



elements

An HK Audio Magazine



Martin Moro
On Tour with Elements

Natural, neutral, authentic - it's all about meticulous tuning

Sound advice - Dr. Elements answers your questions

Approaching perfection in sound - Elements at the Saar College of Music

HighEnd-Audio for Musicians, Bands and DJs.

 **elements.**

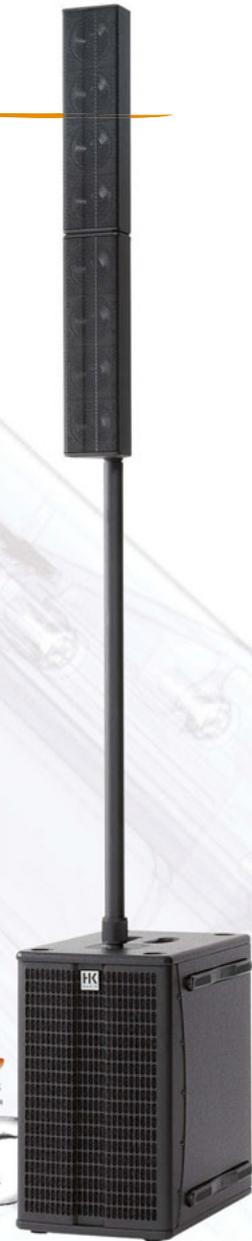


- A True Line Array System**
for even coverage from the first row to the last
- Precise coverage pattern**
for higher intelligibility and less feedback
- Ultimate flexibility**
the single solution that adapts to every application
- Very compact, light weight and portable**
for incredibly easy transport
- E-connect**
integrated signal connection, no speaker cables

Acoustics One

- 1x E110 Sub A subwoofer with integrated system controller
- 600 Watts Class-D power amplifier
- 2x E435 mid/high unit
- 1x EP1 height-adjustable mounting pole with E-Connect

Quality and clarity, simplicity and scalability—yes, you can have it all!
Visit your nearest Elements stockist now for a demonstration!



Further configurations are presented in our online configurator on www.hkaudio.com/us



HK
AUDIO **Portable Sound**



Dear Readers,

When we launched myElements some three months ago, we were pretty confident that Elements would change the world of sound reinforcement as we know it. But even we were amazed at the speed at which Elements is making inroads. Its ascendance is surpassing even our boldest expectations. So we decided to publish a follow-up issue to share the latest exciting developments with you. And the news is breaking fast: Just before this issue went to print, we

learned that Elements had been nominated for the sought-after MIPA Award (see also the News section).

On the following pages, you will read about a few of the many ways in which Elements is used around the globe - at the Saar College of Music, in Istanbul's second-largest mosque in Istanbul, and by finger-style virtuoso Martin Moro from Graz. Product manager Wolfgang Schulz also offers

interesting insights into the painstaking tuning and tweaking efforts that went into the system. Finally, Dr. Elements' office opens with this issue. He answers questions frequently asked about probably the world's most compact and portable line array system.

Here's wishing you enjoyable reading,

Your myElements-team



Imprint: myElements
is a publication of

Music & Sales P.E. GmbH
Tritschlerstr. 3
D-66606 St. Wendel/Germany

Cover Photo © Gorg

Elements snippets page 4

Taking it easy with Elements page 6

Example configuration page 8

It's all about authenticity
Interview with Wolfgang Schulz page 10

It's as if you were sitting up on the stage!
Interview with Martin Moro page 14

School music
Elements at the Saar College of Music page 18

Ask Dr. Elements
Question the Elements experts page 22



Elements snippets

Elements at the movies



The promoters of the Film and Media Music Congress Soundtrack Cologne relied on HK Audio Elements for the seventh installment of the event. Elements provided sound reinforcement for both the cinema and theater run by the Cologne

art association Die Brücke. The rig in each hall comprised four subs and eight mid/high units (four each on the left and right, up front and in back). The systems put in an impressive performance throughout the event, delivering highest speech intelligibility to all corners of the auditorium and powerful yet balanced audio support for movie soundtracks. Some audience members responded to the experience as many other have before them: They simply could not believe what they were hearing, especially in view of the system's discreet visuals. Jan A.P. Kaczmarek, who had won the 2005 Academy Award for best original score for Finding Neverland, was particularly delighted with the performance. He repeatedly praised the excellent speech intelligibility and powerful sound. Kaczmarek now aims to deploy Elements at a festival he will organize in the summer of 2011.

www.soundtrackcologne.de



Product manager Wolfgang Schulz (left) and James Sajeve (right) are happy about the successful launch of Elements in the USA

Elements goes stateside

The word is out and it's been official since the winter NAMM show: Korg USA is to distribute Elements in the United States. "Our entire team is delighted to be working with HK Audio. Elements is definitely the right product to establish this brand in the USA," says Joseph Castronovo, CEO of Korg USA, commenting on the distribution deal.



Elements in a mosque

Süleymaniye Camii, Istanbul's second largest mosque, was recently equipped with a new sound system by ANC Elc (Ertekin Electronics Distributor). The company mounted 60 Elements mid/high units above the lighting. They are powered by 15 EA 600 amp modules.



Elements in a Mini



No need for a shoehorn! eight mid/high units and eight subwoofers indeed does fit into a Mini Cooper — amazingly enough, with the passenger seat remaining unoccupied!

The Belgian distributors had their doubts, but as the Romans used to say, quod erat demonstrandum: The largest, 3.6 kW Elements system with



3.6 kW fit into a Mini Cooper with room to spare.

Elements crosses over Down Under

If anyone has the road credentials to claim he has been around the block more than twice, it has to be Gwynn Ashton. He has toured the world with illustrious acts such as AC/DC, Whitesnake, Johnny Winter, and Mick Fleetwood. Recently the veteran rocker from the deep south of Australia extended his equipment arsenal with a PA that sounds as sweet as it handles. Gwynn now plays all his solo acoustic shows with Elements providing the backline.



