


The history of

System Audio

A tall, black, floor-standing speaker with three drivers is positioned in the foreground on a dark grey floor. In the background, a red sofa with white cushions sits on a white shag rug. A large abstract painting hangs on the wall behind the sofa. To the right, a tall, light-colored wooden bookshelf is filled with books. A modern floor lamp with three spherical shades is visible near the sofa.

System Audio is the only loudspeaker brand founded by a musician. Ole Witthøft played in a band and was surprised that ordinary speakers did not sound natural. So he decided to build his own.

The history

The year is 1984. Here System Audio is launching its first speaker. An amazed press write that “this loudspeaker sets new standards”, but the speaker was not only created through a fascination with technology. It was created through a love for the music. Today about 20,000 SA speakers are manufactured every year and there are 25 different speaker models in the range. They are exported to 41 countries and are aimed at people who appreciate design, art, experiences, and, of course, music.

Ole Witthøft's background as a musician means that System Audio works in a different way than other loudspeaker companies. The sound experience comes ahead of all other properties and SA are among the only brands that have a sonic brand: a sound that is characteristic for all the brand's speakers.

System Audio is also known for its design. The philosophy is that the speaker is a piece of furniture that should be beautiful enough to deserve a central place in the user's living room. This is also where it will sound the best.

The company's name contains the word “system” because in 1984 Ole Witthøft discovered that good speakers must be designed in accordance with a variety of meaningful concepts that relate together. A system.

Concepts with meaning

The system giving its name to System Audio consists of elements that are essential for a good loudspeaker. All SA speakers are therefore created from the same basic principles. You can call the system a design handbook.

There are a total of 25 elements in the system. These are divided into three general categories:

- **Sound.** The sound should bring the listener closer to the artist
- **Integration.** Products should work in the home, from an acoustic, electrical, and design perspective
- **Quality.** The solutions must be long-lasting



Ole Witthøft is the first musician who founded a loudspeaker brand.

Each of the 3 categories contains 6-9 elements that an SA loudspeaker must be designed in accordance with. It is about such things as the durability of the products, the materials in relation to the environment, manufacturing tolerances and of course: the sound.

Among the most important is assessing the “musicality” in the speakers

When Ole Witthøft began to be interested in speakers in the 1980s, it was because as a musician he could not find any speakers that gave him the sound experience he knew from live music. All speakers can create sound, but it is certainly not all kinds

of sound that grabs the listener and holds their interest in enjoying the music.

In fact, it can be a relief to turn it down.

Ole was among the first to use the word “musicality” in connection with the sound of speakers. This was to find a term that describes the speaker's ability to entertain the listener with a living sound quality. The idea of assessing speakers from the musicality of the sound elevates the user experience to the most important thing in the product. The user experience comes before the speaker technology. And working with speaker design is therefore more than just developing technology.

Facts



Company name
System Audio A/S

Head office
Roskilde, Denmark

Established in year
1984

Established by
Ole Witthøft

Main audio product types
Active and passive loudspeakers

Main markets
Europe, Asia

Number of employees
13

Important DNA arose by chance

In the early 1980s Ole Witthøft built his speakers in his parents' basement. The recipe was simplicity in both the technical architecture and the design. There are major challenges to building speakers when it comes to the development process, but also from the craftsmanship.

In the beginning, System Audio sold about 1,000 speakers each year. They were all built in the basement of his parents' villa in a suburb of Copenhagen. Some of the first speakers had a design, which simply had fabric all the way around the cabinet and with a smooth acrylic plate on top. The design was originally conceived as an inventive way to solve the craftsmanship challenges in providing the speakers with a sufficiently neat finish, but the simple design actually became an iconic symbol of simplicity. And so design became part of the DNA of System Audio. But greater challenges lay ahead.

Committed users are vital for product development

With the sound as the focal point, it is not enough to use measuring equipment to ensure that the products are good. Measurements of acoustics are of course essential, but there is no way that human experiences such as musicality, presence, atmosphere, and nerve can be captured by measuring equipment. These have to be experienced.

So System Audio started to test the speakers on real people.

