

soundings

1/03

Volume 6

Ricky Martin at

Pavarotti & Friends

 **SENNHEISER**

Editorial



Dear Reader,

A number of new and exciting things are happening at Sennheiser, and Soundings has been given a fresh new look to correspond with our recent changes. Our new corporate design reflects how we see ourselves: a thriving company that strides into the future with flair, innovative ideas and efficient marketing.

And this is confirmed by the market: at our recent balance sheet press conference we were once again able to announce healthy growth for our company – in spite of a difficult overall business climate and unfavorable exchange rates.

New products, new projects. Let yourself be inspired by the stories in this issue, let them take you to the major stages of the world, to gala awards ceremonies, to the Swiss “Mystery Park”, to an air rally over France and the deserts of Africa – or, if you prefer, to a trip around the world.

Enjoy reading this latest issue of Soundings.

Yours,

Rolf Meyer
President Marketing and Sales

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Continued Growth

For the Sennheiser Group, 2002 was once again a year of strong growth. The Group was able to increase sales by 0.7% to 229.1 million euros, despite the difficult international economic situation and the unfavorable dollar exchange rate. "The Sennheiser Group had a successful year, even though we as an internationally oriented company with over 80% of our sales abroad are influenced by the dollar exchange rate," said Rolf Meyer, President Marketing and Sales, at the presentation of the Sennheiser Group's balance sheet on July 1 in Wedemark. "In the Asian and American markets, for example, we were able to achieve double-figure growth rates in the local currency, but these were almost entirely canceled out by exchange rate effects."

In Germany, Sennheiser went against the general market trend and achieved a growth in sales of 4.5% to 42.9 million euros, which was also due to the formation of Sennheiser Vertrieb und Service (Sales and Service) GmbH & Co. KG (see the complete story on page 30). Among those areas with increased sales volume was the Central Europe region, which increased by 4% over last year. America remained the largest and most dynamic market for the Sennheiser Group, with sales up by almost \$10 million US dollars compared to the previous year, although exchange rate effects resulted in a slight drop in the sales volume in euros. The second-largest sales region, Southern/Western Europe and Africa, lost one percentage point compared to the previous year. Sales in the Northern and Eastern Europe region, on the other hand, rose by 2%, while Asia and Australia saw an increase of 4% (13% in local currency).

Sennheiser Sound – Around the Globe The highlight of 2002 was without a doubt the launch of the new high-end radio microphone, the SKM 5000 N, which immediately became the star on stages throughout the world – whether it was at the Diva's Night in Las Vegas or at the Eurovision Song Contest in Riga. Radio microphones make up the largest share of overall sales at Sennheiser.

Investment in Human Resources and New Technologies The number of employees increased to 1,496, up 5.4% over the previous year, and mainly concentrated in the field of research and development. Optimization of manufacturing processes and progressive forms of work organization ensured a further increase in productivity and efficiency. The Tullamore plant opened a new factory building, thus almost doubling its previous capacity.

"Our positive results for 2002 demonstrate the strength of the Sennheiser Group," said Rolf Meyer. "Even against the background of a difficult world economic situation, we have been able to achieve growth in sales due to the optimum use of resources and targeted investment in the innovative power of the company. We remain one of the world's leading companies in audio technology. We use our strengths and our expertise to set new standards – for our customers."



Sennheiser presidents Volker Bartels (Production), Dr. Heinrich Esser (Research and Development) and Rolf Meyer (Marketing and Sales) at GISMA, the German International Graduate School of Management and Administration, during a course of the "Sennheiser Academy"

Welcome to Sennheiser Communications

Solrød Strand, near the Danish capital Copenhagen, is now home to a new high-tech company, Sennheiser Communications A/S, providing the world's multimedia and telecommunications markets with state-of-the-art headsets from its headquarters in Denmark. Sennheiser Communications A/S is a joint venture between Sennheiser electronic GmbH & Co. KG and the Danish company William Demant Holding A/S. The young company presented itself to the public for the first time at the CeBIT 2003 fair in Hanover. Beginning at the end of the summer, PC and office users will have the pleasure of using headsets supplied by the firm from Solrød Strand. In the fall, products for call centers will be introduced.

The product range sets new standards throughout the whole industry in terms of quality, design and comfort. It includes five different headsets for each of the three target markets as well as special universal interface units for office and call center applications that make it possible to switch back and forth between the telephone receiver and the headset or additionally between the telephone and the PC. Regardless of the headset model chosen, all are fully equipped with the outstanding audio quality of Sennheiser.

Celebrity at the Sennheiser Communications Booth One of the highlights of the CeBIT tradeshow was the visit of German Chancellor Gerhard Schröder. The Chancellor congratulated Jörg Sennheiser, Rolf Meyer, and Niels Jacobsen, CEO of William Demant Holding, on the successful design of the headset range, and stressed the importance of cooperation between the companies as Europe increasingly unites. "Our strategy of providing products for all requirements and all applications in this rapidly growing market has proven to be the right one," said Paul Whiting, Managing Director Marketing and Sales at Sennheiser Communications. He estimates the worldwide market potential for headsets to be around 5 to 6 million for call centers, 300 million for office users, and 400 million for PC and multi-media users.

Jeppe Dalberg-Larsen, Managing Director Operations, is convinced that Sennheiser Communications will gain a significant share of the headset market with this innovative portfolio. "Until now, the worldwide market has been dominated by two companies, one of them Danish and the other American. We are now setting a new benchmark for our competitors with our innovative products, high quality and modern design. Competition is good for business – and it's always the customer who benefits in the end."

[\[www.sennheisercommunications.com\]](http://www.sennheisercommunications.com)

Sennheiser Communications A/S

...was formed on January 1, 2003, as a joint venture between William Demant Holding A/S and Sennheiser electronic GmbH & Co. KG. The company headquarters are in Solrød Strand near Copenhagen, with the workforce largely comprised of staff from both companies. Sennheiser Communications benefits from the experience of both companies in audio technology, audiology and miniaturization. Sales are managed through the existing Sennheiser sales network.

William Demant Holding A/S

...was founded in Copenhagen in 1904. In the beginning, the company manufactured hearing aids only, but rapidly expanded its business activities into the fields of diagnosis technology and personal communication. The Holding is listed on the Copenhagen stock exchange and encompasses 45 companies in more than 20 countries. Sales in 2002 exceeded 500 million euros.



German Chancellor Gerhard Schröder (3rd from the right) talking to (from left to right in the foreground) Prof. Jörg Sennheiser, Rolf Meyer, and Niels Jacobsen, CEO of William Demant Holding, on the successful design of the headset range, and stressed the importance of cooperation between the companies as Europe increasingly unites. "Our strategy of providing products for all requirements and all applications in this rapidly growing market has proven to be the right one," said Paul Whiting, Managing Director Marketing and Sales at Sennheiser Communications. He estimates the worldwide market potential for headsets to be around 5 to 6 million for call centers, 300 million for office users, and 400 million for PC and multi-media users.

© Peter Schmalfeldt

Award for Communication Design

Sennheiser's Brand Book has received the coveted "red dot" award for excellence in communication design. With this prize, an expert jury has recognized Sennheiser and its advertising agency GRAMM in what is one of the most important design competitions worldwide. Competing for the "red dot design award: communication design 2003," were 1,182 participants from 19 countries, with a total of 2,686 entries, of which 181 were selected as winners.

The Brand Book was published in March 2003 when Sennheiser launched its new corporate design. The "oversized" book explains the basic brand values and expresses them in fresh, new ways.

In total, the international expert jury presented 157 "red dot" awards, 22 "red dot: best of the best" awards, one "red dot: junior prize" and one "red dot: grand prix." The official awards ceremony will take place on November 14, 2003 in the red dot design museum in Essen, Germany.



The "Blue Room:" sample pages from the award-winning Brand Book



reddot design award
winner 2003

“Pavarotti & Friends”



– A Concert of Superlatives

Pop meets classical music (l/r):
U2 front man Bono, Lionel
Richie and Eric Clapton were
among Pavarotti's guests



On May 27, the grounds of Novi Sad Park in Modena hosted Italy's biggest live event, "Pavarotti & Friends". Star tenor Luciano Pavarotti had invited top international artists to share the stage in his hometown and raise money for a good cause. Performing before an audience of 30,000 were Bono, Eric Clapton, Laura Pausini, Queen, Lionel Richie, Andrea Bocelli, Ricky Martin, Deep Purple and Zucchero. Those who were not lucky enough to get tickets for the night could watch the show on TV: RAI1 broadcast the concert to 10 million homes, while RAISAT reached another several million viewers.

