

:update

#025



SMART STUFF

CONTROL PANEL APP & AUDIO MONITORING APP FOR 1200-SERIES SMARTPANELS

■ At IBC2019 in Amsterdam, Riedel previewed two new apps for their 1200-Series SmartPanels. While the Control Panel App enables industry partners to utilize the SmartPanel as a user interface for their control, monitoring, and automation solutions, the Audio Monitoring App lets users monitor up to 16 ST 2110-30 (AES67) channels simultaneously.



CONTROL PANEL APP

API based on open NMOS standards:
Discover via IS-04, connect via IS-05, transport via IS-07

CONTROL PANEL APP

With the new Control Panel App technology demonstration at this year's IBC, third-party control, monitoring, and automation systems can now leverage the power of the RSP-1232HL's highly intuitive user interface. Users can trigger actions in third party systems and get visual feedback on configuration status and changes via the colors, labels, and symbols on touchscreens and LEDs that are inherent in the panel.

For this initiative, Riedel has teamed up with several prominent industry control & automation vendors, some of whom have already implemented a version of the API. Partners include ATOS BNCS, Axon Cerebrum, Broadcast Solutions HI, Lawo VSM, Pebble Beach Systems, and Skyline DataMiner.

"The Control Panel App offers several advantages to a proprietary control solution. Most importantly, its NMOS underpinnings allow a 3rd party system to automatically discover all of the panel's control elements, like its hybrid lever keys or touch screens, and assign any desired functionality," said Marco Muckenhaupt, Senior Product Manager, Riedel Communications. "We are thrilled to have the support of some of the key vendors in the industry and it's great to see manufacturers working hand in hand to deliver real benefits to users across platforms."



AUDIO MONITORING APP

Monitor up to 16 mono SMPTE 2110-30 (AES67) channels from a total of 128

AUDIO MONITORING APP

Leveraging the dual-ported stereo speakers on the 1200-Series panels, the Audio Monitoring App allows users to easily monitor their audio, for confidence and quality, while simultaneously performing their typical intercom workflows via the Intercom App. The app directly connects to any SMPTE 2110-30 (AES67) stream available within the network, making the selection and management of audio sources incredibly flexible and surprisingly simple.

This technology demonstration at IBC illustrated the new intuitive workflow for managing numerous AES67 sources while using the Intercom App. Users can select up to 16 mono AES67 channels in parallel from a total of 128 channels which they can swiftly organize within the app's intuitive browser-based configuration tool. As the Audio Monitoring App takes its sources directly from the 2110 (AES67) network, users gain tremendous flexibility in selecting monitoring sources while saving ports on their matrix.

"Many conversations have shown us how challenging it can be to integrate intercom, control, and audio monitoring at the same positions in narrow space environments," said Muckenhaupt. "With our SmartPanel concept, we allow customers to quickly and flexibly react to those needs – all with the same hardware."



INTERCOM APP

Offers flexible workflows enriched by group colors and icons

SMART STUFF

Visit us #10.A31



BOLERO 2.1.

NOW INCLUDING STANDALONE 2110 (AES67) MODE



reddot design award
winner 2019



■ With the addition of the newest Bolero Standalone 2110 (AES67) mode, there are now three network modes available for Bolero systems – each of them dedicated to specific applications.

BOLERO INTEGRATED

leverages the powerful Artist ecosystem, including SmartPanels and extensive I/O connectivity. Now with up to 250 belt packs per Bolero Net!

BOLERO STANDALONE LINK

provides plug & play simplicity that is especially suited to smaller installations, portable deployments, or cases when Bolero needs to be interfaced to other systems with no Artist required.

BOLERO STANDALONE 2110 (AES67)

lets users establish IP-based Bolero networks without the need for an Artist matrix. The antennas are distributed over a SMPTE 2110 (AES67) IP network and connected via AES67 PoE switches. As in Standalone Link deployments, audio mixing and control functions are handled by the antennas and 100 belt packs can be accommodated per Bolero Net. An optional NSA-002A provides analogue interfacing and GPIOs while fiber-connected switches or switch cascades can be used to cover long distances.

