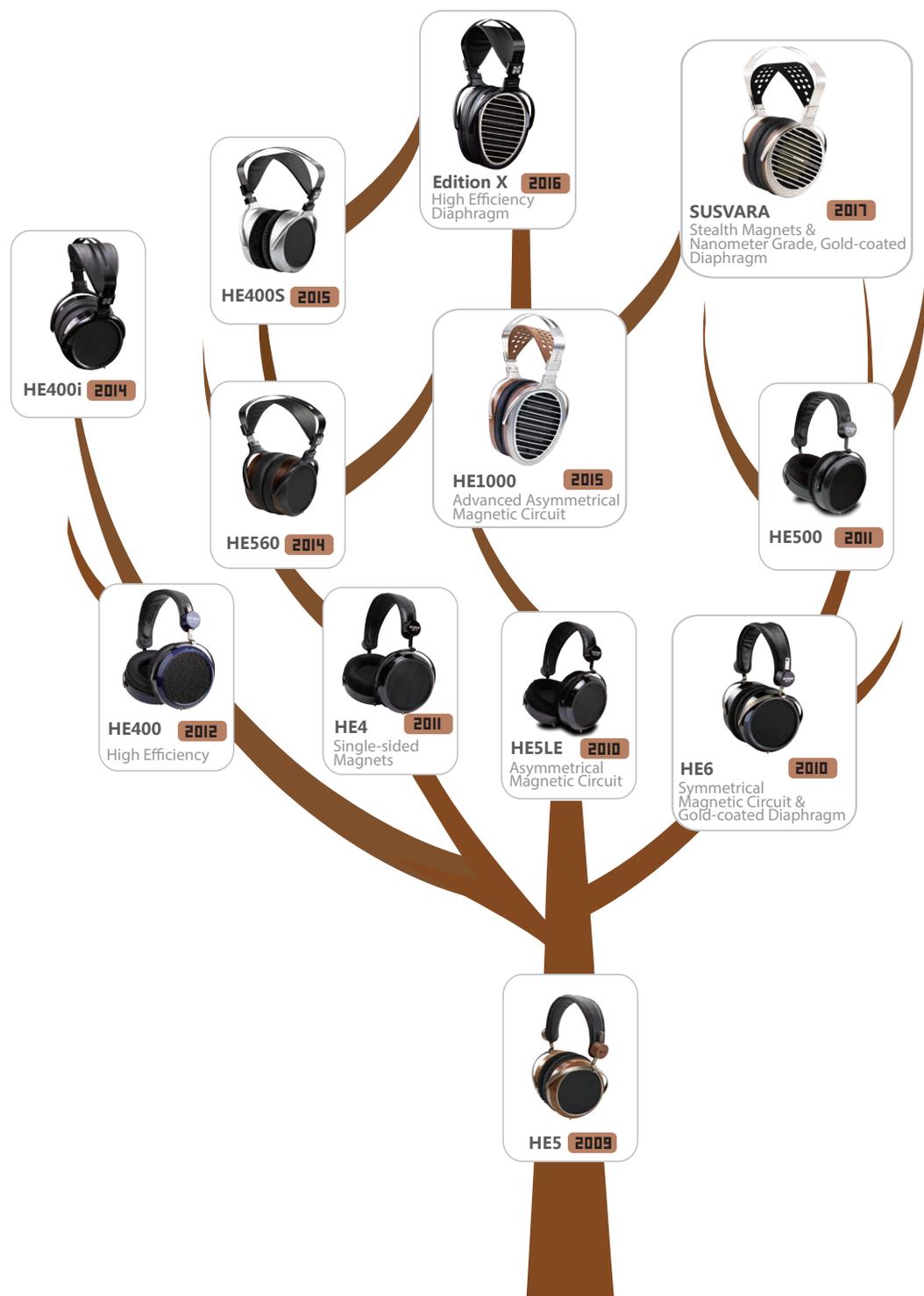
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A Decade of Planar Renaissance

HIFIMAN is proudly celebrating its first decade and noting here its many milestones in those first ten years.