Just as impressive as the line-up of artists were the microphones they used. The RF wireless Sennheiser/Neumann SKM 5000 N/KK 105 S microphones ensured optimum sound for the event. All background singers and instruments also relied on Sennheiser and Neumann microphones. The equipment and on-site technical support were provided by Exhibo. This long-standing Sennheiser partner remarked that even the artists who "normally use other mikes were enthusiastic about the wireless Sennheiser/Neumann microphone."

A medley of Italian songs performed by Pavarotti and Andrea Bocelli marked the beginning of the concert. Eric Clapton sang "Holy Mother," and Bono moved the audience with his version of "Ave Maria." As usual, the proceeds of the evening went to charity. The ticket sales alone brought in 1.1 million euros, the highest since the inception of the annual Pavarotti concerts ten years ago. In addition, TV viewers were asked to donate money. This year, the proceeds went to the UNHCR, the United Nations' refugee relief organization, whose campaign "SOS Iraq" helps Iraqi refugee families to return to their home country.

Good news for all who want to listen to the concert again: the CD/DVD will be available soon.

[\[www.pavarottiafriends.it\]](http://www.pavarottiafriends.it)
[\[www.lucianopavarotti.com\]](http://www.lucianopavarotti.com)

Pavarotti & Friends –
the microphones:

- 15x SKM 5000 N/KK 105 S with EM 1046 and EM 3032 receivers
- 6x SK 50 with EM 3532 receivers
- 20x e 604
- 10x e 608
- 10x e 609
- 10x e 602
- 6x MD 421
- 15x e 664
- 6x KM 184
- 4x MKH 40

"I would always sing for children in need."
Superstar Ricky Martin was delighted to be part of the charity event

Mystery...

...is in the air at the idyllic Bernese Oberland. Against the backdrop of the magnificent Swiss mountains, pyramids and megaliths tower up into the sky and a futuristic spherical structure, which at first glance doesn't really fit into the tranquil landscape, stands in solitary splendor. Here in Interlaken, cult author Erich von Däniken presents the unsolved mysteries of mankind, following the theories in his books.

Seven pavilions connected by a covered glass walkway contain a total of 49 mysterious structures and buildings from the past, with explanations of different theories about their purpose. For example, visitors can fly over Nazca in Peru and see the lines and drawings of animals and gods which are only visible from a bird's eye view. They can visit the tomb at Palenque, see a fantasy lightshow in a reproduction of Stonehenge and come to their own conclusions about whether the human race is the only intelligent life form in the universe or whether, in line with von Däniken's theories, we have already had visitors from space whom our ancestors thought were gods.

In his adventure park, which cost 86 million Swiss francs, von Däniken has brought all the strange phenomena in the world together in one place. And of course the technology is second to none: a Sennheiser GuidePort™ system brings the miracles to life. Sennheiser's Swiss distributor Bleuel Electronic AG installed the state-of-the-art system, consisting of 84 dual cell transmitters which store the audio information for the park and around 80 identifiers, which ensure that the right audio information is played to each visitor. One of Erich von Däniken's main concerns was that people from all over the world should be able to learn about the exhibits in the park. Therefore, the visitor information is available in fifteen languages, and 9,000 receivers are ready to accompany the visitors through the park. The flexibility of the GuidePort system is a huge benefit for von Däniken. His books (of which more than 50 million copies have been sold worldwide) describe a large number of additional mysteries, which could be quickly and easily integrated into the system if the "edutainment" park were to be extended.

[\[www.mysterypark.ch\]](http://www.mysterypark.ch)



From a model...



...to reality: the Mystery Park in Interlaken

Erich Anton Paul von Däniken...

...was born on April 14, 1935 in Zofingen, Switzerland. At a young age he was interested in space travel, archaeology, futurology and the philosophy of religion. He worked initially in the hotel business, but continued to study in his spare time, and as a result developed the theory that extraterrestrial astronauts had made contact with people on earth in the distant past. On his extensive journeys around the world, he collected facts

to support his theory. In 1968, his first book "Chariots of the Gods" was published and became a best-seller, and in 1969, a film was made based on the book. In the 1970's, von Däniken's books were very popular and sold like hot cakes. His work regained its popularity in the 1990's, due to television exposure. Erich von Däniken's 20 books (including "The Gods were Astronauts," "Signs of the Gods," and "In Search of the Gods") have been translated into 28 languages.

The Longest Air Rally in the World

In October 2002, pilot Barbara Friedenberg, competing under the name “Sennheiser”, participated in her seventh Toulouse, St. Louis (Senegal) air rally. Barbara and Angela Fuchs-Bletzinger were the only all-women team out of the total 25 in the competition. They achieved an excellent fourth place, which is their best result so far in the rally.

To mark the 20th anniversary of the air rally, the route on the outward stretch was changed. Instead of following the coast of Mauritania as far as Saint Louis, the pilots flew to Atar in the interior of the country and then flew on to Senegal the next day. For the pilots this meant that they could only communicate with one another on the rally radio frequency. They had no flight plan, no air radio service and no special long-range emergency transmitter. There was nothing but baking sun and sand, as far as the eye could see. Their reward on landing was a trip to the nearby desert town of Chinguetti, which has a famous Koran library.

During the rally the pilots had to solve difficult problems. Questionnaires tested them on their specialist knowledge about navigation, Senegal and the history of French post office pilots, while point landings, timed over-flights and estimation of angles during over-flights demanded excellent flying skills.

The weather smiled on the rally participants. Even over the Sahara they did not encounter any sandstorms. Only on the homeward flight was there “traditional” bad weather over Europe, including storms and torrential downpours, which forced them to land in Almeria in Spain. After the weather front had passed over, they headed along the Spanish coast towards Toulouse, where the rally ended successfully despite continuous heavy rain.



Over the Sahara



Girl power – Barbara Friedenberg and Angela Fuchs-Bletzinger with their Robin 118. Also on board were Sennheiser headsets

Riga in Song Contest Fever

On May 24, 2003, millions of music fans around the world turned their eyes – and ears – to the Latvian capital of Riga. The former Hanseatic city hosted the 48th Eurovision Song Contest, the world's greatest live music broadcast with an estimated audience of 150 million viewers. Latvian television relied on microphone and in-ear monitoring technology from Sennheiser to ensure that this mega-event, the biggest in their history, went off without a hitch.

"It's already the 18th time that we are supporting the Song Contest," said Rolf Meyer, President Marketing and Sales at Sennheiser. "We are very proud of this continuity; as such a gigantic media occasion is a great challenge. But the organizers know from experience that they can rely 100 percent on our expertise and our audio technology." Supported by Swedish Television SVT, the designers from Latvian Televi-

sion conjured up a truly magnificent stage in the concert hall of the Skonto Olympic Complex. With stars twinkling overhead, the artists performed, and were introduced by the previous year's winner Marie N and the popular Latvian singer Reynard Cowpers. While the points were being awarded, the stage "opened" to show the artists as they sat on cloud-shaped sofas, nervously awaiting the verdict.

The voting process proved to be exciting until the very end. Belgium, Russia and Turkey were all very close, and the decision came only when the final votes were cast: Turkey was the winner with 167 points, ahead of Belgium (165 points), and the favorite Russian pop-duo t.A.T.u. (164 points). In the end it was Sertab Erener who charmed the millions of viewers with "Everyway That I Can," Turkey's first-ever performance in English. See you next year in Istanbul!

Since 1956...

...the Eurovision Song Contest – or the Grand Prix d'Eurovision de la Chanson – has been followed by an ever increasing TV audience. On May 24, 1956 in Lugano, 14 European countries took part in the song contest; 47 years later, in Riga, the circle of competing nations had grown to 26. The unbeaten Grand Prix kings are the Irish, who have already won the coveted title seven times. Since 1999, tele-voting has replaced the jury voting system, and the language rule has also been completely abolished, allowing each country to sing in any language they choose.