BOLERO 2.1.: NEW FEATURES

Network topology monitoring - IP / ring / daisy-chain

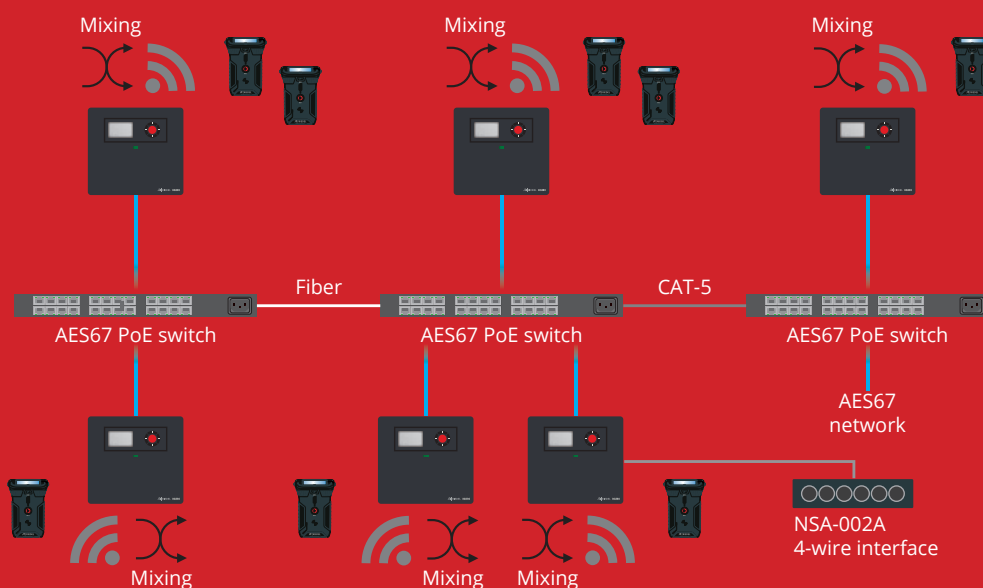
TTL Settings - Adjustable multicast TTL (1 to 255 / default 16)

DECT Master Priority - Configurable in WebUI

PTT Button Support - Up to two external keys
and many more...

BOLERO STANDALONE 2110 (AES67) AT A GLANCE

- Antenna distribution via SMPTE 2110 (AES67) IP network
- Multiple fiber-connected switch cascades for long distances
- Analogue 4-wires and GPIOs via optional NSA-002A throwdown box
- Integrated web browser for configuration
- 12 partylines and unlimited point-to-point connections
- 100 belt packs, 100 antennas
- Simple NFC and Over the Air registration
- Decentralized intelligent antenna network
- Advanced DECT receiver (ADR) for multipath mitigation
- Seamless handover & roaming
- Redundant PoE+ and DC power supply antenna scheme



ENJOY THE SILENCE

ALEX ALBON ON F1
CAR COMMUNICATIONS

■ Alex Albon is a professional 23-year old Thai racecar driver of English descent who was competing in Formula 1 for Scuderia Toro Rosso when we caught up with him in Hockenheim for a quick chat about how he deals with in-car communications. Alex finished 6th in Germany and, shortly after this interview, was promoted to the Red Bull Racing roster to race alongside Max Verstappen.

Hello Alex! First of all, congratulations on a great race and thanks for taking the time to talk to us. This is your first Formula 1 season after coming out of Formula 2. What has changed for you? How are you settling into your new team?

Hey, thanks a lot! Well, at the beginning, Formula 1 really was a new world. But Toro Rosso has a history of young drivers coming through so they really understand what young drivers need. And I'm not just talking about driving, but also about general feedback and how to deal with media and fans. It's all pretty new but the guys at Toro Rosso have been really helpful in every respect. They have made me feel very welcome and now I feel a lot more settled and relaxed in a Formula 1 car!