Gwynn Ashton from Australia

Experience Elements in action!

This year's Prolight + Sound show at Frankfurt will offer plenty of opportunities to experience Elements live in the Dimension room in hall 4.2. Product manager Wolfgang Schulz will demonstrate the system three times a day with the able assistance of some fine musicians. A detailed schedule will be available at the HK Audio Portable Sound stand in hall 6.1, booth C11. Everyone who can't make it to this year's Prolight + Sound show is welcome experience Elements live any time at the nearest dealership. www.hkaudio.com



Elements nominated for a MIPA

Stop the presses: We just found out that Elements has been nominated for a MIPA award in the Portable Sound category. The MIPA ranks among the industry's most distinguished distinctions. It is awarded by 100 international specialty magazines and will be bestowed at the Musikmesse Frankfurt.





Taking it easy with Elements

Did you know that sound reinforcement can be so easy?
Easy to set up. Easy to transport.
3.6 kW will even easily fit in a Mini Cooper if that's what you want.
It's so very easy that you won't need to shower afterwards.
Because sound reinforcement couldn't be any easier - when you use Elements, that is.





So how does it work? That's easily explained. Elements consists of six remarkably compact elements that you can mix and match to suit the given purpose, event, audience, and hall size. Anything goes, from a small personal PA for speech reinforcement to a big rig for top-40 combos that play gala events. And every setup stands as a testament to elegance and efficiency. Bar any monster sports arenas on the touring agenda, even rock bands will find Elements to be an astonishingly powerful and persuasive alternative.

So why does Elements sound so sweet despite its surprisingly small footprint? Well, for one, Elements is a real line array. Sounds complicated? It is, and it isn't. As the theory goes, neighboring speakers form a common beam — specialists call this a coherent wave front. This creates a single, consistent line source that delivers purer sound with far greater efficiency. But what really matters is what this does for you: You can cover a much larger area with far better sound using a lot less power.

An Elements rig is made up of ultra compact, ultra light mid/high units loaded with four custom-designed wide range

speakers. You can combine up to four of these units to suit the given purpose and audience size. The more mid/high units you use, the greater the line array effect.

An amazingly slender subwoofer with a 10" speaker was developed to provide the bass foundation. The powered version delivers 600 watts and is also able to drive two mid/high units, or an additional passive sub if the gig calls for more bass.

The mid/high units are driven by an EA 600 amp module when you opt for a combination of active and passive subwoofers. It also delivers 600 watts to power up to four mid/high units. Of course, you also need the amp module if you wish to operate Elements without the subs, which works like a charm for conferences and smaller acoustic ensembles. The sturdy EF 45 base provides rock-solid support.

Here's another reason why sound reinforcement is so easy with Elements: E-Connect features a built-in signal bus, so you need hardly any cable to set the rig up. Simply insert the speaker pole into the subwoofer and place the mid/high units on the speaker pole — presto, you're ready for action! And if you use four

mid/high units per side, you don't even need that speaker pole.

Elements delivers 3.6 kW in its largest stereo setup with four mid/high units, four subwoofers, and one amp module on each side. In this configuration, Elements impressively proves how easily it can provide an assertive punchy bass foundation even under challenging conditions. Elements is able to tackle even tricky acoustical predicaments in style when you set up subs in a bass line, concave, or convex array.

The rigors of the gigging musician's life on the go can be tough indeed, but optional protective covers keep Elements safe from harm. The very handy cover for the bass bins and the practical tote bags for four each mid/high units ensure Elements looks sharp for many tomorrows to come. What's more, they also — you guessed it — make transport even easier.





Voice Event hosting • Presentations • Background music

Voice One

This is your first choice for mono voice reinforcement at smaller conferences and presentations. It's also an excellent setup for covering specific zones. Its linear response and directional dispersion pattern ensure excellent speech intelligibility.



Voice Two

This mono setup delivers all the power and performance you need to address up to 150 people for conferences and presentations. In combination with two mid/high units, it delivers the kind of linear response and directional dispersion pattern that ensures audiences understand every word. It's also a great choice for zone coverage.



Voice Three

The three mid/high units provide uniform, consistent coverage for conferences, presentations, and a cappella performances in rooms accommodating up to 300 people. The subwoofers extend the frequency spectrum, enabling a wider range of musical applications.



Acoustics For entertainers • Folk bands • Jazz trios • Musicals & theater • Choirs

Acoustics One

This mono system brings the big benefits of ELEMENTS to smaller events with up to 100 people. It delivers a directional dispersion pattern and a solid bass foundation, enabling every guitar duo, acoustic trio, and solo performer armed with an arranger keyboard to achieve excellent audio results. Consisting of just four exceedingly compact components that connect without requiring cables, your sound system sets up and is ready to play in a matter of seconds.



Acoustics Two

If you want up to 200 people to hang on your every word, opt for this configuration. It delivers the highly articulate and transparent sonic image your music deserves. Simply set it up near you or at the back of the stage. Then you can comfortably do without further monitors and enjoy the same crystalline sound as your audience.



Acoustics Three

This system delivers the sonic goods for larger events, getting the solo performer or acoustic band's musical message across to up to 300 people. Courtesy of its remarkably directional dispersion pattern and expansive yet powerful sonic image, it projects a nuanced rendering of your performance all the way to the back rows without overpowering the people up front.



DJ For party DJs • Bars • Mobile DJs • Night clubs

DJ One

This stereo setup is the rig of choice for rendering music in smaller rooms accommodating up to 100 people. It's great for parties, weddings, and small clubs, as well as for distributed sound reinforcement to cover the dance floor. Powerful performance, richly nuanced response, a very small footprint, and phenomenal ease of use: All this adds up to maximum fun with minimum effort.