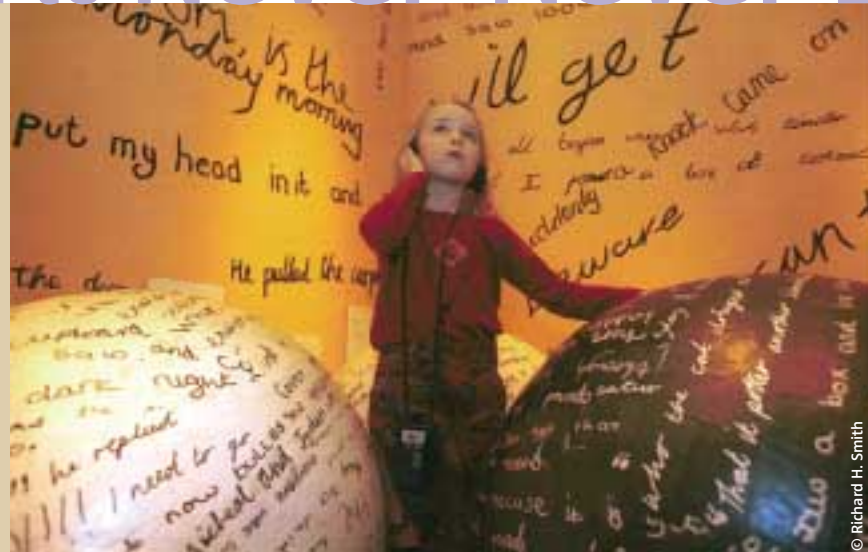


The representative of Turkish pop has a huge following back home: the winner Sertab Erener

Expedition to Never-Never Land

A childhood hero was the focus of the first GuidePort™ installation in the UK: Peter Pan.

During the one-month run of the musical "Peter Pan, A Musical Adventure," hundreds of people visited the "Peter Pan Experience" in London's Royal Festival Hall each day. According to Rachael Harris from the Royal Festival Hall, "GuidePort presented a fantastic opportunity for us to devise an installation which gave the public an opportunity to truly interact with an environment which was inspiring, challenging and hugely enjoyable."



© Richard H. Smith

London schoolchildren helped design the Peter Pan experience. Together with designer Jonathan Reid, composer Paul Clark and storyteller Sandra Agard, they created a narrative and educational audiovisual environment to take both children and adults on a fantasy journey to Peter Pan's Never-Never Land. Orbital, one of the UK's leading suppliers of sound and communications solutions, installed the GuidePort visitor information system. Fifty unobtrusive identifiers ensured that the visitors' receivers played the corresponding text for each area of the exhibition. Six dual cell transmitters, which stored the audio information, sent the text to the compact receivers. The result was an experience for all of the senses.

[\[www.rfh.org.uk/peterpan\]](http://www.rfh.org.uk/peterpan)



The Russian pop duo t.A.T.u.



Pure enjoyment

Wings Around the World II

On Monday, May 26, 2003, at 9:00 am, an overcast Norwegian spring morning with temperatures above freezing at Longyearben airport, a woman in red overalls, Polly Vacher, a British pilot, crosses the airport, obviously very busy. She has a great adventure ahead of her.

In 2001, she was the first woman to fly around the world in a light aircraft. Now the globetrotting Brit has an even more difficult task: to fly longitudinally around the world crossing the North and South Poles. Polly is entering new flying territory, as never before has anyone attempted to fly alone around the world in this direction in a single-engined light aircraft.

Motivated by her goal of recruiting as many people as possible for a good cause, Polly Vacher is not afraid of a challenge. On this second flight around the world, Polly is once again raising money for the Royal International Air Tattoo Flying Scholarships for the Disabled, an organization that helps the physically disabled regain the courage to cope with life by offering them flying scholarships.

Hundreds of names are written on the wings of her little Piper Dakota, and every one of these people has donated £25 to Wings Around the World. Large sponsors, including Sennheiser, are providing additional financial support.

Until she returns to Britain in early 2004 after 30,000 miles in the air, Polly's everyday routine will probably consist of turbulence, ice on the wings, and problems with customs. But the most important aspect of her trip is timing, because the Piper Dakota has a maximum range of 3,800 km on one tank of fuel. Also, it is only possible to cross the poles safely during the "summer months" in each hemisphere. For updates, you can follow Polly's exciting journey at www.worldwings.org.

Prince Charles is fascinated by the many names on the wings of Polly's Piper Dakota



Akira Shimura

New Address

Panter s.r.o., the Sennheiser distributor in the Czech Republic, is making a fresh new start in its second Sennheiser decade. In January, the company moved to Bohuslava Martinů in Prague, a symbolic street name, because Bohuslav Martinů, one of the most



Bohuslava Martinů 1 in Prague:
Panter's new musical address

famous Czech composers of the 20th century (his works include "Mirandolina" and "Half-time"), is almost like a patron saint for musicians and music lovers.

"The move has allowed us to enlarge our business significantly," says managing director Jaromír Tužil. "We now have enough space to display all the products and brands that we sell." Along with Sennheiser and Neumann, the company also distributes products made by Elac, König & Meyer and Marantz Professional.

"The sound quality of Sennheiser wireless systems is great, and the performance is outstanding. I have full confidence in the products and technical support offered by General Traders," ...

...says Asia's most famous sound designer. From an early age Akira Shimura, born in Tokyo, knew that he wanted to work in the music business. He studied sound technology, played in a band and soon became interested in live sound. At the age of 22, he founded a company with his friends, providing sound engineering for concerts and in studios. In 1990, producer Makoto Kubota introduced Akira Shimura to important Asian artists – and the sound designer began to expand his working "territory" to almost all of Asia. Today, Akira Shimura is president of Star-Tech Inc. and the person that leading Asian producers, including Tetsuya Komuro and Takeshi Kobayashi, turn to. He also mixes for top Japanese groups such as "Globe" and "Mr. Children" – and always has his Sennheiser microphones with him.



Akira Shimura – great sound guaranteed

“Peranakan Legacy”

The First GuidePort Project in Asia

Imagine a museum visit that is different: you are walking through an exhibition at your own pace, you don't have to follow any particular sequence and can stop where you want – and have everything explained to you by a Hollywood star. Sound too good to be true? On July 31, this dream came true for visitors to the “Peranakan Legacy” exhibition in the Asian Civilisations Museum. On that day, the Singapore museum, the Peranakan Association, the Singapore Tourism Board and Sennheiser Electronic Asia celebrated the installation of the first GuidePort™ system in Asia. The Singapore TV star Neo Swee Lin, who starred in the Hollywood production “Anna and the King,” lent her voice to the exhibition recordings and narrations. “The Asian Civilisations Museum is excited about bringing this whole new dimension in museum experience to our visitors,” enthuses Museum Director Dr. Kenson Kwok. “Not only can visitors see the artifacts, they can experience the culture – its language, music and stories as they explore the galleries. With Sennheiser’s technology, we are able to bring the visitor experience to a higher level.”

It all started when the Singapore Tourism Board invited local companies and the tourism industry to work together to bring modern museum technology into Singapore’s tourist attractions. The obvious solution for the Asian Civilisations Museum and its partner Sennheiser Asia was to give a demonstration of a GuidePort installation. Their joint project received immediate approval from the board. Financed by the Singapore Tourism Board and the museum itself, and sponsored by Sennheiser Asia, the priceless permanent exhibition “Peranakan Legacy” can now be viewed in a new interactive way.

Items made of silver, exquisite clothing and fabrics, pearl artwork and valuable jewelry are used to illustrate Peranakan culture. Some of the exhibits come from the museum’s own pearl, embroidery and batik collections. The breathtakingly beautiful porcelain and silver pieces come from the Mariette collection, one of the best-known collections of Peranakan art.

GuidePort allows visitors to listen to fascinating stories and anecdotes, including tales about Peranakan life and weddings. The Peranakan culture is well known for its wealth of wedding traditions. The exhibition organizers have even provided information about where you can purchase the much desired Peranakan garments and how to care for them. The exhibition is a true feast for the eyes, ears and heart – thanks to GuidePort.

The Peranakans...

...are a Chinese-Malay people. As the result of a growth in trade between China and Malaysia/Indonesia in the 15th century, a large number of Chinese merchants traveled to the Malaysian archipelago and married local women. During the 19th century under British colonial rule, another wave of immigrants arrived and there was more intermarriage between the two groups. As a result, a new ethnic group developed, called the Peranakan. Some Peranakans speak Chinese dialects and others speak Malay with many Chinese loan words. Unlike the Malaysians, Peranakans are not Muslims. They still follow the traditional Chinese religions.



Swee Fook Ho, President of Sennheiser Asia, congratulates Lee Kip Lee, President of the Peranakan Association, on the opening of the “Peranakan Legacy” exhibition



Happy Birthday, Johnny!

On June 15, the French megastar Johnny Hallyday celebrated his 60th birthday. True to his rock legend status, the celebrations included a series of concerts performed for enthusiastic fans.