For communications during the race – how much are you talking to the team and do you have to find a balance so you don't lose focus? What is discussed and when?

I'm a quiet guy on the track, so I don't speak that much during a race. I mostly listen to the engineers when they request necessary adjustments. In other series' apart from Formula 1, the team will wait till you're on a straight to speak to you. But because Formula 1 is so high-tech, they call you literally all the time. Whether it's an engine or tail setting that you need to change or the overall car balance, they speak to you whenever they want. You could be in the middle of a corner, first lap, last lap... It's pretty non-stop. It's like a NASA conference call!

Was there ever a situation where you felt like saying something but remained silent?

Oh yeah, all the time. When things don't go smoothly, there is really no point in being angry. Angry communication with your engineers is just not beneficial. If you really need to vent your anger, you can just do it before turning on the radio.

And vice versa? Was there ever a situation where you felt like remaining silent but said something?

Not really... But when we do radio tests where the team leaves the channel open, you constantly have to remind yourself not to say anything stupid, because everyone can hear everything you say!

Would you love to talk to someone else while driving?

No. During the race I'm very focused, so I don't really want to speak to anyone. I don't even really speak to my engineers, so never mind someone else.

DARE TO DECENTRALIZE

RIEDEL AT EUROVISION SONG CONTEST TEL AVIV 2019

For 14 consecutive years, Riedel Communications has provided advanced intercom, signal distribution technologies, and on-site engineering support for the Eurovision Song Contest (ESC) – the world’s longest-running international television song competition. This year’s broadcast had an estimated global viewing audience of 200 million, wrapping up in Tel Aviv May 18.

Riedel provided a complete solution for the 2019 ESC that included not only intercom and signal distribution, but also accreditation, access control, commentary systems, and a comprehensive IT infrastructure for staff, broadcasters, and attending press members. Riedel’s MediorNet real-time media network served as the transport backbone for the entire event, delivering redundant and decentralized signal routing. The MediorNet system was comprised of 60 MediorNet frames installed across 25 positions and handling more than 700 audio signals, 400 video signals, and a variety of data signals. The network required more than 25 kilometers of fiber optic cable.

Riding atop the MediorNet signal backbone, Riedel’s Artist digital matrix intercom system and Bolero wireless intercom provided comprehensive and reliable communications for the crew working backstage, performers on stage, and talent in the commentary positions. The Riedel solution featured over 170 intercom panels, 40 Bolero beltpacks, 32 radio channels on 260 analogue handheld radios, more than 10 radio talk groups supporting 150 digital handheld radios, and hundreds of audio accessories such as headsets, remote speaker mics, and earpieces.

From master control, the Riedel team monitored and controlled the complex intercom and media network, as well as an advanced IT infrastructure with extensive cybersecurity capabilities. With nearly 50 network switches and 150 Wi-Fi access points, Riedel provided a 2 x 2 Gb/s redundant internet connection across the entire venue. From here, Riedel also remotely managed the access control and accreditation systems through the RFID-equipped accreditation cards of nearly 12,000 participants and guests.

A critical element of the on-site solution were Riedel’s 2300-Series SmartPanels, multifunctional user interfaces that can be equipped with software apps to provide additional functionality above their primary purpose as intercom panels. With the powerful MediorNet Control App installed, users have flexible routing and control over audio and video signals using the high-resolution, multitouch color displays and intuitive touch-screen UI.

“The 18 SmartPanels distributed throughout the venue enabled agile routing and control of both audio and video signals transported across our MediorNet network,” said Yung Min Lee, Senior Project Manager, Riedel Communications. “Eliminating the need for a separate control system, the MediorNet Control App allowed us to route, control, and communicate all at once. This flexibility translated to greater efficiency, which is crucial in large-scale productions like the Eurovision Song Contest.”



