



Cinema Sound

"Only SA was able to deliver distortion free,
natural sound at all sound pressure levels."

Setting the right tone

From Cabinets To Ribbon Compact Drivers™

Founded in 1977, Stage Accompany (SA) from Ridderkerk in Holland, has become an internationally acclaimed manufacturer of high quality sound equipment. "The success of Stage Accompany is directly related to the unsurpassed performance characteristics and durability of the equipment that we produce. Along with the pursuit of excellence which governs the company's daily operations, the SA team comprises of bright and dedicated employees that all share a common fervor and passion for music."

Starting as a manufacturer of loudspeaker cabinets, including the well known "W-Bins" and "Slides", SA soon added professional amplifiers and the world's first programmable parametric equalizer to its equipment. Further dedicated to achieving first class quality in every aspect of their products, SA began to develop its own components in 1986. To this day, Stage Accompany holds to one of the tightest manufacturing standards in the industry.

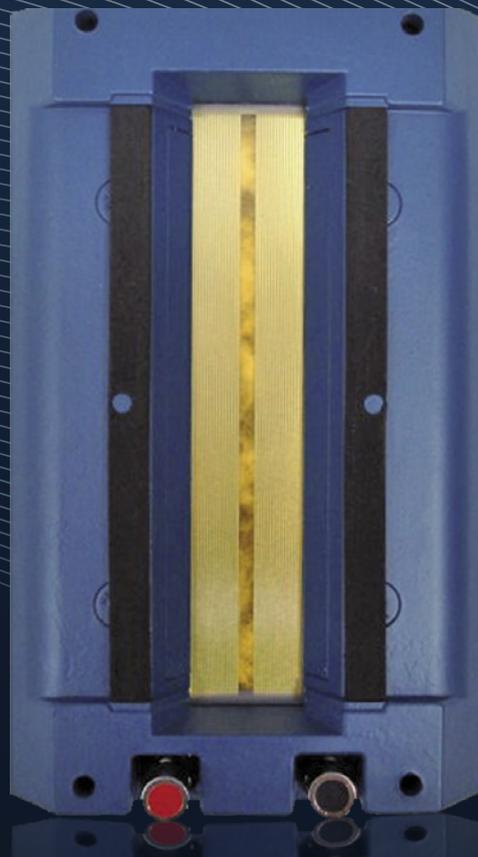
The award winning Ribbon Compact Driver, which will be introduced in the next section, is one such innovation which places sound by Stage Accompany in a league of its own. With its unique mid-range/treble reproduction and no discernible distortion, SA has achieved absolute hi-fi quality at unprecedented sound pressure levels.

Setting The Right Tone

High acoustic output, unequalled transient response, very tight and powerful low response for subsonic effects and many options for custom design have made Stage Accompany a leader in the field of professional sound.

SA's patented Ribbon Compact Driver

The SA Ribbon Compact Driver™ is characterized by excellent speech intelligibility and natural reproduction of music and sound. Harmonic distortions are so small that they are not discernible to the human ear. Instead of problems like listening fatigue, often associated with conventional systems, SA components provide great clarity and a wide dynamic range at any volume level up to 132 dB, and with SA's patented cooling "AIR-system", up to 142 dB. The SA Ribbon Compact Driver™ is the world's first and only mid/high transducer that produces completely natural, high definition and undistorted sound at these levels.



SA Screen Series

Such output capabilities with wide angle dispersion of sound in conjunction with minimal space requirements make the SA Screen Series the perfect fit for any size auditorium. Digital cinema sound, with its extended frequency range and greater dynamics, has raised the standards that cinema sound systems have to meet. Traditional horn loaded compression drivers are no longer up to the job

Integrated hardware and easy installation are the basis for a full range of products. In addition to the advantages of the Ribbon Driver, speakers of the SA Screen Series have a revolutionary Super Space Saving design. At only 9 inches (23 cm) deep, they can be flown 2 inches (5 cm) behind the screen, and often directly from the screen frame. Screen material resonance is never a problem because the acoustical reflex vents are placed on the top and bottom of the cabinets.