More than 40 years ago Jean-Philippe Smet, who took the stage name Johnny Hallyday, had his big breakthrough with "Hello! Johnny." His songs, in the style of his hero Elvis Presley, caused mass hysteria in France in the 1960's. His amazing career and unbelievable popularity are reflected in sales of 100 million albums, 400 tours and about 70 gold and platinum disks. At his legendary anniversary concert at the Eiffel Tower in Paris on July 10, 2000, Hallyday performed before half of a million devoted fans, while millions more watched the spectacle live on television. He is also in demand as a character actor in films and television, and has appeared with Lino Ventura, Mario Adorf, Jean-Paul Belmondo, Beau Bridges and Isabelle Adjani.

The rock idol has been using Sennheiser microphones for many years. This makes Sennheiser France very proud, because "Johnny is one of the few true superstars." Rolf Meyer, President Marketing and Sales of the Sennheiser Group, was very happy to be able to present Johnny Hallyday with two gold-plated SKM 5000 N microphones shortly before his anniversary appearance on stage.

[\[www.hallyday.com.fr\]](http://www.hallyday.com.fr)



Recognition of a brilliant career. Rolf Meyer presents Johnny Hallyday with two gold-plated SKM 5000 N microphones



A special microphone for a special artist

Arab Summit Uses Sennheiser Technology



The conferencing and transmission technology offered by the Egyptian Sennheiser distributor, Technology K.A.R., has always been in demand for large-scale meetings in the Arab world. Sennheiser technology once again played a role at the spring summit in Sharm El Sheikh, where representatives of 22 countries discussed the important issues affecting the region. In addition to an iCL conference system, Technology K.A.R. installed an infra-red system consisting of SZI 1029 high-powered radiators and SI 29-5 five-channel modulators for the interpreters, who were responsible for four different languages. Each of the 130 conference participants used HDI 1029-8 stethoset receivers to hear the speeches.

The Little Prince

Antoine de Saint-Exupéry's "The Little Prince", a book that has captured the hearts of millions of readers throughout the world since its publication in 1943, has been transformed into an enchanting musical by Richard Cocciante.

Many people will remember Cocciante as the composer of the score for the successful musical "The Hunchback of Notre Dame." With "The Little Prince," he has once again succeeded in adapting a great French literary work into a musical. Elizabeth Anäis was responsible for writing the musical and Jean-Louis Martinoty was in charge of the production. The musical, which has intentionally been staged like a play, can be seen at the Casino de Paris, a theater which retains its true old-fashioned charm.

Squelch, a Paris-based company, was commissioned to select and provide the microphones and the RF wireless systems. They also handled the frequency planning for the musical, and were responsible for mixing and monitoring in the theater. According to Frédéric Braun of Squelch, "The use of in-ear monitoring allowed us to improve the sound quality considerably. We were able to capture the atmosphere of the stage perfectly using omni-directional microphones and this also reinforced the deliberate theater effect."

Squelch chose the 3000 Series EK 3053-U bodypack receivers and SR 3056 twin transmitters for in-ear monitoring. SK 5012 bodypack transmitters transmit dialogue to EM 3532 receivers. "The transmitters are not only very light and very small, but the audio quality is also much improved," says Frédéric Braun. "We carried out a range of tests with other transmitters, but the SK 5012 has a rounder, more pleasant and more dynamic sound."

The story of the little prince can now be seen on the stage, with a simple set consisting of Saint Exupéry's drawings. The focus is on the words and the music: there are no overblown effects which might distract the audience from Saint Exupéry's moving message.

[\[www.lepetitprince.com\]](http://www.lepetitprince.com)

The pilot and the little prince



Divas 2003



VH1's "Divas Duets" paired the sensual Ashanti with the high-energy Ron Isley (The Isley Brothers)

VH1 brought the biggest line-up of stars so far in its Divas series to the small screen when "VH1 Divas Duets: A Benefit Concert for the VH1 Save the Music Foundation" aired live from the MGM Grand in Las Vegas on May 22. Hosted by Queen Latifah, the show featured many of the world's leading divas with several of their male counterparts – and two dozen Neumann KK 105 S/Sennheiser SKM 5000 N wireless microphones.

Show producers once again called upon Kevin Sanford, owner and founder of Wireless First, the 'go-to' company for many top television productions, to provide the RF systems equipment and coordination for the show. The theme of the show required large numbers of wireless systems. "It was all duets," notes Sanford, "which is why there were so many microphones. None of the artists wanted to 'share' mikes so we dedicated a particular mike to each artist." Those using the hybrid Neumann/Sennheiser microphones included Céline Dion, Whitney Houston and Bobby Brown, Ashanti, The Isley Brothers, Pat Benatar and host Queen Latifah, as well as presenter Sharon Osbourne.

All in all it was a busy show for Sanford, who coordinated all of the wireless in-ear and production staff intercom systems for the event in addition to the microphone systems. With so much RF flying around, he made sure to use Sennheiser gear in mission critical locations. "I used Sennheiser equipment with Sharon Osbourne for all her interview segments. I needed that because they wanted it to work everywhere – backstage and front stage. I had to split an antenna system up with a switcher so that any time they went to the backstage area I went to another antenna. That way I had coverage everywhere."

Finding sufficient workable frequency bandwidth to operate without interference can be a problem in any major city, and this was no exception, but as Sanford observes, "Vegas is preferable to New York. It's not as bad, although it's getting there. But no matter what you do, you still run out of spectrum at some point."

Divas are divas, which means that production staff is often in the dark as to who is performing in the show until the last minute. With the potential line-up in flux right down to the wire, Sanford has not only to stand on his toes for changes but also keep bandwidth and RF channels available for everyone. "You never really know until the end who is going to perform with who," he says. "Whoever happens to be in town may stop on by. Things change up to the last minute."

This year, leading up to the "Divas Duets" special, VH1 presented a reality-based series "Born to Diva," a competition that sought out the next potential diva from hundreds of aspiring amateur performers. The three finalists were also present at "Divas Duets."

VH1's "Divas" specials raise funds for the VH1 Save the Music Foundation, a non-profit organization dedicated to restoring instrumental music programs in America's public schools. Since VH1 Save the Music was created in 1997, more than \$25 million worth of musical instruments has been donated to 1,000 public schools in 75 cities, improving the lives of more than 500,000 children.

[www.vh1.com/shows/events/divas/2003]

Sennheiser at the "Super Bowl XXXVII"



Gwen Stefani and Sting, who opened the halftime show, with the SKM 5000

© ImageDirect (2)

On January 26, almost 900 million people around the world watched the broadcast of the 37th Super Bowl. In the Qualcomm stadium in San Diego, California, the Oakland Raiders clashed with the victorious Tampa Bay Buccaneers. This is an event that not only keeps millions of American football fans on tenterhooks, but also makes the hearts of music fans beat faster, because superstars traditionally give performances both before and after the show as well as during the halftime break.

The RF Challenge The pressure on the organizers grows each year as the number of viewers increase. The organizers' PA company, ATK Audioteck, entrusted the radio transmission for both the microphones and in-ear systems during the music shows once again to James Stoffo of Professional Wireless Systems (PWS). "We've been using Sennheiser exclusively for at least the last four Super Bowls," states Stoffo. PWS put together a system that cut through the 1,200 ENG crews, the RF systems for network TV presenters ABC, CBS Radio and NFL Films and the radio systems for the coaches and the referees. "There was a ton of RF on the field that day," observes Stoffo. "I had a total of fourteen EM 1046 receivers and eight in-ear transmitters. These needed to work with over 34 RF intercom frequencies used for production, audio and lighting for the show. In addition, there were several high-power VHF links to feed audio to various areas where cabling would not have worked. In all, I ran over 70 frequencies through my intermod computer."

Stars on SKM 5000 Only Sennheiser RF microphones offer the reliability required for such a mission-critical event, Stoffo explains. "In that environment other wireless mikes just don't put out enough power. If you touch the antenna from other systems your body absorbs about 95 percent of the RF. That leaves no power to radiate. So I go with the higher output power of Sennheiser. You can touch the antenna on the Sennheiser and you don't lose the power output because the antenna is inside the case."

In the hands of Sting, Gwen Stefani (No Doubt), the Dixie Chicks, Shania Twain, Bon Jovi, Carlos Santana and friends, Céline Dion and the Goo Goo Dolls, Sennheiser's SKM 5000 high-end radio microphones, some of them with KK 105 S Neumann capsules, produced perfect sound.

