# **STAX**®

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3-4 | Forward 5-6 | About the Founder 7-8 | Working with a Legend 9-10 | Carrying On the Vision 11-14 | STAX Engineers & Engineering, Unlike Any Other 15-16 | What is a Cleanroom 17-18 | The Future of STAX Is In Good Hands 19-20 | Photos 21-22 | Conclusion The year 2023 is special to us as it marks the company's 85th year in business. STAX has grown from being an exclusive collectors' brand from Japan to being available in more than 35 countries globally. Today, STAX continues to be one of the most respected audio brands for its consistency, commitment, and dedication to delivering the best experience for customers of electrostatic audio products.

In kanji, the characters '静魂' mean quiet soul or spirit and this has been the fundamental driving force behind STAX from its early beginnings in 1938. Which is to create products that bring our listeners to a moment of sublime peace. With strong products like the SR-009, its descendent models as well as the latest SR-X9000, we believe we've done that and then some.

As we look back on the past 85 years, we are taking stock. It has not been an easy road but therein lie the stories of heroes. STAX has undergone hardships through tides of change and challenging economic times. It has changed presidents and ownership, it has been carried by legends who continue to work at STAX some 40 years later, and our legacy is the sum of our people who work with us day in day out. And you will get to know some of them in this anniversary book.

STAX is and will always be a brand that represents courage and enterprise, creativity, and commitment, but most of all we will continue to strive for 静魂.

We hope you will enjoy the stories shared in this 85th anniversary book.

From all of us at STAX, thank you for listening.







#### Who was Naotake Hayashi?

Naotake Hayashi & His Impact on the Company

Naotake Hayashi, began his journey into music almost immediately after graduating from one of Japan's most respected universities, Waseda University where he studied audio engineering. Passionate about music and already an electronics enthusiast and audiophile, Hayashi-San founded the Showa-Kouon Co., Ltd in Kundan, Chiyoda-Ku in 1938, first running a recording and mastering business that included doing soundtrack recordings for music and film, as well as the production of metal masters and related audio equipment. It was his first foray into manufacturing.

In his pursuit of finding perfection, he pushed himself and the company to evolve and in 1950, the company's first high frequency condenser microphone was launched. They were adopted by the NHK (Japan Broadcasting Corporation), Japan's main and oldest broadcaster, for use station-wide. The microphone named Stax-1, inspired Hayashi-San to rename the company STAX Co., Ltd in 1963.

The swinging 60s was a golden era in music and STAX too enjoyed its own momentum, creating the world's first electrostatic earspeaker, the SR-1 in 1960, marking a significant leap forward in headphone design that would forever change the audio landscape. This landmark product showcased STAX's dedication to delivering an immersive and realistic listening experience.

STAX quickly gained global recognition for its pioneering technology and garnered a devoted following among audiophiles and professionals alike. Hayashi-San's relentless commitment to research and development ensured that each STAX product pushed the boundaries of audio fidelity, making the brand a symbol of uncompromising sonic performance.



Under the stewardship of Hayashi-San, STAX introduced numerous groundbreaking innovations over the next two decades. It also opened doors to interesting business opportunities such as one request that came through our German distributor in 1980.

Car manufacturer, Daimler-Benz was looking for headphones that could be used to measure engine noise in their cars and they wanted something with a wider dynamic range. To meet this demand, the team made some improvements to the SR-Lambda (1979) :-

- 1. We changed the bias voltage from NORMAL (220-230V) to the PRO bias (580V)
- 2. Reduced the gap between electrode and diaphragm from 0.2mm to 0.5mm
- 3. Changed the cable connector from a 6 pin to 5 pin input.

These improvements duly led to the development and release of the SR-Lambda Professional in 1982 and laid the foundation for today's STAX earspeakers. It also ushered in a time of growth and prominence for the company.

The 80s was known as the golden era of audio especially as renowned Japanese brands like Sony, Yamaha and Panasonic/Technics made their marks internationally. STAX was on par with them and began manufacturing a full range of audio equipment such as CD players, DAC, amplifiers, aside from its core electrostatic business. They moved to a new office space in Saitama that combined administrative and engineering into one, forming the company's former Technical Research Center and a showroom was also established at Ikebukuro in downtown Tokyo. STAX was incredibly sought after from overseas

buyers and enjoyed 70% of sales from export alone.