Complemented by SA surround cabinets and SA subwoofer speakers, amongst which is the first ever 9 inch deep (23 cm) bass cabinet from the SL-series, the Screen Series delivers all that today's complex film soundtracks, digital or analog, have to offer.

Stage Accompany's Direct Screen Series has been designed to get the best possible cinema sound, by placing the loudspeakers directly above and below the projection screen, instead of behind it. Through innovative use of Stage Accompany technology, the sound coming from the left, centre and right channels, is cleverly still perceived to be coming from where the action is: the cinema screen.



Without the interfering screen between loudspeaker and listener, cinema audiences can now fully enjoy a direct and un-muffled cinema sound and appreciate the precise sound balance as the filmmaker intended it. Fitted with Stage Accompany's patented Ribbon Compact Driver for mid/high frequencies, the Direct Screen Series offers an unsurpassed clarity and speech audibility, preventing listening fatigue.

At the heart of the Direct Screen Series lies the specially developed loudspeaker DS24, three of which are placed directly above and three directly below the screen. With a height of just 35 centimetres, they leave plenty of room for a big projection screen. Bass comes from the SSB36 subwoofers, which are placed beside the DS24 loudspeakers on the floor of the auditorium, while surround speakers are mounted on their regular positions on the side and back walls of the auditorium.

Additional bonus of this set-up is the extra auditorium space that is obtained by placing the projection screen further back, enabling the exhibitor to install an extra row of money making seats. Equipped with Stage Accompany's Direct Screen Series, cinemas can now also be fitted with non-perforated projection screens. These are not only cheaper, but also markedly improve the on-screen resolution and the light yield. This is advantageous for the latest generation of digital cinema projectors and prepares auditoriums fitted with the Direct Screen Series for 3D cinema in the EXP norm.

How it works

Compression based drivers, in use with minor improvements for 75 years, work according to a simple principle. The loudspeaker is coupled to a chamber with a very narrow opening that is smaller than the cross-section of the loudspeaker. Compression is induced when the cone moves and greater efficiency thus achieved. By adding the horn as “acoustic transformer” with yet an even higher ratio between initial and final cross-section, sound levels are further increased but so is distortion.

The patented SA Ribbon Compact Driver™ on the other hand uses a “diaphragm” that generates the sound and transfers it directly to the ambiance. This professional ribbon driver is powered by Neodymium structured magnets and enables the user to produce a distinctly clear and clean sound avoiding the drawbacks of conventional Compression Drivers: “It won’t distort the music!”

Another striking difference is the way in which the diaphragm is driven. In a Compact Driver, the voice coil and the diaphragm are integrated instead of the voice coil driving a relatively heavy dome-shaped membrane. When parts of the diaphragm can no longer follow the forces applied to them it starts to vibrate at random. We have all heard the noise that sound experts call the “break-up phenomenon”. With the integration of the voice coil this disturbance is eliminated and the result is an extremely pure, undistorted sound and much better reproduction of the mid and highest frequencies.



SA Digital Series

High power and very pure signal amplification under heavy user conditions were the main goals in the development of the DS series amplifier range. These power amplifiers are built with an excellent sonic performance class-D design for increased efficiency by decreased weight and dissipation. With an output power exceeding 2500W @ 4 ohms per channel, a S/N ratio of more than 110dB and a THD percentage of <math><0.007\%</math> @ 1kHz (100W, 8 ohms). The DS50 combines (sound)quality, power and very low weight into one unit. The SA digital amps are among the best performing amps on the pro-audio market!

Dynamic Damping Control

An important feature is Stage Accompany's Dynamic Damping Control (DDC™) system, with which a very high damping factor is being realized (10.000 @ 1kHz). The result is even more remarkable in combination with a Stage Accompany “DDC prewired” loudspeaker system. This unique circuit compensates for the cable and connector resistance, which can be enormous when long loudspeaker cables are being used (lengths sometimes exceeding 50 meters, 164 feet).

The result is an extremely tight and accurate bass and mid response, in combination with a “DDC-prewired” loudspeaker system. Furthermore, with “DDC™” both linear and non-linear distortion are reduced substantially. The amps can also be used on a normal, not DDC-prewired loudspeaker.