James Stoffo explains, "The first time we used wireless in-ears was at half-time. The Sennheiser transmitters went into a combiner that we make that kicks up the power of the transmitter, combines it all onto one PWS helical antenna, and the result is that each transmitter is kicking out 250 mW, which is the legal limit in that band."

Everything under Control on the Football Field This was the seventh year in a row that ATK with its head engineer Andrew Waterman and freelancer George Mashonas had been responsible for the artists' PA and mixing. In order to capture the atmosphere in the stadium for the mix, ATK used Sennheiser MKH 416 shotgun microphones. "I put one on each of the four corners of the field. In the center I used pairs in an X-Y pattern," explains Mashonas, who is full of praise for James Stoffo. "ATK asked James to take one of his Sennheiser wireless mikes to be a back-up for the hard-wired mike at the Lombardi stand. Have you ever heard such a thing? Take this RF mike to be a back-up for a hard-wire! That tells you all you need to know: James is THAT good with that equipment." [\[www.superbowl.com\]](http://www.superbowl.com)



"The Star Spangled Banner:"
The Dixie Chicks sang the American national anthem



The RF experts from Professional Wireless Systems. From left to right: John Garrido, James Stoffo and Jason Eskew

The Czars

GuidePort Recounts 400 Years of Russian History



During the opening ceremonies



Students find exhibits captivating via Sennheiser's GuidePort system

Only two museums in the US were granted the honor of hosting the exhibition "The Czars: 400 Years of Imperial Grandeur". The Kansas International Museum in Topeka, where the exhibition was on show until the middle of March, carefully prepared for the arrival of the priceless exhibits from the Kremlin in Moscow. In order to avoid the problems of rewinding tapes for the audio transmissions, which occurred during the 1995 exhibition "The Treasures of the Czars," the museum managers decided to install a Sennheiser GuidePort™ system.

Betty Simecka, President and CEO of Cultural Exhibitions and Events, Inc., a Topeka-based company that assisted with the arrangements for the exhibition's Topeka stop, explained, "What we like about GuidePort is that it's state-of-the-art and is so much more convenient for our visitors because no one has to fool around with punching in numbers or pointing wands to get the right audio. I've been in museums where you have to walk clear around a display to find a number so you can punch it into an audio unit. With this system you don't have to think about these things, and you can stop where you want without going in any kind of order."

Using GuidePort, visitors to the new 30,000 sq. ft. museum could easily learn about the 267 artifacts in the exhibition. The exhibits ranged from insignias and state robes to icons, portraits, weapons and ceremonial horse equipage. Around 50 minutes of audio information brought the world of the Czars to life for the visitors. The exhibition galleries were divided into virtual "cells," each of which had its own transmitter that continuously transmitted the appropriate audio information. When a visitor entered the cell, his or her receiver downloaded all of the information pertinent to that cell and played it back in segments specific to a particular identifier, for example on a glass case. GuidePort's ability to provide live audio was demonstrated to its best advantage in a theater associated with the museum.

"One of the nice things about GuidePort is that we can constantly improve upon the narration in the audio tour, whereas with a cassette system we were more or less locked in to what was produced," said Simecka. "Using GuidePort you can also monitor the routes which visitors take and work out where you can improve the exhibition."

Although the Kansas International Museum "only" offered guided tours in a range of languages for the exhibition, which has now returned to Moscow, it plans to incorporate different levels of information for future projects. "We could develop narration aimed at children or even visitors such as university professors, who may want to have narration that goes much deeper into the subject matter than a narration designed for a general audience," explains Betty Simecka. "It's like having a private docent go through the museum with you..."

[\[www.kansasinternationalmuseum.org\]](http://www.kansasinternationalmuseum.org)



Your own private docent: as an exhibit is approached the GuidePort receiver plays the corresponding audio information

A New Star Is Born

Sennheiser will be presenting its high-end headphones – the HD 650 – at this year's IFA. Hand-selected, matched systems with the tightest of tolerances, harmonic distortion at a mere 0.05% and a frequency response of 10 to 39,500 Hz: the dynamic open HD 650 make a music lovers' heart beat faster.

Sennheiser's engineers and product professionals developed the HD 650 after intense consultation with high-end audio experts, sound engineers, trade journalists and internet forums. Their conversations revealed an interesting fact: that listening habits have changed. Even though music lovers still want perfect sound reproduction, most of them now prefer to "feel" the music rather than to analyze it.

The result was the HD 650 – headphones with a "soul" that captivate the listener with the ultimate in natural sound reproduction, while still maintaining absolute precision. More intensive system damping and a low-resonance, compressed cellulose fleece reduce standing waves in the diaphragm and permit an even more precise sound image, especially for bass sounds. Trebles sound pleasantly natural and voice reproduction is completely authentic, as well. These headphones express emotion, giving the listener the impression that they are part of the music. Sennheiser has created a new miracle in sound reproduction – the HD 650.



New evolution 800 Series Models

Sennheiser has introduced the new evolution 800 Series models, e 815 S, e 816 S and e 817, which are the most affordable way to enjoy the legendary sound of the evolution Series. The three new vocal microphones from the 800 Series (all with a cardioid pick-up pattern) offer an outstanding price/performance ratio and are optionally available with an XLR-XLR cable, an XLR-jack plug cable or a microphone clip. "Our 'newcomers' feature top quality and an even more affordable price," says Michael Polten, Industry Team Manager for the music industry. "And we offer different versions that take account of all our customers' wishes."



The e 815 S with a lockable, noise-free on/off switch is ideally suited as a speech or vocal microphone. Development was focused on ensuring the best possible quality at an extremely favorable price. The e 816 S, also with a noise-free, lockable switch, achieves excellent results on stage due to its high output power, while the e 817 features a balanced frequency response and high assertiveness.

Sennheiser Adds Top-End Models to Its Most Successful Microphone Series

The evolution 900 Series is Sennheiser's new range of professional stage microphones. Three wired models are available: the e 935, and the e 945 vocal microphones, as well as the e 903 instrument microphone.

"With the 900 Series, Sennheiser is offering an absolutely professional wired microphone series for use on stage – at an attractive evolution price," said Michael Polten, Industry Team Manager for the music industry. "These evolution microphones are of particular interest for rental companies and professional musicians. They feature an assertive and impulsive sound and have an extremely low risk of feedback thanks to their optimized frequency response."

The two vocal microphones are insensitive to handling noise and their full metal housing makes them tough enough to withstand the rough life on stage. The e 935 has a cardioid pick-up pattern, while the e 945 has a super-cardioid pattern.

The e 903 is ideal for a variety of instruments, but is particularly suited for miking snare drums. Its cardioid pick-up pattern picks up the full sound directly at the drum, while the frequency response supports the fine trebles. Further features of the e 903 include its high sound pressure capacity and its excellent transient response.



New Condenser Microphone Range

The latest range of Sennheiser microphones set new standards for both sound and size in the fields of sound reinforcement, conference and broadcast. The electret condenser capsules ME 34 (cardioid), ME 35 (super-cardioid) and ME 36 (super-cardioid/lobe) can be combined with a number of different goosenecks, table stands and a ceiling mount, giving users a wide range of installation options.

Despite the small size (8.2 x 96 mm) of the ME 36, it offers broadcast sound quality (40 – 20,000 Hz), high feedback rejection and a speaking distance of 30 to 120 cm. The capsules can be combined with six different goosenecks: the MZH 3015 which is 150 mm long, the MZH 3040 which is 400 mm long, and the MZH 3042 which is also 400 mm long, but has two gooseneck elements. They are also available in an L version with a red LED ring and an XLR-5 connector. A range of accessories are available covering every need. They include table stands and table sockets with XLR-3 or XLR-5 connectors, optional velour foam windshields, shock mounts, a boundary adapter, a ceiling mount, connection cables and a stand adapter.

The robust, modular system has a high-quality matte black finish with a special non-reflective coating.



ME 36

HS 2: the Headset for the True Professional

Excellent sound, resistant to humidity, rugged and easy to use: the HS 2 fulfills the demands by many stage and broadcast professionals for an inconspicuous and sturdy headset.

The headset microphone uses an MKE 2 Gold capsule (pick-up pattern: omnidirectional), which is optimally protected from humidity by the patented Sennheiser Umbrella diaphragm. A steel cable ensures that the headset can withstand the toughest of conditions on stage. The thin gooseneck allows the HS 2 to be optimally placed near the mouth – ready for use as a speech or vocal microphone. In addition to the standard version in black, the headset microphone is also available in beige (HS 2-1).



i.F. Design Award for the PXC 250



Sennheiser's foldable PXC 250 mini headphones were presented with the prestigious i.F. Design Award in the category "Product Design." Despite strong international competition, the jury was greatly impressed with these headphones, and with the mechanism which enables them to fold up in seconds and fit into any briefcase or shirt pocket. In total, 833 companies from 32 countries entered 1,500 products overall for the i.F. Design Award.