Quite early in the lifetime of the company, users were engaged to contribute to product development by acting as test pilots. Input from users helps to answer some of the questions that arise in a development process where a given technology is to be employed. Reviews from test pilots can help to determine if the technology is perceived as valuable to the user, or if it is actually only worth something on paper.

Iconic products

The first speaker that put System Audio on the international map was the tiny 905 model. It is not much bigger than a shoebox, and visually does not attract too much attention. But the tiny 905 loudspeaker sounds much bigger than it is. In just six days at an exhibition in London, the company signed export contracts with 20 countries and System Audio's international adventure began. The small 905 model was part of the 900 series, which was the first family of speakers to win international recognition with good test results worldwide.

In the early 1990s, the 900 series was not a genuine technological innovation, but its captivating sound quality made reviewers everywhere prick up their ears. In the annual CES in Las Vegas it was awarded the "Best Sound at the Show" and the 905

became a success. It was the first family of speakers from Audio System where each model had a number explaining where it belonged in the program. A model name ending in 5 or 10 is a small compact model, while loudspeakers ending in 30 or 50 are floor-standing models.

Controversial speaker with expensive cables

The 905 was a great success in Germany and the discerning German market demanded a compact speaker where there is no restriction on cost, but instead used the maximum creativity in every detail of the product. The result was the System Audio 5010 signature. The first speaker that System Audio built in real wood. The loudspeaker employed specially developed speaker units in an almost solid cabinet, and the small speaker is complemented by internal connections with expensive cables from the American brand Nordost.

Ole Witthøft designed a speaker stand especially for the 5010 signature. It raises the speaker to an ideal listening height and at the same time exhibits the speaker as a visible object in the room. Work on the 5010 signature helped to expand System Audio's expertise in how to create a big sound from a relatively small speaker.

The company concentrates on sound

In the years leading up to the millennium, System Audio found its identity as a company. The future required flexibility and focus on the product characteristics that make a real difference to the user, and so production of less essential components was outsourced to specialist companies. Electronic assembly was outsourced along with a number of less important functions, and previous thoughts about such things as producing one's own speaker units or cabinets were set aside in favour of qualities that make a real difference to the user. Development work was now prioritized, and all resources were given over to building up expertise about the sound. And this gave results.


Computers are used to simulate and develop sound

One of the first tasks was to find out whether there is an acoustic connection between speakers that we like the sound of. To put it another way: Is it possible to find certain characteristics of good speakers? Can these characteristics be used in the development of future speakers?

Using a mass of data from the speakers, you get a list of the important properties and so-called targets can be prepared for the sound. This was the birth of a sonic brand. The database was gradually built



SA talent. It is the first speaker to use storytelling in the design.



SA saxo. The financial crisis creates a new family of loudspeakers.

up as more experiences were put into the system. You can say that the personal taste of hundreds of test pilots is as a guide in the search for the best sound. There was also an investigation into which sound characteristics of the speaker can make people tap their foot to the music. This is behaviour that is closely related to the feeling of being involved in the music.

A bold move against the tide

In 1996 the floor-standing speaker System Audio 1070 was crowned Product of the Year and this marked the beginning of a new era. This was the first computer-aided loudspeaker created with sound characteristics that the tests pilots like.

But the project was not easy.

Studies showed that loudspeakers with a controlled sound radiation are perceived as being more true to life, in comparison to speakers where no work was done on the sound radiation. Therefore there was a lot of work done on sound radiation on the 1070 model, which can be seen in such details as the special construction where the tweeter is located between two woofers.

The challenge is that commercially it does not make sense to work with sound radiation when it comes to the technical specifications. This is because loudspeaker manufacturers are not obliged to provide information about the speaker's sound radiation. Only few consumers will discover the speaker's particular strength. So it came as a great help that 1070 was named Product of the Year. The model has since been the

basis of many new generations of speakers from System Audio.

Iconic loudspeaker to mark the new millennium

System Audio launched into the new millennium with the new SA2K, a compact speaker with a number of innovations. The vision with the speaker was to demonstrate that it is possible to create big high-quality sound from a relatively small speaker. It took 5 years to develop SA2K and it ended up being called a "Masterpiece" and "World-class" in the international test magazines.