Active Clip Eliminator

Also built into the DS50 is our Active Clip Eliminator (ACE™), a circuit that constantly monitors all outputs of the amplifier for continued clipping.

When clipping is detected, the related input is inaudible reduced to the safest maximum level in order to prevent harmonics from damaging the high frequency drivers, to maintain the amplifier's sonic quality and to prevent thermal shutdown.

Together with the SA Cinema Series and the DS50 amplifier is an uncompressed 1:1 reproduction of the film soundtrack, digital or analog, from the most delicate vocals to the largest explosions obtained.



S26



S27



SL30

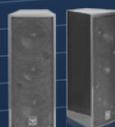


SL15



SSB36

SSB18



S7



DS24

Cinema range

- * S 26 Full range cinema system, frequency range 35 Hz – 35 kHz (+/- 3 dB), SP Lmax 130 dB@2000W peak,
- * S 27 Full range system, frequency range 35 Hz – 35 kHz (+/- 3 dB), SPL max 125 dB@1000W peak,
- * SL 15 Subwoofer, frequency range 39 Hz – 100 Hz (+/- 3 dB), SPL 125 dB@1000W peak,
- * SL 30 Subwoofer, frequency range 39 Hz – 100 Hz (+/- 3 dB), SPL max 131 dB@2000W peak,
- * SSB36 Cinema subwoofer band-pass horn design, SPL 142dB @ 4000W peak
- * SSB18 Cinema subwoofer band-pass horn design, SPL 136dB @ 2000W peak
- * DS24 Full-range Direct Screen cinema front system, without the interfering screen between loudspeaker and listener .SPL 128dB @ 2000W peak.
- * S 7 Surround loudspeaker, frequency range 80 Hz – 20 kHz (+/- 3 dB), SPL 116dB @ 300W peak.

Where We Are

Stage Accompany exports to more than 30 countries worldwide. SA systems are used in cinema's, recording studios, clubs, theaters, for stage shows and live concerts.

The list of impressive clients includes music experts as diverse as the pop-rock artist the Artist (FKA Prince), the "Blue Note" Jazz Café and the Vivian Beaumont Theater at Lincoln Center in New York. In this multiple usage performance space, SA loudspeakers are installed as part of a customized acoustical reworking, with a process called "System of Improved Acoustic Performance." Just one example of SA's presence on Broadway.

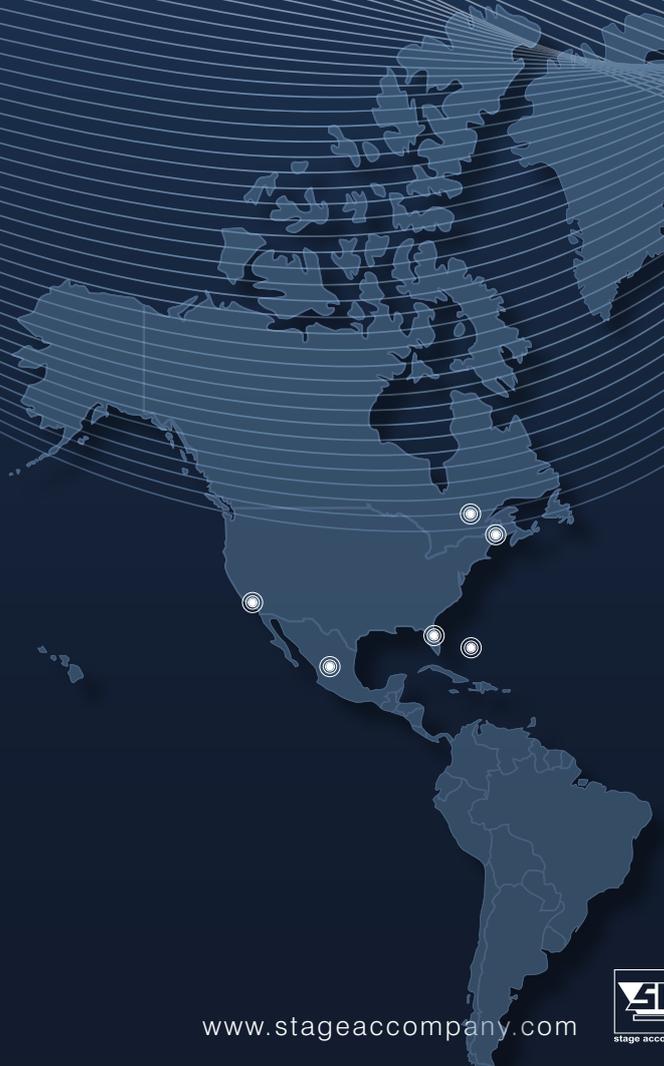
Euro Disneyland in Paris installed SA speakers, as well as the Ponte Negra Amphitheatre in Manaus, Brazil, that has room for some 100,000 people. Stage Accompany equipment can also be found at the Royal National Theatre in London, at all Café Iguana restaurants and clubs in Florida and in the Panavision Studios in Hollywood, as well as Warner Bros. Studio facilities.