RIEDEL AND GERMANY'S DFL

EXPAND THEIR COOPERATION

First-Class Referee Comms Now in 2nd Bundesliga and DFB CUP

operators benefit from the patented Hybrid Lever Keys and the phase-accurate stereo loudspeakers of the highly customizable panel. In addition to 12 RSP-1232HL Smartpanels, 12 RCP-1028 panels, and six RCP-1128 panels, the team also uses 12 2300-Series SmartPanels that are equipped with the MediorNet Control App.

The MediorNet Control App allows the ROC team to access the video signals from the Cologne VAC and distribute the live images to their own screens. At the same time, operators can quickly reconfigure the panels to customize each monitoring position to their specific needs.

Because every component is completely redundant, the new ROC also sets new standards in terms of reliability. The core technology, located in the Riedel data center, is entirely independent thanks to a backup power generator. Even in the event of a major power failure, the active monitoring of the football matches would remain completely unaffected.

"For us, the future of sports production lies in managed sports services and remote management," said Carsten Voßkühler, Project Manager at Riedel Communications. "The ROC significantly reduces the personnel and logistical production effort for us and our partners while enabling unrestricted transmission security and the highest service quality. The incredible response to our cooperation with the DFL empowers us to apply the concept of central control management to other applications. With our expanded ROC, we are already prepared for future projects."

■ For more than a year, referees for Germany's Bundesliga professional football matches have enjoyed the benefits of Riedel's Bolero S wireless referee communications system including high transmission security, significantly improved voice and sound quality, and guaranteed quality assurance from the Riedel Remote Operations Center (ROC) in Wuppertal. Now, for the 2019/2020 Deutsche Fußball Liga (DFL) season, referees for all 306 of the 2. Bundesliga division matches will take advantage of these same benefits. The Bolero S will be used throughout the regular season and for the final 15 Deutscher Fußball-Bund (DFB) matches.

the addition of another full division of Bundesliga play. The tailor-made technology and comprehensive system management from the ROC in Wuppertal considerably enhance both the referee comms and the integration of the video assistant.

The Bolero S wireless intercom system, with remotely monitored VOX voice activation, was developed by Riedel's Managed Sports Services division in close cooperation with experts from the DFL and DFB. The solution enables perfect communication between referees, assistants on the pitch, and the video assistants in the Video Assist Center (VAC) in Cologne. From the newly expanded ROC in Wuppertal, the Riedel team remotely controls, configures, and calibrates all system components in real time, ensuring maximum security and optimum sound quality.

With the introduction of the Bolero S systems in 2. Bundesliga came the outfitting of 18 2. Bundesliga stadiums with the appropriate Artist and Bolero hardware. The support capabilities of the Riedel ROC likewise have been raised to an entirely new level. The ROC now offers space for 12 audio specialists who can monitor up to 10 matches simultaneously on any given Bundesliga Saturday.

The improved room concept within the Riedel ROC relies on the processing power of the new RSP-1232HL SmartPanel, whose user-friendly user interface enables the Riedel team to optimize its workflows. Among other things, the ROC

The successful premiere of Bolero S for 1. Bundesliga during the 2018-19 season led the DFL to extend its use to the 2. Bundesliga and DFB Cup. Both equipment and capacity at the ROC were augmented at the start of the 2019-20 season to provide sufficient space for the rapid expansion in remote management services — and particularly



RIEDEL INTERCOMS
HIT THE ICE
 AT GERMANY'S LANXESS ARENA



■ As Germany's largest multifunctional arena, with up to 20,000 seats and 83,700 square meters of usable space, the Lanxess Arena in Cologne has been hosting major events of all kinds for over 20 years. The arena is also the home of the eight-time German ice hockey champion Cologne Sharks. Since its completion in 1998, the Lanxess Arena has relied on Riedel solutions – the latest of which is a new, Artist-based communications network that streamlines broadcast and event production workflows.