In 1988, our founding President Hayashi-San retired and it was the changing of guards at STAX. His son, Takeshi Hayashi became the next President from 1988 to 1995 which coincided with the end of the industry boom, with the Japanese government determining that the 'audio industry was in structural recession'. Other factors such as the appreciation of the Japanese Yen against the US dollar and high export ratio became a burden on the company and STAX began to shift its interests closer to home. Supported by many fans of condenser headphones, STAX developed the SR- $\Omega$  and high-end driver unit, the SRM-T2.

Unfortunately, the introduction of the two models was not enough to save the company from administration and by 1995, STAX Co., Ltd suspended operations.

It was the end of an era... but there was more to come.

## About the Founder

# Living & Working with a Legend

In the world of STAX Limited, the phrase "not all heroes wear capes" holds true. It is a testament to the profound camaraderie and unwavering commitment shared amongst a group of STAX employees who played an instrumental role in turning the tides of the company during a critical period in 1996. We had the privilege of sitting down with Kazuo Suzuki, STAX engineer and one of the ten legends who continues to work at STAX Limited today. With nearly five decades of service, Suzuki-San embodies the heart and spirit of STAX, serving as an inspiration to all who walk through the halls of the factory.

In 1996, STAX faced one of the most challenging periods in its history. Suzuki-San vividly recalls the moment when he was informed that the company was heading towards administration. It was then that a group of employees, comprising engineers, sales personnel, and administrators, made a decision to reclaim the STAX brand and revive the business. They attended a pivotal meeting with the company's creditors, proposing to re-establish the brand and continue manufacturing by paying rent. Each person volunteered to stay on without pay, fuelled by their unwavering belief in STAX and their determination to fulfil an outstanding order and not disappoint their loyal customers.

During this critical period, procuring parts became an arduous task for the team as they lacked a credit history. Nonetheless, they persevered. The success or failure of their first order, the SR-007, would determine

the fate of the company. Suzuki-San and his colleagues donned multiple hats, juggling sales, product development, and administration, working tirelessly to meet their goal of launching the SR-007 in time for the Christmas season. The arrival of two orders from the UK and Taiwan proved to be the saving grace for the STAX brand that year.

Reflecting on his longstanding career, Suzuki-San expressed immense pride in his accomplishments. One of his significant contributions was the development of the SRM-007T, an amplifier that featured four vacuum tubes and achieved remarkable success. Additionally, Suzuki-San fondly recalls his involvement in the creation of the SRS-001 amplifier, where he meticulously crafted the amplification circuit by hand. These and many other products stand as testaments to his commitment & unwavering dedication to the art of audio engineering & STAX.

Suzuki-San holds a unique distinction within STAX Limited today, as he is the only employee who had the opportunity to work alongside the company's founder, Naotake Hayashi. He speaks fondly of Hayashi-San, describing him as a graceful and gentlemanly man.

Suzuki-San's journey at STAX Limited encapsulates the essence of dedication, resilience, and unwavering belief in a brand. His pivotal role in reviving the company during its most challenging period showcases



the true spirit of camaraderie and commitment that permeates the halls of STAX. His contributions and technical achievements have cemented his status as a living legend within the company, inspiring generations of employees to uphold the STAX legacy.

Next year, Suzuki- San celebrates 50 years at STAX and we thank him for his services to the audio industry, as well as STAX Limited. Please join us in celebrating this living legend.





Kazuo Suzuki Stax Engineer at Large Legend





# Carrying On the Vision

STAX, propelled by the remarkable success of the SR-009 in 2011, emerged as a prominent leader in the high-end headphones market. In an industry where only a handful of manufacturers produce electrostatic headphones and even fewer can consistently meet the demand, STAX has been at the forefront of electrostatic headphone technology for over 60 years since the introduction of the SR-1 in 1960. The company's unwavering commitment to excellence is evident in every aspect, from stringent quality control measures and optimal manufacturing environments to top-notch maintenance services. While the technology behind electrostatic headphones may not be overly complex, STAX has amassed a wealth of knowledge to ensure the utmost in sound quality.

The company's pursuit of perfection in electrostatic technology continued with the introduction of the Lambda series in 1979. This series revolutionized the market by offering a compact and lightweight design, making electrostatic headphones more accessible to a wider audience without compromising on STAX's sound quality. The Lambda series resonated with consumers and firmly established STAX as a leading manufacturer in the electrostatic headphone industry.