Since its inception in 1954, the i.F. Design Award has become one of the most important design competitions worldwide. Each year, an expert jury awards products with outstanding design and exceptional quality for the user, by evaluating workmanship, functional aspects, innovativeness and overall design.

In addition to its light-weight and foldable design, the PXC 250 features Sennheiser's proprietary NoiseGard™ compensation system, which actively reduces annoying low-frequency noise and ensures top sound quality for music on the move. Thanks to its special voice coil design, the PXC 250 can be used for both low-impedance portable players and high-impedance inflight entertainment systems in aircraft. A special airplane adapter is included, as well as a soft belt pouch, and an adapter to 1/4" jack plug.



Echo Awards 2003

Besides the Grammys and the MTV Awards, the Echo is one of the most important music awards in the international music business. In spring this year, the German music market, the second largest in the world, awarded the prestigious "Echoes" for the twelfth time.



Won the Echo Awards for "Best National Rock/Pop Artist" and "Best National Rock/Pop Single": Herbert Grönemeyer



Shania Twain



Paul Hugo, Sennheiser's worldwide relationship manager, and Steve McCale (r.)

Among the many stars was Shania Twain who performed songs from her current album "Up!". Ensuring perfect sound for the Canadian born artist were sound engineer Steve McCale – and Sennheiser. Said McCale about Sennheiser: "Being a sound guy for 25 years I know what Sennheiser does. I have used the 421 and 441 microphones since the seventies – Sennheiser has always made great microphones. I got really involved with Sennheiser directly when I was trying to get high-density RF systems. Sennheiser are the kings of that, the best stuff. When you need to have more channels and more reliability, you really need to talk to Sennheiser."

McCale's list of sound engineering jobs reads like the "Who Is Who" of international rock/pop music: U2, Steve Miller Band, Chris Isaak, Stevie Nicks, and Faith Hill, among others. For the last year and a half, McCale has been working with Shania Twain. "There are situa-

tions in show business where you have to have a wireless mike, such as the Super Bowl and the American Music Awards, two recent jobs we have done," says McCale. "There was just no way a wired mic would do." The receiver system used was an EM 1046. "The reason I use EM 1046 receivers is their worldwide tunability. We can't just use something that works in the States, we have to be able to jump all around the world with a minimum amount of equipment changes." Commenting on Sennheiser ear monitors: "I've always used Sennheiser wireless ear monitors. With Shania Twain, I was hired very early on not only to handle appearances like the Echoes but to plan for her tour. Her upcoming tour is going to be very wireless intensive. We're going to have about 50 simultaneous frequencies required between the ear monitors, all the vocal microphones and all the instruments. There's nobody saying 'How can we do it cheap?' That's not happening. We're all talking about 'How can we do it right?' There's only one way and that's with Sennheiser wireless equipment. It's the only thing that will do it." Paul Hugo, Sennheiser Network Manager says; "I have probably spent a few hundred hours working with Steve on this application. We have supplied engineering resources from both our German and UK offices to meet their needs. We have even developed products for use on this tour that may influence our standard line-up in the future. This is what we try to have with all our users, a great working relationship that is mutually beneficial."

Shania Twain was not the only artist using Sennheiser microphones at the Echo awards: Herbert Grönemeyer, No Angels, Joy Delane, Avril Lavigne, Wonderwall – they all relied on equipment and know-how from Sennheiser.



© Debbie VanStory

And the winner is... Norah Jones!

Grammy star Norah Jones: five personal Grammys, three shared awards

There's no doubt about who was the big star of the 45th Grammy Awards, held at Madison Square Garden in New York City at the end of February. Only one year after the release of her debut album "Come Away With Me", Norah Jones came away from the awards ceremony with five personal Grammys and shared three additional honors with the writer, engineers and producer of her album and single.

The last twelve months have been truly extraordinary for the 24-year-old singer/songwriter/pianist who was catapulted from playing tiny jazz clubs to huge venues in just a matter of months when her record sales went through the roof. With the assistance of her engineers, Lee Moro and Brett Dicus, who joined the organization in early 2002, Jones has made the choice of Neumann and Sennheiser microphones and Sennheiser wireless ear monitors in June of last year. As Moro reports, Jones is never without her Neumann and Sennheiser equipment, even on her many television appearances. "For the Grammys, Norah was using a Neumann KMS 150." Moro, who has used many Neumann microphones in the past, notes that this was the first opportunity to try out Neumann's hypercardioid wired vocalist microphone for the singer. "We tried it and it sounded great," he adds. Jones has been touring with a Neumann KMS 105 vocal mic. The KMS 150, says Moro, "is a lot 'tighter'. In some situations I think it would be better to use a tighter mic to reduce pick-up of the room ambience." Moro also used a

number of other favorite Neumann and Sennheiser microphones for the band. "We have a Sennheiser evolution 602 in the kick drum. The backing vocals were Sennheiser wireless 5000 Series." Even Grammy broadcast engineer Jay Vicari was impressed by Moro's choice of microphones. "Jay, who also mixes 'Saturday Night Live', asked if we still had the piano mikes we'd used, a pair of KM 140s. Jay said, 'I love those mikes.'"

Jones was not the only artist using Neumann and Sennheiser microphones on the Grammy Awards telecast. The New York Philharmonic, who performed "Politik" with Coldplay, requested a bevy of Neumann microphones, and Yo-Yo Ma, performing with James Taylor, had a Neumann TLM 170 on his cello. Faith Hill used her favorite Neumann/Sennheiser SKM 5000 N with KK 105 S microphone head, Vanessa Carlton an SKM 5000 wireless hand-held and Eminem, as usual, his silver-plated version. Avril Lavigne sang with a Sennheiser evolution 565 wireless mic.

Norah Jones has just finished a series of tours around Europe, Japan and the USA, her album "Come Away With Me" having sold well over 14 million copies, with the biggest post-Grammy sales spike on record.

[\[www.norahjones.com\]](http://www.norahjones.com)

"A front man is like a catalyst for everything that's there, and he compensates for every- thing that isn't there."

soundings: How important is equipment for you as an artist?

Grönemeyer: Working in the studio and singing live on stage, you begin to realize how sensitive you are, how sensitive your voice is, how important the choice of microphone and headphones is. I've tried any number of microphones over the years; I've taken them to the limits! The thing that's really important about the microphone is that it has to feel as if it's part of me.

soundings: Would you say that the microphone is the same to you as an instrument is to the musician?

Grönemeyer: Definitely. The microphone is my instrument, with all the sensitivity you'd expect. I would be able to hear a difference between five microphones from the same batch. I am not normally a great one for telling stories, but even I was surprised when I used the new microphone on the fall tour. Normally I get hoarse, but this microphone really kept that to a minimum. It gives you the feeling that you can talk quietly into it, and as a result, you don't need to use the power of your whole body, and that's incredibly helpful. A front man is like a catalyst for everything that's there, and he compensates for everything that isn't there. I can feel from behind whether the band is with me. I can feel the sound, feel the audience and tell how people are reacting. All the things that are there relax me, my voice, and I can relax internally. But I have to provide everything that's missing. Because I'm up there at the front, I have to compensate for everything that isn't there with my body, and my voice, and I must do so with power, attitude, gestures, and with everything I do.

soundings: What music do you listen to at home?

Grönemeyer: I don't really have much of a say at home any more, because I have two teenage kids. We've got a house in London which is open and both kids are generally listening to something. My son plays the keyboards, and writes music. My daughter listens to anything she can get her hands on. When I get to choose the music I listen to, it's generally jazz or stuff like Saint Etienne or St Germain or Massive Attack, a lot of ambient music. Or Norah Jones, for instance, she's 24, and has made a really simple album, but you can really feel that there's a lot more behind it.

soundings: How do your children like your music?

Grönemeyer: : My children are getting more particular about my music. My daughter likes my ballads such as "Schmetterlinge im Eis" or "Der Weg" because they are a part of her own history. Sometimes she plays "Marie," a song I wrote for her. My son said "Zum Meer" was the best track on the album, and that it had the strongest beat. There are still songs that they like, but a lot of the songs don't mean anything to them. They say it's not their sort of music, and that's fine.

soundings: Thank you very much for the interview.