New name in 2003

In 2003 the launch of four new loudspeaker families (the 500, 1500, 700 and 1700 series) marked the transition to the SA name. Until then the speakers were called System Audio, but now the brand name was changed to the simpler SA. The path to the new name was a long one with many internal reflections, but one day it dawned on the people at System Audio that for years they had been calling their own products SA, so why not just make the name official? The four new speaker families launched along with the new name were a complete collection of all the experiences from the SA house and at the same time a new and important step was taken.

SA talent. A provocation to the established industry

In 2005 SA talent was launched. It was the first speaker with a real name and it was

put into the world with a mission. It was to show that consumers interested in design also wanted to buy good speakers. Design people had been neglected for years and only had clumsy-looking loudspeakers to choose from. At that time a wall-mounted speaker was not at all interesting for a so-called serious Hi-Fi enthusiast. There were stories circulating that it was acoustically unwise to hang a speaker on the wall and it was not accepted for serious Hi-Fi enthusiasts to have wall-mounted speakers.

In the real world, SA talent was a success. Thousands of design-interested music lovers took to the speaker and it became the longest-living product in SA's portfolio with sales in line with Danish design classics. The sound has been upgraded three times, but the design has not changed since its launch in 2005.

It is the first speaker to use storytelling in the design. Seen from the front, the speaker depicts a typical Danish sunset. The open skies. The calm sea. The SA brand is the sun.

Two floor-standing speakers create history

Two of the most ambitious floor-standing speakers saw the light of day in 2007. The SA ranger and SA explorer were built of specially developed parts and designed using extensive computer power to simulate and perfect the sound. Many test pilots tested the speakers during the development phase and know-how about sound radiation and wave guides was used in the most

advanced form. Both speakers used knowledge from the millennium speaker SA2K and the product names tell in their own way that there is something special going on here. SA ranger shows its confidence by being shaped like an exclamation mark. Both models were successful in all markets and SA explorer was crowned Speaker of the Year.

The financial crisis creates a new family of loudspeakers

Towards the end of the 2000s, several international markets were affected by the financial crisis, resulting in declining sales. System Audio decided to prepare itself for hard times. Therefore they launched the speaker family SA saxo. The speakers are a study in efficiency and manufacturing technology. The goal was to create a series of speakers for the economically minded music lover, without compromising the values that are the basis of the System Audio brand.

The name of the saxo family includes an ambiguity. For Saxo referred to the abbreviation System Audio X-over with the meaning "to cross over the crisis", but the person Saxo is also known as a historical personage in Denmark. He was the first to write down the history of Denmark. SA saxo was given a tremendously warm reception and took up all available capacity at System Audio. In fact, there was a failure to communicate the fact that the saxo family's success was partly due to a further development of the wave guide.

Mantra. The recipe for successful development

The four speaker families that were launched in 2003 were due a replacement in 2010. The replacement had been a long time coming, and for 7 years Ole Witthøft had gathered ideas for new speakers in a desk drawer. Now the drawer was full.

The essence of the development process is evolution. The idea is to build on ideas that work. A speaker such as the SA mantra 50, for example, borrows technology for the woofers from its more expensive predecessor, SA ranger. The structure that controls the sound radiation is an eighth-generation evolution of the design that has roots back in the other speaker models that also bore the number 50 (for example, SA 1250, 1550, 1750 and 2050). The Mantra models subsequently won six stars, and were the Test Winner, Best for Price and Best in Test in a number of tests all around the world.

The world's first loudspeaker to be developed in an open forum

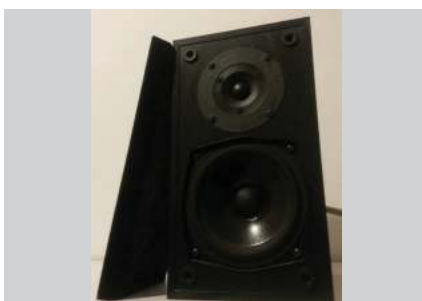
In 2012 Ole Witthøft opened the doors and invited readers of Denmark's largest science magazine The Engineer to an open development process that should end with a compact world-class loudspeaker. The goal was to spend one year developing the speaker in an open forum. It had to surpass SA2K, which in total took 5 years in the making in a traditional closed development process.