Hayashi-San, the visionary behind STAX passed in 1982. However, his legacy has been carried forward by our dedicated team of engineers and our customers, the audio enthusiasts who remain steadfast in

their commitment to excellence. Under the team's guidance, STAX has persevered and continue to innovate.

The 1990s witnessed STAX reaching new heights with the introduction of the Omega series. These flagship models epitomized the brand's meticulous craftsmanship, featuring luxurious materials and an unwavering attention to detail. The Omega series further solidified STAX's reputation as a manufacturer that consistently pushed the the boundaries of electrostatic headphones technology.

As the 21st century unfolded, we adapted to evolving technologies and expanded the product lineup. Portable electrostatic systems, such as the SR-002 and SR-003, were introduced, allowing listeners to experience STAX's renowned sound quality on the go. These portable offerings captivated audiophiles who sought a seamless audio experience outside of the traditional listening environment.

Today, STAX stands as an emblem of audio excellence, revered by enthusiasts worldwide for its unwavering dedication to precision and its commitment to preserving the true essence of recorded music.

The audacious vision of Hayashi-San laid the foundation for STAX's success. We will continue to honour and fulfil that vison.

## STAX Engineers & Engineering, Unlike Any Other

In the realm of audio technology, STAX stands as a pioneer, continuously pushing boundaries in the electrostatic headphone market. Through our unwavering commitment to innovation and unique technical specifications, STAX has established the company as a prominent name in the industry.

The heart of STAX's success lies in our electrostatic earspeaker line, where we have developed our own manufacturing equipment and measuring devices that are implemented into our own QC processes. This has helped establish our very high standards in development. While traditional headphones rely on magnetic drivers, STAX headphones employ a completely different approach. Our philosophy centers around the use of exquisitely designed diaphragms that vibrate lightly and swiftly, creating a vast and immersive sound field. These diaphragms are meticulously crafted, requiring extreme thinness and large size for high-grade models.

The pursuit of excellence doesn't stop at the diaphragms; it extends to every individual part. The precision in the selection of materials and the way they are combined pose great challenges. STAX's ultimate goal is to create stable and reliable products that deliver an unparalleled audio experience.

To complement our headphones, STAX has developed amplifiers that

apply a constant voltage to the diaphragms, a crucial requirement for electrostatic headphones. Special driver units, utilizing both vacuum tubes and semiconductors, have been meticulously engineered for this purpose. The flagship model, SRM-T8000, adopts a hybrid method, with vacuum tubes installed in the first stage and semiconductors in the last stage. The installation of vacuum tubes demands a thorough elimination of noise, a task that only the skilled engineers at STAX can accomplish.

STAX's commitment to introducing new technologies is evident in our more recent high-end models: SR-009, SR-009S, and SR-X9000. These models incorporate a breakthrough innovation called "MLER," or Molecular Level Electrode Reworking. MLER introduces fixed electrodes constructed by bonding multiple metal plates at the molecular level using thermocompression bonding technology. This technique not only enhances resistance to vibrations but also ensures high working accuracy and smooth transmission of sound waves. It has paved the way for the production of metal mesh electrodes, a previously unattainable feat before the SR-X9000.

In the eyes of Ryuji Shimizu, Sales Director at STAX, the electrostatic headphone market remains vibrant and full of potential. While larger-scale listening events continue to be held regularly in Japan, Shimizu-San believes that the untapped potential lies in attracting



younger headphone users who are yet to discover the STAX experience. With the rise of social media, the network of headphone enthusiasts has expanded, providing an opportunity to reach new audiences and allow them to savour the distinct sound of STAX.

STAX's unique and long-term relationship with our customers is built on the foundation of good service. Shimizu-San emphasizes the importance of providing exceptional support before and after sales, understanding that customer satisfaction extends beyond the point of purchase. STAX's commitment to product longevity is evident, avoiding unnecessary model changes that may disappoint users. Instead, we value maintaining a consistent product cycle, ensuring familiarity and reliability for their loyal customers.

Moriyasu Machida, Manager, Development Department at STAX, shares insights into the evolving expectations of customers over the years. While the demand for higher-level listening experiences persists, he emphasizes that price alone does not define quality. STAX acknowledges that an exclusive focus on expensive products would limit their user base and ultimately shrink the electrostatic headphone market. Therefore, we strive to strike a balance by creating products that cater to various price ranges without compromising on the unparalleled sound experience STAX is known for. As STAX continues to innovate and shape the electrostatic headphone market, it is our unwavering dedication to exceptional design and customer satisfaction that remain at the forefront. With unique technical specifications, groundbreaking technologies, and commitment to authenticity, STAX is poised to captivate the hearts and ears of audio enthusiasts for years to come.