Though the company's first product was a landmark portable player, HIFIMAN is best known for its high performance, full-size headphones utilizing planar magnetic technology. Though this technology wasn't new when HIFIMAN began its journey, it did present significant challenges to headphone designers. Planar headphones were heavy, uncomfortable and very inefficient requiring large amplifiers that didn't readily exist at the time.

HIFIMAN met those challenges head on and began designing headphones that not only sounded amazing but pushed at the boundaries of what was possible from a planar magnetic headphone. For example, the Edition X V2 is so efficient it can be driven by a smartphone. That was unthinkable just a few years ago. This development trend steadily continues to today where the planar has stylish headphones that combine best-in-class sonic performance with sublime comfort.

"I give a lot of credit to HIFIMAN for the renaissance we're now seeing in high-end headphones, and in particular for the recent resurgence of interest in planar magnetic headphones. Fang Bian has done a great deal to advance the art of headphone sound."

Brent Butterworth

Renowned Audio Writer



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Message from the Founder

Thank you for your purchase of a HIFIMAN product. We take great pride in offering audio products that provide best-in-class performance and value.

Though it seems like only yesterday when I started HIFIMAN as a passionate audiophile, we just finished our first decade in business and eagerly look forward to an exciting future. The company has grown rapidly and the HIFIMAN brand has become one of the most respected in the industry.

Even with our success, the one thing that has not changed is my passion for music and creating products that help recreate that live experience. Now, I am joined by many others in the company who share my passion and in turn, we humbly share that with you.

Thank you again for your purchase. I hope you will find this guide useful in learning about your product which will help you enjoy countless hours of listening pleasure.

Happy listening,

Fang

Dr. Fang Bian,
Founder and CEO



The Stealth Magnets

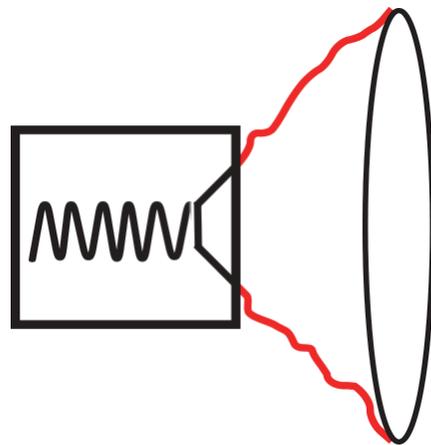
The latest innovation in the world of planar magnetic headphones is the development of a new design of magnet. We have called these “Stealth Magnets” after the core principle of anything stealth, to be as invisible as possible. Thus, the advanced magnet design used for the first time on the SUSVARA aims to be as acoustically transparent, or invisible as possible. In traditional designs the magnets get in the way of the sound waves, by reflection and diffraction. This creates constructive and destructive interference and as these points shift with frequency changes there is a mass of wave interference taking place.

The use of “Stealth Magnets” on the SUSVARA means the sound wave reproduction can take place without the necessary magnets getting in their own way ruining the sonic purity of their output.