The project was set up as a blog with the name Speaker Q113 and engineers in



The SA mantra family uses reduction as a design philosophy both internally and visually on the loudspeaker. Simplification of details is thought to optimize the user's experience.

Timeline



1984

Ole Witthøft founds System Audio with the idea that good speakers should be based on a number of concepts. A system.

1989

Design is part of System Audio speakers as it is the design that gives the speaker the opportunity to be placed on a visible location in the room, where it will also sound the best.

1993

The loudspeaker model 905 puts System Audio on the international map and begin exporting to 20 markets.

1995

The development of System Audio as a sonic brand takes off. Test pilots are used to test the speakers to identify how people experience good sound.

1996

The speaker 1070 is selected as Product of the Year. This is a great achievement as it is created with sound at the centre.

2000

A completely different loudspeaker sees the light. SA2K is an innovation that provides inspiration for many upcoming speakers.

acoustics, mechanics, electronics, etc., could voluntarily participate in the project and make new discoveries. 110 engineers participated and the project tasks and results were shared in full transparency on the blog. The first result was the speaker SA pandion 2, which was placed in the category “Absolute Spitzenklasse” in a German test magazine.

SA pandion 30. Named after the osprey
Pandion is the Latin name for osprey. The loudspeakers from the open development project bear this beautiful name because they (like the bird) find nourishment from many different directions. SA pandion 30 is no exception. It was developed by Danish engineers in a community that openly shared the knowledge that arose in the project. The open collaboration led to several new discoveries and SA pandion 30 is among the first speakers developed with the help of trained testers from DELTA SenseLab. Almost all of the speaker parts are produced by specialist Danish companies and the design appears simple, functional and original.

Wireless speakers named Loudspeaker of the Year

In 2013 the first wireless speaker from SA was unveiled. It had been 4 years in the making and the electronic part of the speaker was developed in close cooperation between System Audio and a major international electronics manufacturer. Wireless music playback is growing at a

tremendous rate, but instead of quickly launching a lot of inexpensive loudspeaker products, Ole Witthøft and the SA team decided to go the opposite way. That is, spending time on creating a simple but also relatively expensive speaker product.

The philosophy works. The first wireless SA speaker was crowned Loudspeaker of the Year and was honoured (among other things) for its sound quality and high standard. Thus System Audio found a winning formula, and just one year later launched yet another wireless speaker, which was crowned Loudspeaker of the Year in 2015.

Cutting-edge technology

The wave guide. Simplification towards better sound

Having learnt from experience about the great importance of sound radiation for the perceived sound, at the beginning of the new millennium System Audio took a new step. This was the so-called wave guides, a bowl-shaped ring that fits around the tweeter diaphragm. It aims to control the sound radiation, so the user experiences the sound as cleaner and more nuanced. It was of great significance for System Audio to build its experience with wave guides, which became clear a few years later. First the established industry had to be provoked a little.

DXT. A further development of the wave guide

Diffraction eXpansion Technology is the name of the patented technology which

found its way into the SA saxo loudspeakers. DXT is a kind of wave guide which uses three so-called diffraction rings to give the loudspeaker better sound radiation. It is well recognized through proven research that the sound radiation is essential for the sound quality. DXT is a technology that helps speakers fill the room with sound. It has a Danish patent.



Future focus

System Audio is the only speaker brand founded by a musician. This means that the sound is central to the business and not just something that is measured and calculated. It is a valuable experience for the users. In the future there will be a greater use of mobile speakers, but there is also a need for the content and authenticity that only really good speakers can provide. SA will set the standard in both areas. ■



2007

SA ranger is launched and together with the SA explorer it is the first SA speaker that uses wave guides as well as a design that controls the sound radiation.

2009

The wave guide is further developed and given the name DXT.



2010

The speaker families' aura and mantra are presented as the best examples so far.

2012

The world's first open development project (Speaker Q113) is started by Ole Witthøft in the news magazine The Engineer and after three months wins the Bording Prize for Digital Media.



2013

SA presents its first active speaker, the wireless SA saxo 1 active. It is subsequently crowned Loudspeaker of the Year.

2015

SA pandion 30 is launched. This is a floor-standing speaker from the open development project, with 110 volunteer engineers taking part in the development work.