DJ Two

Looking to provide music in bars, clubs, and smaller outdoor events with up to 250 people? Then this is the stereo setup you have been seeking. The four subwoofers deliver a powerful low-end punch, while the mid/high project a crystal-clear stereo image. This combination renders voices and instruments with authority and nuances intact, treating even the back rows to a truly satisfying audio experience.



Band For rock & pop Bands • Ensembles • Electric bands • Live clubs

Band One

Despite its tiny footprint, this ultra compact rig delivers satisfying live sound to rooms for up to 100 people. The mid/high units' amazingly detailed audio image combine with the subwoofers tightly focused punch to create pure audio pleasure. Easy to handle and remarkably compact, this system fits on even very small stages. Its articulate delivery, speech intelligibility, and richly nuanced rendering of instruments are sure to surprise and delight you.



Band Two

The added subwoofers extend the dynamic range to beef up the low end. Although it is able to cover rooms holding up to 200 people, this system is remarkably compact. And its discreet look keeps things inconspicuous.



Example Configurations

Voice Four

Voice Four is ideal for larger congresses, presentations, and a cappella concerts for up to 450 people. This system treats your audience to a richly detailed, highly defined stereo image. Despite its remarkable transparency and reach, it looks inconspicuous, blending in so well that it all but disappears in your stage design. Even at higher volume, this rig always affords audiences a pleasant and never a painful audio experience.

Voice Five

This configuration is the perfect public address solution for presentations and a cappella concerts. It provides signals with superior speech intelligibility and a well-balanced audio image to up to 600 people. With a directional dispersion pattern designed to close the sonic gap between the people on stage and the audience, this system excels at bridging distances greater than 20 meters.

Acoustics Five

This configuration puts all the many strengths of ELEMENTS on prominent display. The eight mid/high units' directional dispersion pattern strikes the perfect balance of power and finesse to reach every member of your audience throughout the venue. Tuned to deliver a natural-sounding, remarkably dynamic bass foundation perfect for the double bass and Hammond organ, the subwoofers are still so compact that the setup blends smoothly into the background.

Acoustics Four

The ideal combination for larger rooms holding up to 500 people, this rig renders every detail of your performance with accuracy and authority. The system projects even the finest points of acoustic bands and performance artists' presentation across the full throw distance from the stage's edge to the last row. Look no further for an impressive yet unobtrusive experience in sound.

DJ Three

This power-pack pairs high-performance audio with superior dynamic response. Providing plenty of punch and headroom to cover rooms with up to 350 people, its audio image is always gratifying, never grating. Projecting tightly focused low end, vigorous midrange, and sparkling top end frequencies throughout the room with very little level tapering, this rig has the tools to transform every gig into a sonic sensation.

DJ Four

Do you frequently DJ for larger audiences? Are you searching for an ultra versatile sound reinforcement solution? Then this full-blown ELEMENTS configuration is perfect for you. Combining powerful audio performance with utmost handling ease, it provides excellent coverage for rooms holding up to 500 people. Engineered to make the most of a line array's directional dispersion pattern and equipped with eight muscular subwoofers, this setup adapts to suit the most diverse venues. The entire rig fits in a standard station wagon; what's more, you can easily set it up on your own.

Band Three

This setup lets you stage concerts for up to 300 people. Combining astonishingly dynamic, highly transparent directional dispersion with a solid bass foundation, this rig will let you rock out if you wish. Linear, transparent, and dynamic, its response provides the perfect platform for a fab concert experience. And it's easy to tote and handle to boot.

Band Four

The full-blown configuration puts on impressive display of all the many advantages of ELEMENTS. This setup treats up to 450 people to an unforgettable audio experience wherever they may be in the venue. Instruments and voices come across with all their natural power and grace intact. It delivers big, bold yet amazingly transparent sound throughout the auditorium; even 20 meters away, the sound is as fresh, refined, and articulate as at the foot of the stage.

HK AUDIO

It's all about authenticity

Product manager Wolfgang Schulz talks about the development and tuning efforts for Elements.

Element's is easy to transport, sets up and tears down in a jiffy, and sounds brilliant. However, it took tremendous R&D effort to bring all this handling ease to the customer. We chatted with product manager Wolfgang Schulz about the long yet interesting road to the finished product.

myElements: Mr Schulz, many people who experience Elements for the first time live are amazed at the big sound the system is able to deliver even in smaller configurations. This obviously took some painstaking tuning. Can you tell us a little about the process?

Wolfgang Schulz: Many readers may be aware that we collaborated closely with Celestion to develop the wide-range speakers used in Elements. This was quite a time-consuming process because, alongside the simulations and development effort, it took scores of acoustical tests to get the overall result right. After one and a half years and more than 30 samples, it was a milestone achievement when we finally had the final product on hand. The 10" speaker in the subwoofer was also developed from the bottom up for Elements.

myElements: But you still had a long way to go, didn't you?

Wolfgang Schulz: That's right. Next we had to match all components to suit the

loudspeakers. The system's electronic circuitry required meticulous attention to detail, particularly the filters. After all, we're talking about fundamental filtering aimed to achieve the most linear frequency response possible – or in other words, the most authentic rendering.

myElements: Are you talking about the crossovers?

Wolfgang Schulz: Not exclusively. The filters integrated in Elements also EQ the audio signal so that a well balanced basic sound is always achieved regardless of how the given Elements system may be configured. To get the best results, we ran simulations in the lab and conducted comprehensive tests with very different signals. These filters in the amp and powered subwoofer also help make the most of the line sources' acoustical advantages.

myElements: When you were in the planning stage, how did you define this aforementioned 'authentic rendering'?