[\[www.groenemeyer.de\]](http://www.groenemeyer.de)

[\[www.groenland.com\]](http://www.groenland.com)

For 20 years Herbert Grönemeyer has been at the top of the German music scene, selling millions of albums and uniting generations of fans. In August 2003 he released his latest album "Mensch," which instantly made it to number one in the German charts and achieved quintuple platinum. In May and June, Herbert Grönemeyer toured Germany, accompanied by an SKM 5000 N wireless microphone. soundings met him during his summer tour.



© Marc Theis

Live Sound Support

– Just a Mouse Click Away

Where can artists and engineers turn when they need live sound support during a tour? – Their laptop computers and the new Sennheiser Network. Whether it is Kylie Minogue’s sound engineer or a local artist: members now have instant access to an array of critical product news and technical service support provided by Sennheiser in countries around the world.

The network, managed by Sennheiser’s worldwide relationship manager Paul Hugo, revolves around a password-protected, members-only website that links the Sennheiser artist or engineer to a Sennheiser subsidiary or distributor in the country or region in which they require support. On the site they will find wireless microphone frequency coordination support, technical troubleshooting, product information and much more. The local Sennheiser partner provides additional support – a special asset for international tours where a lot of frequency management is needed.

“With the Sennheiser Network we have created a platform for information and communication between the artists and engineers and our worldwide network of subsidiaries and long-standing distributors,” explains Rolf Meyer, President Marketing and Sales, who developed the idea with Paul Whiting, Managing Director of Sennheiser UK.

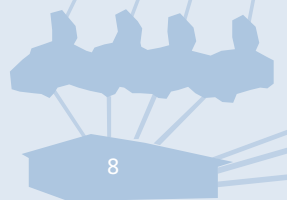
“For decades, Sennheiser has earned accolades for supporting the artists and engineers who faithfully use our equipment, whether they’re international superstars or local favorites,” adds Paul Hugo. “The Sennheiser Network is simply the next step in delivering this world-class support to our partners – whenever and wherever they need it.”

Engineers and artists interested in joining the Sennheiser Network should contact the artist relations manager at the Sennheiser subsidiary or distributor in their home country or for help contact Paul Hugo at phugo@sennheiser.com.



In a few clicks of the mouse: Sennheiser’s live sound support

- 1 Helicopter camera
- 2 Finish area/reporters
- 3 Technical Organization Center
- 4 Production
- 5 OB vans
- 6 Camera
- 7 Presentation ceremony
- 8 International Broadcast Center
- 9 Satellite
- 10 Hubs



World Ski Championships

Sound at Lightning Speed from Sennheiser



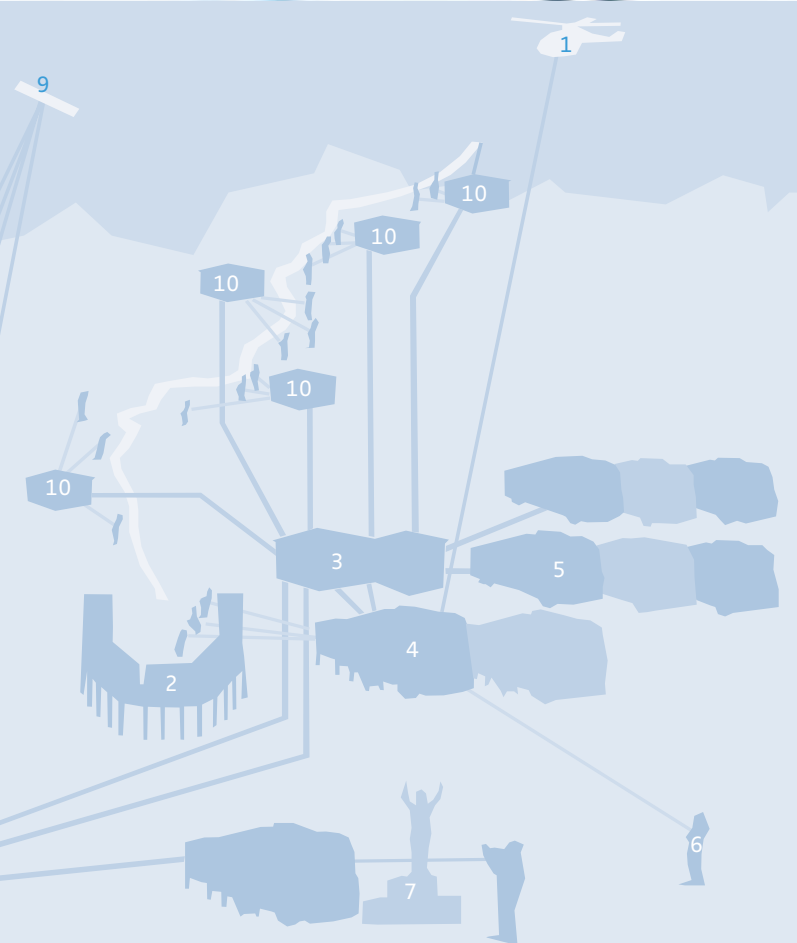
A highly mobile microphone...

In February 2003, the Swiss television station SRG SSR idée suisse consulted with a number of companies to ensure that the broadcasts of the world ski championships from St. Moritz realistically conveyed the lightning speed and dangerous scraping noises of the skis. Sennheiser and its Swiss distributor Bleuel Electronic AG were not only responsible for ensuring reliable audio transmission from the ski slopes and the finish area, but also for handling the frequency management for the broadcasters at the championships.

Bleuel installed MKH 70 and MKH 416 RF condenser microphones along the slopes, which could withstand temperatures of -25°C and were equipped with SKP 30 plug-on transmitters for wireless transmission. In addition, 30 of the new MKH 418 stereo microphones were used. The signals came together at the hubs or camera connection points where the RF wireless experts had installed Sennheiser antenna systems. SKM 5000 hand-held transmitters were used for reporting, either with EM 3532 receivers in fixed systems or EK 3041 receivers for cameras.

At the finish line and in the International Broadcast Center, the Sennheiser Service Centers coordinated the frequencies of around 200 two-way radio channels and 250 microphone channels. Broadcasters could have frequencies set or changed, and get help with problems quickly (including repairs, cold-resistant batteries etc.). Sennheiser technology could also be found in the main Press Center, a Sennheiser interpreting and conference system was used for the FIS press conferences.

[\[www.skiwm2003.ch\]](http://www.skiwm2003.ch)



Stereo and Surround Microphone Techniques (III)

The third and last part of our series is all about surround sound.

Dolby Surround This is the simplest type of surround sound recording. The rear image needs a mono signal that is divided between the L and R channels with identical amplitude but out of polarity from each other. An XY configuration (without time delay) is needed for the recording, together with an additional channel, which is split and mixed out of polarity with the existing LR channels. This is generally done by a so-called ProLogic encoder, with which it is also possible to set time delays (5 to 15 ms) between the rear and the front signal, in order to improve the perceived directionality of the sound.

Guidelines for Productions in Dolby Surround

1. Dialog always comes from the center (volume reduced by 3 dB).
2. Stereo music and movements (cars, doors, windows, shots) are reproduced either by the right-hand or left-hand loudspeaker.
3. Atmospheric sounds, such as rain, wind and murmuring, are reproduced by the surround loudspeakers with band limiting and a level reduction of 3 dB.

The basic functions of a Dolby surround encoder can be defined as follows:

1. Signals in the left and right channels with the same amplitude and polarity are reproduced through the center channel.
2. Signals in the left and right channels with the same amplitude, but which are out of polarity, are reproduced through the surround channel.
3. Signals in the center and surround channels with the same amplitude and polarity are reproduced through all channels at almost the same volume.
4. Signals in the left (right) and surround channels with the same amplitude and polarity are reproduced through the right (left) and center channel with a reduction of 12 dB.
5. The separation of the individual channels must be greater than 30 dB across the entire frequency range of 100 Hz to 20 kHz.
6. In mono reproduction, the surround signals must be erased; in stereo reproduction, their level must be reduced.

On the basis of this definition, [Figure 1](#) shows a live recording made without a special encoder, which can be reproduced using a Dolby decoder. This is achieved with a special microphone configuration that uses only the acoustics and the level controller and panpots of a mixing console. Three microphones with suitable characteristics are set up in a configuration that corresponds to a large extent to the definition above. This means that the recording does not need to be processed with an encoder.

MPEG II (5:1) This format and its related technology allow the imagination and creativity of artists free rein. With MPEG II you have five real channels with full bandwidth at your fingertips and you are not constrained by the strict Dolby rules. However, the laws of physics and psychoacoustics still come into play.