After extensive testing, Arena Management GmbH chose a decentralized Riedel comms solution based on two Artist-32 digital matrix intercom nodes, with one Artist frame in the production control room and a second one in the central technical area below the arena.

"This comprehensive intercom upgrade is a gift to ourselves for our 20th anniversary," said Martin Rebiszewski, Technical Manager, Arena Management GmbH. "In terms of reliability and flexibility, the products from our neighboring city of Wuppertal really are unmatched. And, with its unparalleled scalability, the Artist infrastructure is perfect for multifunctional halls with constantly changing requirements."

Thanks to its modular structure, the Artist ecosystem can be easily expanded to match the specific conditions of various Lanxess Arena events. The ability to effortlessly integrate rented Riedel accessories, such as additional SmartPanels and Bolero wireless intercoms, has been particularly valuable for larger events and productions.



The Artist ecosystem, with 23 2300-Series SmartPanels, enables flexible and creative workflows for the Arena Management GmbH production team. At Cologne Sharks hockey games, the communications system not only connects production, camera, sound, and lighting staff, but also integrates referees, house announcers, and the DJ.

"Ice hockey allows for particularly spectacular staging, but it also imposes exacting demands on TV and event production. With this Artist installation, the Lanxess Arena is prepared to overcome any production challenge," said Niklas Rautenberg, Account Manager at Riedel Communications. "By enabling clear and reliable communications between all participants, the production team can now present the Cologne Sharks games in an even better light. We are very pleased to have renewed our long-term partnership with Arena Management GmbH and are already looking forward to the next ice hockey season."



AUSTRIA'S
 UPPERCUT
 UPGRADES OB
 OPERATIONS
 WITH ARTIST
 AND
 MEDIORNET

■ Riedel's Artist and MediorNet are bringing flexibility and agility to the OB operations of Uppercut Broadcast and Visual Technologies GmbH, an Austrian-based division of the Uppercut Group. These smaller-footprint vans are able to cover events that larger OB vans simply could not access, yet can easily leverage the scalability of the Riedel technology to operate independently or be combined using just a single fiber cable.

The larger of Uppercut's two new vans is a 12-ton truck that was launched in April of 2018, with the ability to handle productions with up to eight cameras. Communications gear includes an Artist-32 frame with 12 panels, Performer digital partyline, and a RiFace radio interface, while video transport, processing, and routing are handled by two MediorNet MicroN software-defined media devices. Replacing a traditional, monolithic router, MicroN is able to reduce system complexity and weight by allowing I/O to be placed where it is needed, while the use of Apps allows users to load exactly the capabilities they need. Uppercut employs the MultiViewer and Control Apps to simplify its workflows and eliminate single-purposes boxes.

The smaller truck is a 3.5-ton van that is typically deployed for four-camera productions. The van is equipped with an Artist-32 frame and Performer partyline, plus two MicroNs in a similar configuration.

"The real elegance of our solution is that we can combine these two vans by interconnecting them with a single LEMO-hybrid fiber optic cable," said Daniel Brandstätter, CEO and founder of Uppercut Broadcast. "We chose this cable type because it is a broadcast- and SMPTE-standardized assembly that we also use for our cameras and that many venues have pre-installed."

The Uppercut group is a family-run range of businesses that provides services ranging from marketing to advanced media throughout Austria with reach into the surrounding countries. Events covered by Uppercut include Golden League volleyball, Champions League volleyball and field hockey, Opera in Erl, and ORF 3 Politics Live.

"Uppercut is a great example of how MediorNet and the concept of decentralized routing can scale down to handle events of all sizes. It's not just for the Eurovision Song Contest," said Jürgen Diniz-Malleck, General Manager, Austria and CEE at Riedel Communications. "Uppercut gets all of the routing capacity they need, plus integrated signal processing and the ability to control it all from the same panels that they communicate over."