Wolfgang Schulz: Good question! Although the perception of sound is subjective, there are certain parameters attached to descriptive terms such as natural, true, and neutral. At HK Audio, we have more than three decades experience making diverse classes of loudspeakers. Our development efforts always focus on satisfying the special demands of the given area of application and getting as close as possible to our ideal of a natural-sounding, uncolored sonic image. To this end, we not only subject every sound reinforcement system to a battery of extensive measurements, we also listen with the trained ears of unforgiving critics. Doing this properly depends very much on knowing exactly how the source sounds, be it an instrument, a track on a great CD, or a voice and the microphone that is capturing sound. During a performance, the sonic image has to live up to the expectations of a very wide audience, which doesn't make the development effort any easier. This is why we attach such great importance to



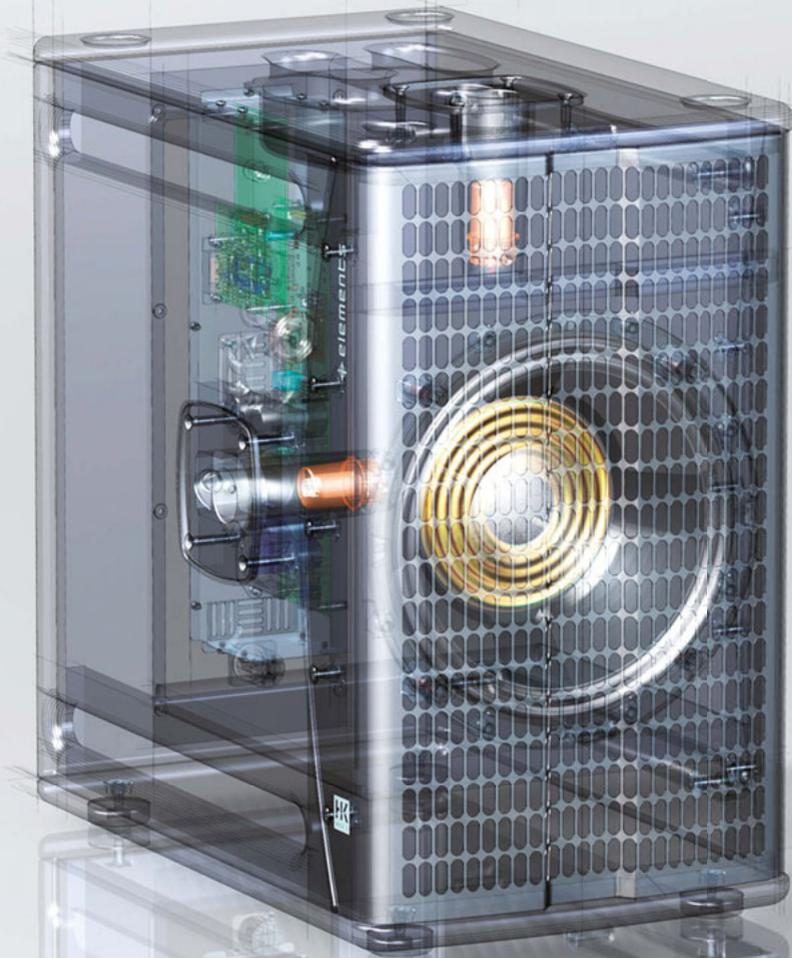
arriving at the best combination of measured result and audio experience.

myElements: So how do you know if you have achieved your goal at the end of the day – when the greatest skeptic stops shaking his head?

Wolfgang Schulz: (Laughs) Nice thought. Of course, our aim is to satisfy as many users possible with the basic sound of our systems. We are actually our harshest critics during the development phase. All the people contributing to the cause have years of experience in the most diverse fields, and their standards for the new product are very high indeed. It is understood that we build our systems for our customers, but we're also delighted every time we win over a skeptic.

myElements: Elements debuted at the US NAMM early this year. What kind of response did you get?

Wolfgang Schulz: Even more enthusiastic than I had dared to hope. Korg's decision to market Elements in the USA came after some very thorough testing of



The seed for successful product design is sown at the planning stage



the system. A team of 14 pros and representatives of the most diverse user groups had been assembled to test Elements in fall of last year. When I read this news, I realized straightaway how seriously Korg was taking this matter. We were delighted to learn that the test results and ratings were very positive. James Sajeve, the product manager at Korg, and the sales force were all very eager to present the product to their customers and try it out with their bands Korg had presented its new flagship keyboard Kronos and other products at the NAMM show in a sizable sound booth equipped with Elements. We had good cause to be satisfied when the chief developer of Kronos praised the sound (smiles). The fairgoers, most of whom were dealers, were extraordinarily impressed with the format and scalability of Elements.

myElements: Can you briefly explain what you mean by the somewhat unwieldy term ‘scalability’?

Wolfgang Schulz: ‘Scalability’ describes one of the most important properties of line array systems. It means that

speaker cabinets of the same system can be combined to form a line array of any size large or small, at least in theory. It also implies that this can be done without the adverse physical and audio effects such as phase overlapping and cancellation that inevitably occur when stacking conventional speakers.

myElements: So, in practical terms, Elements is scalable because up to four mid/high units may be stacked in one column?

Wolfgang Schulz: Exactly. What’s more, a scalable line array’s beneficial properties improve by the power of two. The more speakers in a column, the greater the line array effect. The user benefits from progressively greater efficiency, directivity, and a coverage pattern that spreads sound evenly throughout the audience area with much less drop-off in level.