SRM-T8000 Quality Test









### What is a CLEANROOM?

According to Wikipedia, a cleanroom is designed to keep everything from dust to airborne organisms, or vaporised particles, away from it, and so from whatever material is being handled inside it. The STAX cleanroom does just that and until today, has not been showcased in any capacity to the public. In celebration of the company's 85 years in operation, we are pleased to bring you inside for a behind-the-scenes look at what it takes to bring STAX electrostatic audio products to life.

#### The Future of STAX Is In Good Hands

At STAX, our dedication to innovation and excellence shines through our exceptional electrostatic earspeaker line. We proudly lead the electrostatic headphone market, driven by our original production lines and continuous development of manufacturing equipment and measuring devices.

Setting us apart from conventional headphones, STAX headphones feature thin diaphragms, a testament to our unique design philosophy. Our high-grade models demand extraordinarily thin and large diaphragms to achieve an expansive sound field. These diaphragms vibrate with remarkable lightness and speed, ensuring an unparalleled audio experience. The precision required in each individual part poses ongoing challenges, from carefully selecting materials to meticulous assembly. Our ultimate goal is to create stable products that push the boundaries of audio performance. Under the guidance of Yagishita Masao, the STAX manufacturing department chief, our skilled engineers work diligently in the cleanroom to handcraft the sound element for our flagship headphones, the SR-X9000.

Our amplifiers are indispensable partners to our headphones. STAX headphones, which utilize static electricity, require a consistent voltage applied to the diaphragms, calling for specialized driver units. Our approach combines the use of vacuum tubes and semiconductors, employing vacuum tubes on the First Stage and semiconductors on the Last Stage. The installation of vacuum tubes on the First Stage is a delicate process exclusively entrusted to our highly skilled STAX engineers. Their expertise and unwavering dedication ensure impeccable design and engineering, defining the superior quality of our amplifiers.



SR-X9000 assembly



Today, junior STAX engineers like Asaumi Mitsuru and Nagayama Yoji are taking the lead in designing and manufacturing new product lines while upholding the traditions established by our revered legends. Yoji-San, in his late 20s, is a devoted STAX fan, and his dream of working at the company has become a reality. For them, working alongside legends is an invaluable experience that cannot be taught in universities. Suzuki-San, a living legend himself, regales them with stories from his remarkable 50 years of service at STAX.

With every product we design, we prioritize the target market and its users. While we consistently strive to provide the highest quality products for discerning high-end users, we also understand the significance of catering to beginners. Our SR-L300, SRM-400S, and SRS-3100 models exemplify perfect entry points into the world of STAX audio. Our headphones are designed to be connected with driver units, enabling users to upgrade their audio experience effortlessly by simply changing headphones or driver units. This approach underscores our commitment to delivering affordable products that deliver exceptional performance, ensuring that even newcomers can revel in the legendary STAX sound.

Behind the scenes, meticulous planning drives our product lineup. We carefully establish a range of product prices and grades, transitioning seamlessly from entry-level to high-end options, empowering users to consider upgrades effortlessly. Maintaining the continuity of maintenance is paramount, particularly when it comes to amplifiers. We ensure that model changes occur before parts go out of production or

become challenging to maintain, guaranteeing a seamless experience for our customers.

In the ever-evolving landscape of audio technology, we embrace the potential of newly developed parts to dramatically enhance product specifications and introduce game-changing innovations. Our core policy revolves around manufacturing high-quality products designed for long-term use, forming the foundation of every creation that bears the STAX name.



STAX factory staff

















### Conclusion

This book is a celebration of the stories, achievements, and dedication that have made STAX a symbol of courage, enterprise, creativity, and commitment over the years. It pays tribute to the past, present, and future of the brand and our people, highlighting its unwavering pursuit of "静魂" - the quiet soul that lies at the heart of every STAX product.

It is also a way for us to show gratitude to all the listeners and customers who have been a part of STAX's journey. Your support and appreciation has played a crucial role in shaping the company's success and ensuring its continued presence in the audio industry.

Overall, this 85th anniversary book serves as a testament to the legacy of STAX and our dedication to providing exceptional audio experiences for our customers worldwide.

Thank you.

