ARTIST AND BOLERO BOOST INTEGRATED COMMS AT UNIVERSITY OF GEORGIA SPORTS VENUES

■ The University of Georgia is one of the oldest public universities in the United States and the flagship research university for the state of Georgia. In addition, the institute is a member of Division 1 of the Southeastern Conference of collegiate sports, competing in 19 sports — and its teams have won over 40 national championships.

For some time, the University of Georgia Athletic Association (UGAA) has relied on Riedel's Artist digital matrix intercom system. Now, a brand-new expansion of the Artist-based communications infrastructure now fully integrates multiple sports venues across the campus. As a result, UGAA has been able to streamline linear broadcasts and live streaming of sports events, video board presentations, and in-venue fan promotions.

Riedel partnered with Alpha Video for UGAA's broadcast infrastructure expansion, anchored by a new Artist-128 mainframe in the central production core. The Artist-128 services Sanford Stadium and the Stegeman Coliseum, with a fiber link to frames at the Foley Field baseball facility, the Turner softball complex, the Turner Soccer Stadium, the Gabrielsen natatorium, and the William Porter Payne and Porter Otis Payne Indoor Athletic Facility. In addition, a Bolero wireless intercom system comprised of 15 belt packs and seven antennas replaced a previous two-wire solution that was in place at several venues. Some of the Bolero antennas are routinely moved to handle various other requirements around the campus.

The new Bolero solution integrates directly with Artist and enables all user groups, such as the band, cheer squad, DJ, operations team, and video control team, to communicate using a single system and without conversion or a party line. Bolero has proven especially valuable for the men's and women's basketball and gymnastics events, which require multiple wireless channels but for which a party line setup is impractical.

"When it came time to upgrade our comms capabilities across campus, we knew we wanted to stay with Riedel and Artist. And then the introduction of Bolero made it a no-brainer," said Mike Bilbow, Assistant Athletic Director, Digital and Production, UGAA. "Bolero gives us so much more flexibility, and its reliability and sound quality are bar-none — both critical factors for events with 90,000 cheering fans. With many of our users connecting wirelessly now, we're able to save money on cabling infrastructure. And it's great to be able to salvo presets for each event, which frees up our engineering staff for other duties."



MARTIN BERGER

CSO

„Technology and creativity.
German engineering
with a dash of madness.“

■ It's been almost two years now since Martin joined Riedel, filling the newly created role of Chief Sales Officer (CSO). Pivoting off his 20 years of international sales and marketing experience, Martin has been fine-tuning the global sales organization through the adoption of new company-wide sales tools and a focus on developing individual skills. We sat down with Martin to look back and to look ahead at future challenges and opportunities.

Hey Martin! Describe the Riedel brand in a nutshell.

Technology and creativity. German engineering with a dash of madness. The Riedel brand has its own personality. Riedel is not an anonymous company, but bears the name of its founder, owner, and CEO. The company dares to try new things, breaking with traditions and shifting borders. Riedel is not a rigid structure. Riedel does not stand still. It lives, breathes, experiments, and constantly evolves.

Large events and complex projects drive us to new heights of performance. For our clients, we aim to solve complicated issues as simply as possible. Riedel wants to inspire and be an active innovator and driver in the industry. At the same time, the brand never takes center stage. We prefer to be the „heroes in the background“. We want our customers to inspire their customers and be successful with whatever they are doing. Only then are we successful.

Riedel has been growing continuously for years in the double-digit range. How is this maintained?

First of all, our growth shows that we have done quite a few things right in recent years. For this we are grateful to our customers and employees. We want to continue to grow, but turnover and profit are not an end in themselves. Growth enables us to continue to drive development and to realize exciting projects. In our dynamic industry – digital transformation is one of the key words here – we must also further develop our own core competencies. For example, our need for software specialists continues to grow significantly. Since we have been hiring more than one new employee per week for quite some time now, we have now reached a size that requires fundamentally different internal processes than in the past. Growth calls for an expansion of the company's foundation, and that is by no means achieved overnight.