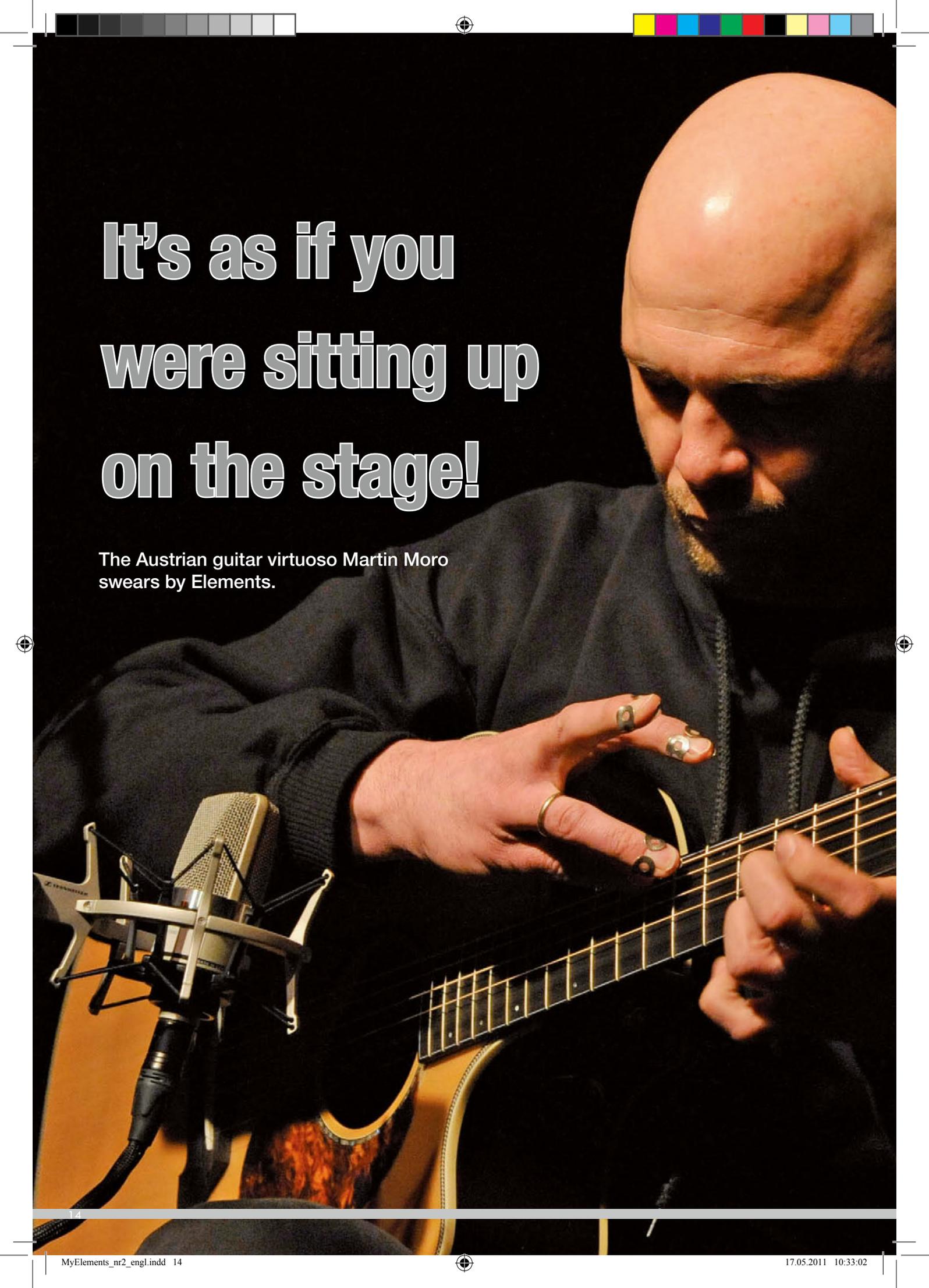
myElements: Are all line arrays scalable?

Wolfgang Schulz: In theory, yes. However, the manufacturer has to design the line array components so that they can actually be stacked. Many compact systems operate on the principle of a real line array when it comes to the midrange frequencies. However, each enclosure is equipped with just a single tweeter, so the system is not scalable. This is actually a satellite—a mid/high unit that cannot be combined with further mid/high units in the same way as in a line array. As it stands now, Elements is the only scalable line array in its class worldwide.

myElements: Mr. Schulz, thank you for this chat!



Korg USA showcased its new flagship synthesizer Kronos at the NAMM using Elements



It's as if you were sitting up on the stage!

The Austrian guitar virtuoso Martin Moro
swears by Elements.



© Gorg



Martin Moro, an acoustic guitarist and multi-instrumentalist from the Styrian city of Graz, has used HK Audio's Elements for some time, and with great enthusiasm at that. Martin revealed to us in the following interview why he is so pleased with his rig.

myElements: Martin, what's your normal gig like?

Martin Moro: I play mainly solo finger-style guitar. This genre is all about musical details. Usually I'm on the road alone, so it's me who sets up, takes down, and mixes the sound system.

myElements: What did you use before Elements?

Martin Moro: I had an HK Audio Linear Pro rig, including subwoofers and a controller. Alternatively, I used an E.L.I.A.S with four mid/high units. I was very satisfied with the sound, but I had to schlep a lot of gear around with me.

myElements: So Elements surely lightens your workload.

Martin Moro: Definitely! The benefit of unloading only those components I really need from the car is invaluable.

myElements: And thanks to the lightweight Elements, setup has to be a lot easier.

Martin Moro: Yes, indeed! Elements is ready to go in three minutes – without a sweaty shirt or pulled shoulder. I'm totally relaxed with no backaches when it comes time to perform. On top of that, I need a lot less storage space in my car.



myElements: What's your touring setup?

Martin Moro: I use a powered and a passive subwoofer as well as three mid/high units per side. Of course, I need another power amp module for the mid/high units.

myElements: How did your first gigs with Elements go?

Martin Moro: Incredibly well. The first was at Bad Lausick in a hall holding 300 people. I had the rig set up in a flash, and the sound was simply

perfect. A day later in Leipzig there was room for just 150 people. As I started to set up I realized that two bass bins per side would be too much for this venue. So I used just one active sub and two mid/high units each on the left and right sides. The passive subwoofer, two mid/high units, and the power amp modules stayed in the car. It all worked out great.

myElements: Have you pushed Elements to its limits?