For the recording, you arrange two stereo microphones one above the other. The usual color coding is: front left = yellow, front right = red, rear left = green, rear right = blue. The tracks on the recorder should be allocated as follows: 1=L, 2=R, 3=C, 4=RL, 5=RR. The center microphone is either a separate microphone or a central signal generated by a matrix from the R+L data. The sound is reproduced through loudspeakers distributed around the room.

Günther Theile from the German Institute for Radio Technology suggests the use of a cross shape configuration similar to a double ORTF setup, as the intensity and time delay characteristics of such a system are ideal for a realistic acoustic image (see [Figure 2](#)). The major advantage of this configuration is that it is always backwards compatible. It can be used to create mono, stereo and Dolby surround recordings. However, despite its versatility, MPEG II has one small but crucial problem. The staggered data reduction process, which is divided into a number of layers, often results in undesirable fading, particularly in the reproduction of echoes and atmosphere. This is caused by the "joint stereo" setting (see [Figure 3](#)). The reduction algorithm is changed again, in this case by reducing the number of positions. In the figure there are 7 positions that can be reproduced most consistently if only intensity stereo is used. In the case of time delay stereo, resonances may occur in the room.

Figure 1: Live recording without a Dolby encoder

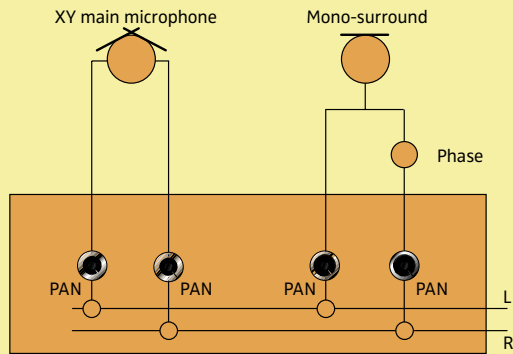
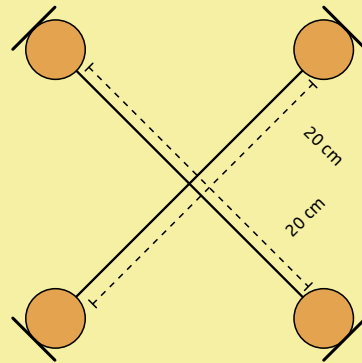
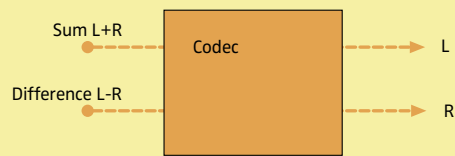


Figure 2: Theile configuration



Top view | 4x cardioid

Figure 3: Joint stereo



Reproduction



Seven positions



“Hello, Sennheiser Sales and Service, how can I help you?”

For 58 years, the name Sennheiser has stood for not only innovative audio and microphone technology, but also for professional sales and service in Germany.

Competitive, high-quality products, competent customer service, and familiarity with the customer have always been the foundations of the company's leading position in the German audio market. In order to improve customer relations and service, the German Sennheiser sales subsidiary, “Sennheiser Vertrieb GmbH,” and the German Sennheiser distributors Walter Diekhöner KG (Osnabrück) and Gerdes Elektronik GmbH (Magdeburg) decided to combine forces.

The result is “Sennheiser Vertrieb und Service GmbH & Co. KG” (Sennheiser Sales and Service), which was founded on July 1, 2002. Based in Hanover, it is represented by managing directors Ties-Christian Gerdes and Gerhard Tammen. Together, the companies can now provide a wider range of customer service and consultation, achieving shorter sales distances.

“This merger is an investment in the future, and will allow us to reposition ourselves in the market. We have a sales force of 36 and we plan to expand this team in the future. We offer training programs to improve the efficiency and performance of our sales personnel,” said the managing directors.

The final step in merging the companies took place in January 2003, when the new company was formally registered in Osnabrück and Magdeburg. From that point onwards, the old Diekhöner delivery notes and Gerdes invoices became obsolete. When a customer calls the company, a friendly voice answers: **“Hello, Sennheiser Sales and Service, how can I help you?”**

In addition to supplying the entire Sennheiser range, the German sales subsidiary's product spectrum includes microphones from Georg Neumann GmbH and the new product portfolio of Sennheiser Communications A/S. The Hanover-based company is the sole German supplier for the aviation sector.



The wide range of Sennheiser products is completed with items from complementary suppliers such as WHD (PA loudspeakers), and Klein & Hummel (ELA, PA and studio technology). The company is also the sole German supplier of audio and video solutions from Radio Design Labs (RDL), benefiting the customer with complete, tailor-made solutions available from a single company.

A well developed customer service network is one of the strengths of Sennheiser Sales and Service. This tight network allows for close work with the customer and provides direct on-site support. With this system in place, the Sales and Service team is more than simply sales-oriented: the emphasis is on comprehensive consulting, training and repair services. Quality, variety, customer service: a combination that promises success.

	Name	Venue	Date	Target Group	Presented by
August	IFA	Berlin, Germany	29.08. – 09.09.	Consumer	Sennheiser electronic
September	CEDIA	Indianapolis, IN, USA	05.09. – 09.09.	Consumer	Sennheiser Electronic Corporation
	PLASA	London, UK	07.09. – 10.09.	Music Industry	Sennheiser UK
	WAEA	Seattle, WA, USA	09.09. – 12.09.	Airlines, Inflight	Sennheiser electronic
	IBC	Amsterdam, Netherlands	12.09. – 16.09.	Pro Audio	Sennheiser electronic
	CallCentre Expo	Birmingham, UK	12.09. – 18.09.	Telecom	Sennheiser UK
	AES	New York City, USA	21.09. – 24.09.	Pro Audio	Sennheiser Electronic Corporation
October	NBAA	Orlando, FL, USA	07.10. – 09.10.	Business Aviation	Sennheiser Electronic Corporation
	UHA Convention (HAK)	Nuremberg, Germany	16.10. – 18.10.	Audiology	Sennheiser electronic
	Practical Hi-Fi Show	Manchester, UK	17.10. – 19.10.	Consumer	Sennheiser UK
	SATIS	Paris, France	21.10. – 23.10.	ProAudio	Sennheiser France
	Music Instruments Fair Japan	Yokohama, Japan	23.10. – 26.10.	Consumer, Music Industry	General Traders
	Musicalia	Lisbon, Portugal	24.10. – 27.10.	Music Industry	Custódio Cardoso Pereira
	CCELECOM	Lisbon, Portugal	24.10. – 27.10.	Consumer	Custódio Cardoso Pereira
	Broadcast India	Mumbai, India	30.10. – 01.11.	Broadcast	Sennheiser Asia
	AOPA	Philadelphia, PA, USA	30.10. – 01.11.	Aviation	Sennheiser Electronic Corporation
November	Music Live	Birmingham, UK	21.11. – 23.11.	Mics/Headphones	Sennheiser UK
	SBES	London, UK	26.11. – 27.11.	Broadcast	Sennheiser UK
	InterBEE	Tokyo, Japan	19.11. – 21.11.	Broadcast	General Traders
	IBTS	Milan, Italy	27.11. – 30.11.	Broadcast	Exhibo
December	Dubai Air Show	Dubai, U.A.E.	07.12. – 11.12.	Aviation	Sennheiser UK/Sennheiser electronic
January	CES	Las Vegas, NV, USA	08.01. – 11.01.	Consumer	Sennheiser Electronic Corporation
	Namm Show	Anaheim, CA, USA	15.01. – 18.01.	Music Industry	Sennheiser Electronic Corporation
February	Sound & Vision	Bristol, UK	22.02. – 24.02.	Consumer	Sennheiser UK
	Asian Aerospace	Singapore	24.02. – 29.02.	Aviation	Sennheiser Asia
March	Ideal Home Show	London, UK	04.03. – 04.04.	Consumer	Sennheiser UK
	DAGA	Strasbourg, France	22.03. – 25.03.	Hi-Tech	Sennheiser electronic
	STAF	Sunderby, Sweden	24.03. – 26.03.	Audiology	Sennheiser AB
	Mondial	Paris, France	25.03. – 29.03.	Consumer	Sennheiser France
	Image Photo Son	Paris, France	25.03. – 29.03.	Consumer	Sennheiser France
	prolight & sound	Frankfurt/M., Germany	31.03. – 04.04.	Music Industry	Sennheiser electronic



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