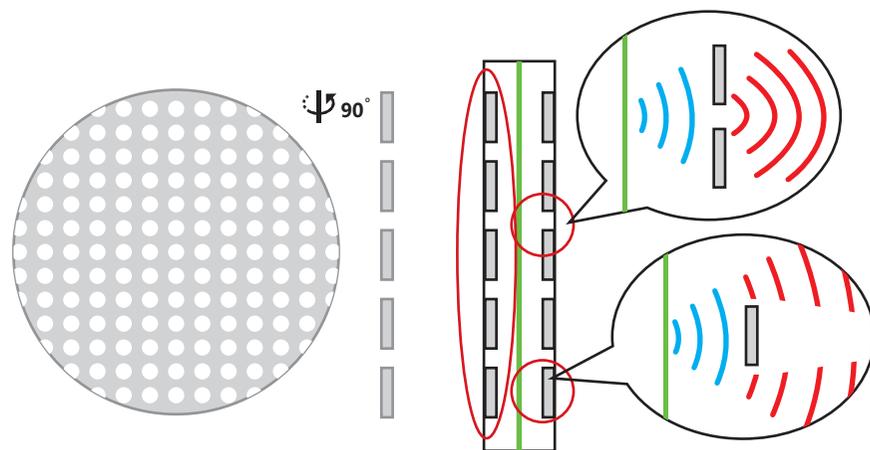


The Technology Under the Grill

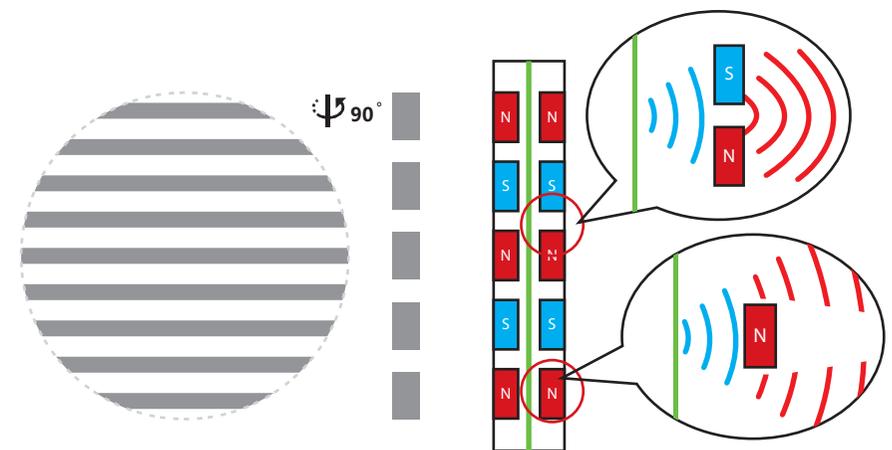
A conventional dynamic driver's frequency response can be altered due to distortions and vibrations across the diaphragm surface.



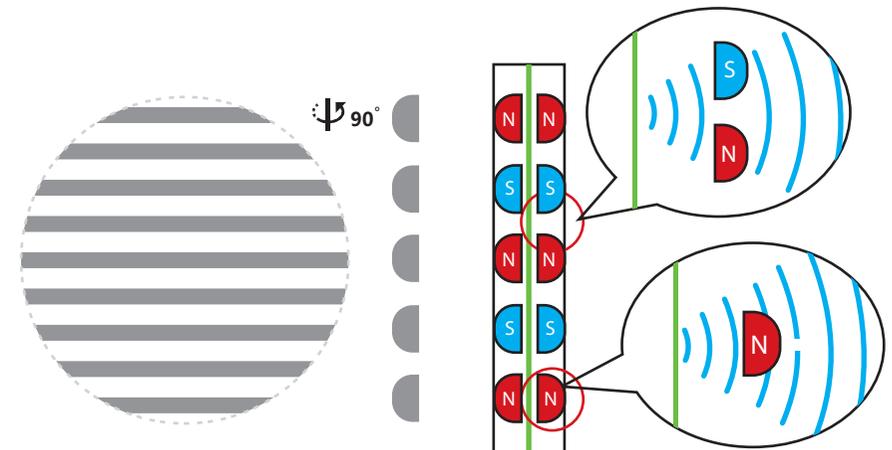
Conventional electrostatic headphone sees degradation of sound quality caused by the stator's interference.



Degradation of sound quality in a conventional planar magnetic headphone is caused by the magnets getting in the way of the sound wave.



Unlike the sound waves created by a conventional magnet, the special shape of stealth magnet of SUSVARA enables the waves to pass through the magnet without generating interference.