Martin Moro: I have a nice story to tell about. I was asked to provide sound reinforcement for about 600 people. Several speakers were to take the stage, as well as a full-blown rock band. I thought to myself, "This is the ultimate crash test for Elements!" Then I went and borrowed two mid/high units from my dealer. This gave me four mid/high units and two subs per side.

myElements: So how did it go?

Martin Moro: I was certain that I'd have to drive Elements to its limits for this gig. But nothing doing – I didn't even come close! The master fader always stayed at very reasonable -15 dB. It all sounded lovely – remarkably transparent with no distortion. All the benefits of line array technology were put into action. There was a lot less sound pressure loss and high-frequency dampening at greater distances than with conventional systems.

myElements: Did the audience respond at all?

Martin Moro: They certainly did. Many people could hardly believe that all this sound was emanating from 'those little things there.' A woman who had sat a little further back approached me after the concert. She thanked me for the good sound and agreeable volume, but was concerned that it might have been too loud in the front rows. In that very moment, another audience member joined us. He was delighted with the sound and full of praise for the comfortable volume level in the first rows. And he was a bit worried about the consequences for the back rows, where he

feared the sound may not have been loud enough. I don't think you can pay a higher compliment to a sound reinforcement system.

myElements: What has changed at your concerts with Elements, apart from far more convenient handling?

Martin Moro: With Elements and its line array technology, I can cover the back rows with much lower volume levels. This means the front rows get less sound pressure. The audience hears far more nuances in my playing. Recently somebody told me that the sound at the back rows was so detailed, it's as if you were sitting up on the stage. And there's another benefit to all this: I need less volume so feedback is no longer an issue. So it's a win-win-win situation thanks to Elements!

To learn more about Martin Moro, visit www.martinmoro.com.



© Gorg

Making school music with Elements

Wolfgang Bogler talks about the use of Elements at a college for music in Saarland.



The Musikhochschule (college of music) in Saarbrücken, Germany, has staged a small, but very fine performance program in recent years. Called *Ensuite – An Evening of School Music*, the event affords prospective music teachers the opportunity to present a sampling of their many skills.

Musicians at this college have to have mastered not only at least two instruments; they must also be fluent in the most diverse styles from Bach to Beatles. The evening's varied musical program celebrates this diversity. Students can also put their crossmedia skills to the task by conducting interviews and reporting

on cultural topics. The latest event, broadcast live by SR2 KulturRadio, featured Elements for the first time. We had the opportunity to talk to Wolfgang Bogler, the college's chancellor, and ask about his experiences with the system.



myElements: Mr. Bogler, how did you find out about Elements?

Wolfgang Bogler: Our experiences at the college with HK Audio sound reinforcement systems have been good over the years. Consequently, we like to keep an eye out for new gear coming out of St. Wendel. What's more, we were already looking for a highly flexible and modular system that would meet our high standards for sound quality. So when Elements came along, it was a perfect fit.

myElements: You have used the system for quite some time. How would you describe the experience?

Wolfgang Bogler: Very good so far. We use Elements for very different purposes because there is a place for every musical genre at our college. This poses some very big challenges for a system such as this — especially if you want it to sound nothing like

a loudspeaker. At the risk of seeming a little starry-eyed and euphoric, I am almost inclined to say that when eight instruments are being played on stage, our ninth instrument is Elements. Our students and professors strive for perfection in both instruments and sound, and Elements delivers it faithfully.

myElements: How important is reinforcement for acoustic instruments for you?

Wolfgang Bogler: It's essential! I am certain that the aversion that some people, especially in the field of classical music, have for PAs is born of this fact that so many of these systems lose the natural sound of the instrument in translation. It sounds like a loudspeaker. This really used to bother me. Acoustic instruments have a tremendous dynamic range and an exceedingly nuanced sound spectrum, which should be rendered properly by a sound reinforcement system.