Coming To A Cinema Near You

In addition to an exclusive agreement with the Pathé Group (formerly MGM Cinemas) in Holland, the Multicines Fuenlabrada in Madrid, Spain, the UFA Savoy in Düsseldorf, Germany, United Artists theatres and Malco theatres in the United States and many other important international installations. Products from the SA Cinema Series have been installed during the renovation of the historical 2,000 seat Pathé Tuschinski palace in Amsterdam to expand to 19 auditoriums.

Another high profile installation is the special screening auditorium at the Museum of Jewish Heritage (MJH) in New York that will continuously show testimonies to the terror of the Holocaust. Director Steven Spielberg took the initiative of filming more than 50.000 concentration camp survivors and had their story recorded as a "living memorial" to future generations.

The Screen Series is experiencing a strongly increased interest worldwide, because of the completely new approach to cinema sound; Not based on a modified PA system, but a truly dedicated cinema sound system bringing the best out of the digital movie soundtrack.



What our customers say

With a market share of 30 to 35 % throughout the Netherlands, the Pathé Cinemas Group (formerly called MGM Cinemas) is the largest organisation in the country and made an exclusive commitment to the Stage Accompany product line. Ronald Rosbeek, former engineer in charge of technical installations, now partner in Movietech cinema supplies: "Especially the speech intelligibility plays a major role

in cinema. During the scenes with machine-gun bursting and explosions that were in our test film, only the SA speaker reproduced the dialogue so clear that you could actually hear what is being said. In our opinion, the SA system distinguishes itself from the other sound systems because it was able to deliver distortion free, natural sound at all sound pressure levels."

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Wolfgang Burkhardt heads the technical department of UFA Theater AG, the largest organisation in Germany with almost 500 screens in 85 cities:

"In comparison to traditional horn-based systems the innovative Compact Driver revealed three advantages.
1.) Dialogue becomes more clearly audible, especially in conjunction with complex sound signals, so that the spoken word can clearly be distinguished and understood, in spite of heavy sound effects and loud music.
2.) High frequencies are evenly distributed throughout the

entire auditorium, including the "last corner", without ever being too "loud" or too "low".

3.) The Compact Driver allows high volumes to be transmitted without the side effects encountered with horns, which often "compress" the sound and make sentences sound nasal. The SA speaker concept is convincing both in terms of its technical features and tonal qualities."



After a successful launch in the U.S. and European countries, Stage Accompany is rapidly expanding its presence in the global film market. The introduction of a series of cabinets and truly dedicated theater sound systems is received with great interest by the cinema sound and technology experts and theater operators. As a result of the serious interest in SA's Ribbon sound quality from leading studios worldwide, the Master Series studio monitor is designed for a similar sound experience.



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SA Dealer

www.stageaccompany.com

Head Office Haven 28 | 2984 BR Ridderkerk
+31(0)180 426 225 | info@stageaccompany.com
Sales | Service +31(0)6 519 23 630 |
g.vermeulen@stageaccompany.com



www.stageaccompany.com