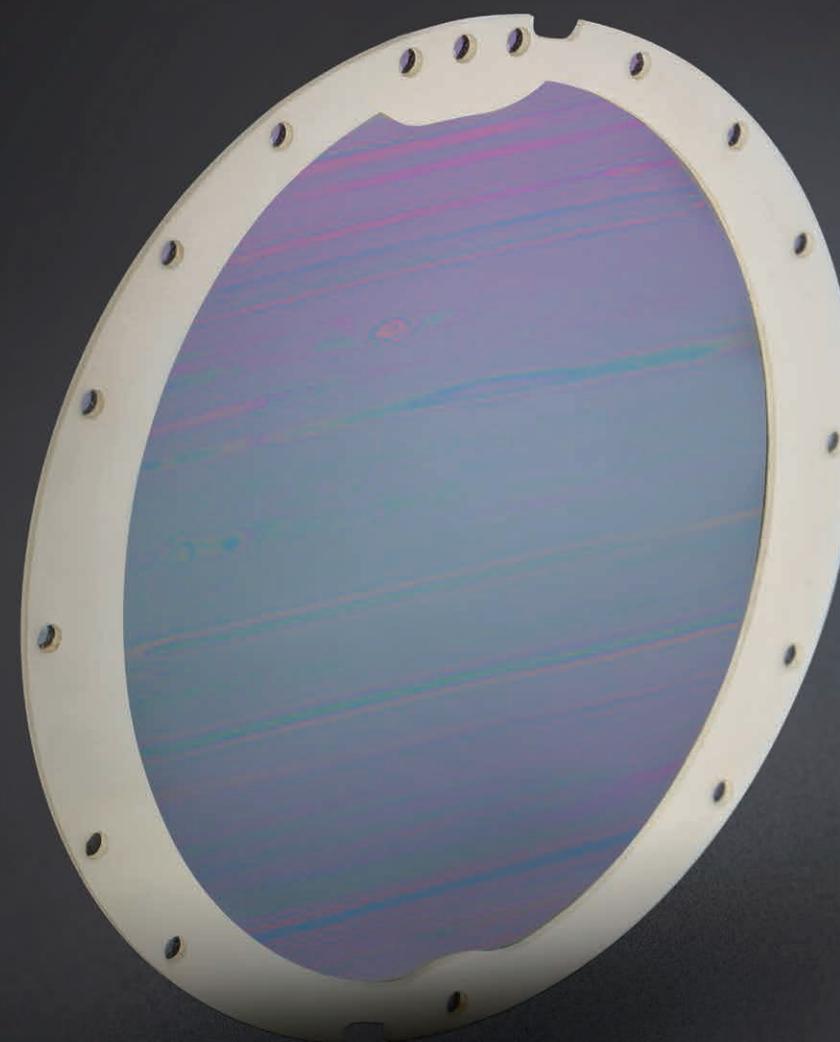


The Nanometer Grade Diaphragm

HIFIMAN has been researching and developing Nanometer Grade diaphragms for many years, this core technology has been further refined in the design of SUSVARA. The production, processing and installation of diaphragm materials is highly complex. The drivers of extremely high tensile strength and low thickness and mass means it can produce tremendously low distortion levels yet offer an outstanding dynamic response. This, while difficult, can be achieved at the same time by combining this diaphragm and “Stealth Magnet” technology. Each working in harmony for an end result where the audio produced is of a remarkable tonal quality and clarity.

Compared to conventional dynamic drivered headphones, planar magnetic headphones have solved problems such as surface distortion of high frequency audio and the lingering vibrations in a dynamic loudspeaker. HIFIMAN has further improved the efficiency by the use of the nanometer grade diaphragm in the drivers.

The thickness of the SUSVARA's diaphragm is under a millionth of a meter. This light, high tensile strength material with the acoustically invisible “Stealth Magnets” are a perfect sound producing pairing. We have had to select from numerous prototype designs and production methods and find the best-sounding materials without regard to cost. As the successor to the HE6, the SUSVARA also uses a gold coating conductor on its diaphragm.