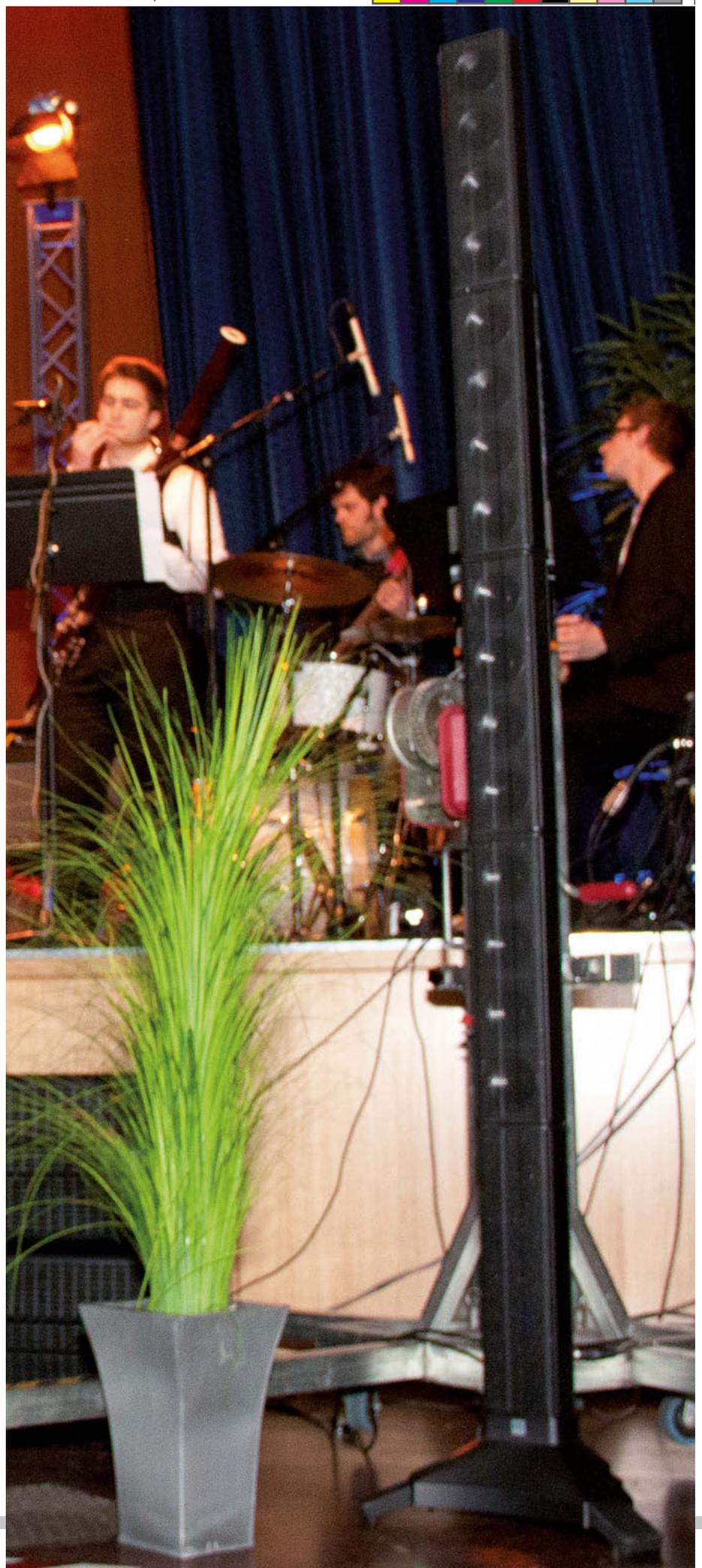
Wolfgang Bogler, chancellor of the Saar College of Music, is a devoted Elements fan

No matter how large the room or audience may be, you should always get the impression that you're hearing an instrument and not a speaker cabinet.

myElements: Why did you equip your college's auditorium with a mobile, versatile system rather than a permanently installed PA?

Wolfgang Bogler: Firstly, for the simple reason that it lets us respond far more flexibly to the different challenges. For example, the audience is smaller at some events, which calls for a cozier atmosphere. Then we can make do with just a few Elements. If the auditorium is full, we need more material. I believe that today's demands for mobility and individuality can no longer be met with a permanently installed system. What's more, the auditorium is not the only place we need sound reinforcement. Time and again, our college's various studios and event venues need the same support — if at all possible, in the same excellent quality. It's just so gratifying to have a system as scalable as Elements available — and that's so easy to transport to boot.

myElements: Mr. Bogler, thank you very much for your time!



individuelle
Herausforderungslösung!

nur 6 Elementen vielfache Konfigurationsmöglichkeiten

...offen für Ideen

Von kleiner Sprachbeschaltung bis zu großem Bandbreite.
ELEMENTS lässt sich für jede Situation perfekt konfigurieren.

Ask Dr. Elements

Everything about Elements is an exercise in ease and convenience, but sometimes there's a little devil in the details. This issue marks the opening of Dr. Elements' practice, and the good doctor can't wait to answer your questions. He knows Elements inside and out, and whatever your configuration aches and pains may, he has the remedy.

? What happens if I connect an amp module to the E 110 Sub A?

Dr. Elements: You will do no harm because the EA 600 routes its speaker signal exclusively via the separate Speakon port. The EA 600's bottom E-Connect sleeve is there merely to provide some mechanical reinforcement. Otherwise, two

amps would be operating at odds. The electronic circuitry would soon be destroyed.

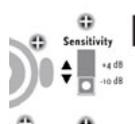
? Should I address the E 110 Sub A via the XLR or 1/4" jack, and why?



Dr. Elements: Both the XLR and 1/4" inputs are balanced. A balanced circuit is preferable to an unbalanced circuit because it is so much less noisy. In mechanical terms, XLR connectors are far more robust.

**? How should I set the Sub A's sensitivity switch?
? Why does the speaker distort in one position?**

Dr. Elements: The sensitivity switch adjusts the system's input gain to match the sound source's output signal. If you connect a mixing console, set it to the +4 dBu position. The system will sound softer at the same gain level, but its output power does not actually change. Rather, this setting makes the most of the mixing console's dynamic range and fader control more precise. Some DJ desks furnish far weaker output levels. In this case, I recommended that you boost Elements' input sensitivity. If the system distorts, the input gain is too high.



**? What purpose do the
? amp module's filters serve?**

Dr. Elements: The filter setups in the amp and subwoofer linearize the speakers' frequency response, which changes as the line array grows longer. Serving the same purpose as in every big line array, these filters ensure the sonic image remains largely the same as the size of the system increases.



? Can I set two columns up side by side?

Dr. Elements: The only conceivable reason for doing this would be to achieve very wide coverage, for example, in mono. But this is a self-defeating exercise: Frequencies will overlap, which is precisely what you want to avoid.

? Can I operate Elements in light rain?

Dr. Elements: Never set up powered speakers of any kind in the open air when it is raining. The risk of too much moisture penetrating the amp's housing is just too great. And nobody wants an event to end abruptly because of defective amps.



**? What happens if water gets
? into the top unit — a short-circuit?**

Dr. Elements: We can't rule that out, which is why we are having covers made to protect the top mid/high units.

**? If I have four mid/high units, can I
? turn one towards me for use as a monitor?**

Dr. Elements: Perhaps as a stopgap. However, the sound quality perceived by the audience will suffer. Every mid/high unit that is turned in a different direction changes the entire line's response. The line array effect will be weakened or even interrupted (if you turn the second or third mid/high unit). Ideally, monitors need to be addressed via a separate signal path to provide the desired mix to the musician.

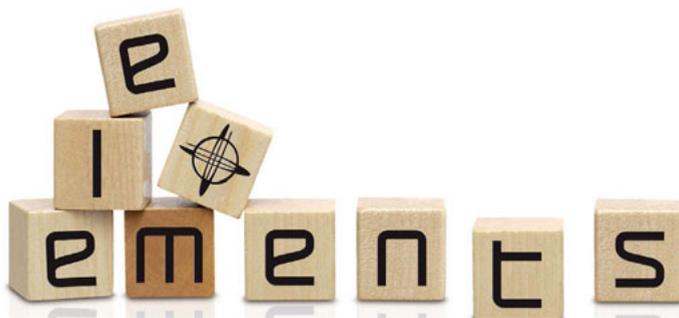


**? The base is much too wobbly with four mid/
? high units when people are dancing on stage.**

Dr. Elements: I would always mount the mid/high units and amp directly on an active sub for any kind of music that inspires dancing.

? Why is Elements unavailable in white?

Dr. Elements: We can deliver Elements in any color given an adequate order quantity. Note there is a surcharge for custom colors.





? Why are wall mounts unavailable for the mid/high units?

Dr. Elements: We designed Elements specifically to provide mobile sound reinforcement. If we decide to roll out a similar audio solution for permanent installation, we will also offer well-engineered wall and ceiling mounts.

? Can I connect a PREMIUM PR:O 210 A subwoofer to Elements, and if so, will the signal be stereo?

Dr. Elements: Sure, you can combine an Elements system with one or several PR:O 210 Sub A units as you see fit. To this end, tap the given line signal at the Elements amp or E 110 Sub A's Through port. If you use just one PRO

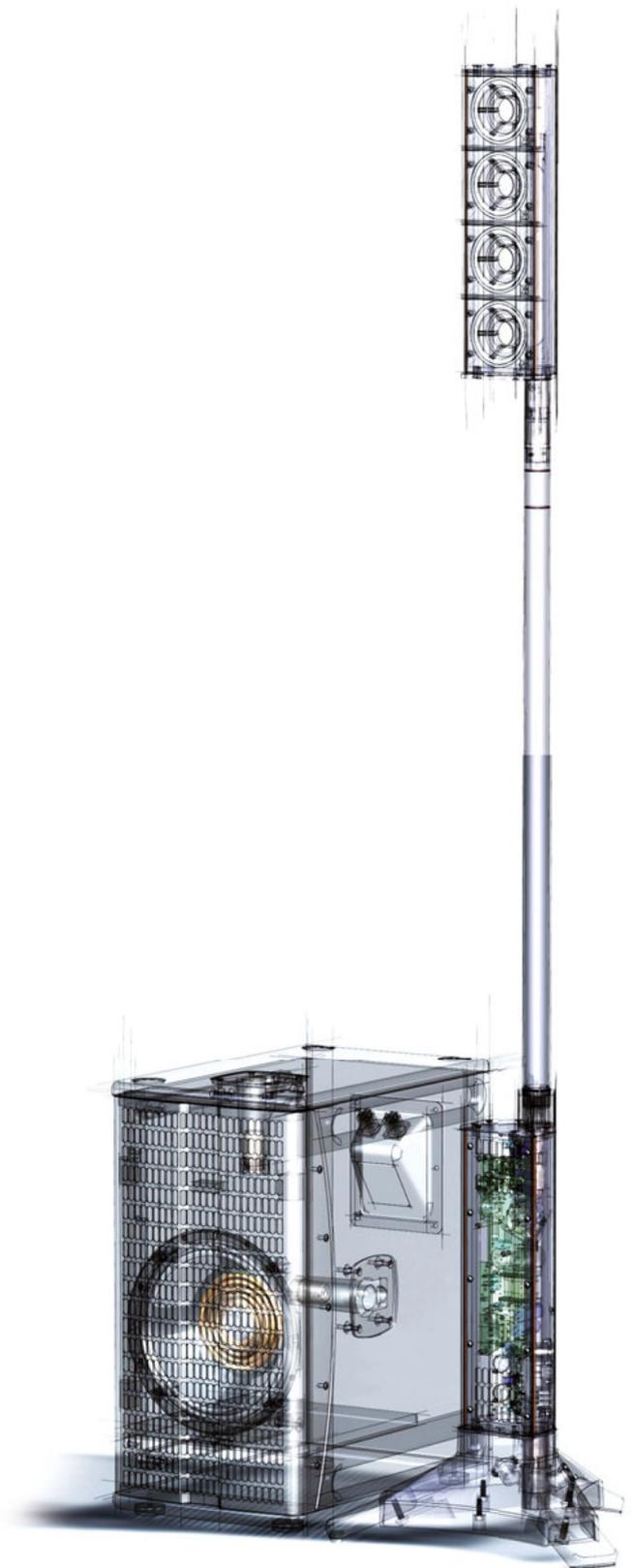


210 Sub A and feed both line signals to it, you will get a mono composite signal. To get a stereo signal, use two units and connect each to a separate channel.

However, the difference will be hard to detect under live conditions, which is why signals in this frequency spectrum are usually mixed to mono. In any case, ensure that you reverse the PRO 210 Sub A's phase (by setting the Phase switch to 180°) so that the two bass signals support rather than interfere with each other.

? Can I operate the active subwoofer on its own in combination with 2x12" cabinets?

Dr. Elements: Yes, but only if the 2x12" cab is driven by a separate amp.





elements.

it's elementary

www.hkaudio.com



Sounds good to you?

Then drop by one of our dealerships and enjoy a demo of Elements!

Go to hkaudio.com and click Support/Dealers to find an Elements dealer near you.



HK[®]
AUDIO
**Portable
Sound**