HIFIMAN

The “Window Shade” System

The outer grill has been carefully designed to offer the physical protection required yet to have as minimal an acoustic impact as possible. The open backed nature of the SUSVARA means that physical protection of the driver inside is necessary but it creates unwanted reflections. How do you stop the wave reflections from the protective grill creating wave interference? The answer was found in the careful crafting of the grill such that the secondary reflections caused are exactly controlled to avoid any unwanted vibrations reaching the delicate diaphragm. Thus the most detailed acoustic subtleties can remain unhindered to offer a perfectly natural sense of space and openness.

The “Window Shade” on the SUSVARA has been painstakingly optimized to avoid any resonant frequencies. This leads to superior aural purity, tonally clean and unadulterated yet provides practical protection for the ultra-fine diaphragm and additional offering an appealing visual aesthetic.

The Headband

Ergonomic and comfortable headband is designed to fit for most people, with greater reliability and durability.

The metal headband structure is created via CNC milling and hand polishing. To adjust the headband, simply move each ear cup up or down until the top of the headband rests comfortably on your head and the ear cups surround your ears.



The Cables

The cable configuration used for the SUSVARA is a single crystalline copper wire alongside a single crystalline silver wire. A special composition ratio and quantity of the materials have ensured low resistance in the signal transmission and high mechanical strength for daily use which should ensure a long and fruitful existence.

The cables are all user swappable and have channel orientation for left and right marked. Further an "L" and "R" are indicated inside the headband. Once the cable is connected to the correct channel orientation, an easy way to tell left from right is that the cable is connected slightly towards the front of the ear cup. The cable then should gently drape across the user's chest for greater comfort.



The Ear Pads

The elegant asymmetry of the ear pads on the SUSVARA conforms round the human ear, comfortably distributing the weight evenly yet offering a secure and sound grip. The pads themselves are gently bevelled, contouring and moulding to the users head thus providing superb comfort for long listening sessions.





Technical Data

Specifications

Frequency Response: 6Hz-75kHz

Impedance: 60Ω

Sensitivity: 83dB

Weight: 450g (15.9oz)

Package Contents

- (1) Pair of headphone
- (1) 3m headphone cable (4-pin XLR plug)
- (1) 3m headphone cable (6.35mm plug)
- (1) Pair of ear pads (mounted on headphone)
- (1) Owner's Guide



Amplifier Requirements

The SUSVARA is a low sensitivity headphone meaning it will require more than average amplifier power to drive it properly. Matching the SUSVARA to a high quality and potent amplifier is critical to allowing it to reach its fullest potential. To aid users in finding a perfectly complimentary amplifier we have developed the EF1000 in conjunction with the SUSVARA, possessing both tremendous power output and exceptional sound quality. We believe the EF1000 is the perfect complementary amplifier to the SUSVARA.

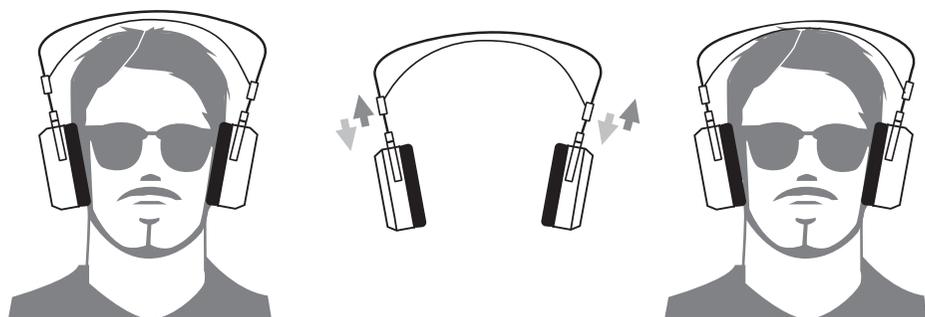
Further information can be found on our website at www.hifiman.com



Metropolitan Opera, New York

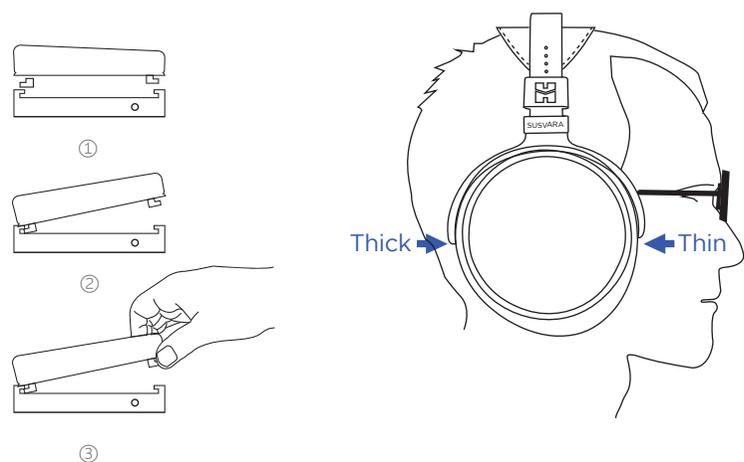
Headband Adjustment

To help fit the headphone to your head, you may use the two adjustment blocks to change the position of the headband strap to better accommodate your head.



Replacing Ear Pads

To remove the ear pads, locate the clips on the inside of the pad, and use two fingers to gently bend them in and slip them out. To install new pads, simply align the ear pad with the mounting ring, and gently bend the clips so they slot in their appropriate locations.



Care and Maintenance

Planar headphones benefit from break-in to achieve optimum performance. Usually this takes up to 150 hours however there is nothing special you need to do other than enjoy your headphones.

Wipe the surfaces (ear pads, cups) with a microfiber cloth and store the headphone in a dry, cool and safe place (away from dust, heat, humidity, sunlight, younger kids and pets if possible.) For the headband, wipe it periodically to remove any dust.

Do not expose the headphone to excessive heat or cold temperatures.

Do not use any headphone while driving or operating machinery.

Do not use volatile substances alcohol, acetone, gasoline or dish detergent to clean the headphone.

HIFIMAN Limited Warranty

HIFIMAN warrants this product to be free of defects in material or workmanship for a period of three years from the date of original retail purchase. If your product is found to be defective during the warranty period, HIFIMAN will, at its sole option, either repair the product or replace the product with a new or factory reconditioned or substantially equivalent model. This limited warranty does not apply to any defects attributable to damage beyond the reasonable control of HIFIMAN including damage caused by abuse, misuse, misapplication or modifications performed by anyone other than HIFIMAN.

If your product is under warranty and problem appears, please contact HIFIMAN customer service or your authorised dealer. If necessary, and at our discretion, we will provide a warranty repair or replacement of your product.

Caution: do not disassemble or modify the product in any way. Tampering with or modifying your HIFIMAN product will void its warranty.

This Limited Warranty does not apply to:

1. Defective or discolored parts if the damages are caused by fluids, dirt or improper use.
2. Damage caused by misuse with another product.
3. Use of the product for other than its normal intended use, including, without limitation, failure to use the product in accordance with the supplied "Owner's Guide"
4. Damage caused by accident, abuse, neglect or misuse.
5. If you do not have a valid dated receipt showing proof of purchase.

6. Damage caused by services/repairs or other modifications to the system carried out by anyone other than HIFIMAN or an authorised HIFIMAN distributor or dealer.

7. Damage caused by self-repair or if the unit has been disassembled or modified in any way. HIFIMAN greatly desires your satisfaction and will do everything reasonable to achieve that. If you have any questions or concerns with your product, simply contact your authorised dealer or HIFIMAN directly (if purchased from us) and explain the issue in detail. Should a return be required, a RA# will be issued. Return shipping to HIFIMAN or authorized service facility will be at the owner's expense.

The warranty applies to the first purchaser and is not transferable. Should you need warranty service please contact your authorized HIFIMAN dealer. Or email us directly at customerservice@HIFIMAN.com