Can Riedel achieve its targeted growth this way?

We can, but we can't do it alone. Our future depends on strategic cooperation since customer requirements and technologies are becoming so complex and demanding that they can hardly be met by individual companies. Good performance and sincere cooperation in trustful partnerships will be the key to mastering the challenges that lie ahead.

In 2018 we invested 20% of our turnover in R&D – and I can say it will not be less in the future. Thinking and acting this way is one of the great advantages of an owner-managed company.

On a global scale, economic and social challenges remain as pressing as ever. Trade embargoes and Brexit to name but a few. How is Riedel dealing with these?

Of course, we only have a very limited influence on major social and political developments. Our roots are in Wuppertal, but as a company we operate globally at more than 20 locations worldwide and therefore depend on open markets. We believe that the right path is leading forward, not backward, and we believe in core values such as sincerity, freedom, and diversity. I am confident that with this attitude we can look forward to continued success in the future.



COMMS? YES WE CAN ^{ADA} ARTIST AND BOLERO FOR CBC/RADIO-CANADA

■ Modern, multiplatform, and increasingly digital, CBC/Radio-Canada is the epitome of a 21st-century public broadcaster. One of the latest examples is the Maison de Radio-Canada (MRC) Broadcast Center, CBC/Radio-Canada's state-of-the-art new headquarters in Montreal. Scheduled to open in 2020, the MRC will serve as a creative hub for the city's digital and artistic communities.

CBC/Radio-Canada has mandated that the MRC communication infrastructure be entirely IP-based, utilizing the established SMPTE ST 2110-30/31 and NMOS IS-04/05/07 standards to create a future-proof communications environment. To that end, CBC is implementing a large communications backbone based on Riedel's Artist and Bolero wired and wireless intercom systems. When complete, the MRC will represent one of the largest Artist installs in North America and one of the first deployments of Riedel's all-new Artist-1024 node.

“The combination of cutting-edge technology, modern user interfaces and panels, and commitment for open specifications and standards will give our creative people a very powerful and fully integrated intercom system,” said François Legrand, Senior Director, Core Systems Engineering at CBC/Radio-Canada.

With its extensive IP capabilities, high port density, and multiple redundancy schemes, Artist-1024 is a perfect fit for large networked installations like the MRC. Offering 1024 nonblocking ports in just a 2-RU frame size, Artist-1024 uses software-definable universal interface cards (UICs) that combine networking, mixing, and management on a single card. Each UIC can be configured to act as a SMPTE ST 2110-30/31 or MAD1 subscriber card, or as an Artist fiber/router/processor card. Changing the connectivity type is as easy as reconfiguring the UIC with the click of a button in the Director configuration software. A flexible licensing structure will allow MRC users to scale port counts up as needed, all within Director.

The seamless integration of Artist-1024 with Bolero, Riedel's AES67-based wireless intercom system, was a large selling point for CBC/Radio-Canada. Working together, Bolero and Artist create a fully unified wireless communications environment for the new MRC. In addition, CBC/Radio-Canada installing more than 250 Riedel 1200-Series SmartPanels. Designed to optimize rack space and reduce costs, these newest SmartPanels are ST 2110-30/31-native, app-based user interfaces for intercom, high-quality audio monitoring, and integration of third-party control systems via the new SmartPanel Control Panel App.

“This sale is the culmination of many months of collaboration between CBC/Radio-Canada and our Riedel teams both here and in Europe,” said Joyce Bente, President of Riedel Communications North America. “We are thrilled to be selected as the intercom technology partner for this groundbreaking project and look forward to accompanying CBC/Radio-Canada during their transition to IP workflows.”

ESPORTS TOURNAMENTS

WIN BIG WITH RIEDEL INTERCOM SYSTEMS

■ The ESL One Intel Grand Slam in Cologne and the PUBG Mobile Club Open (PMCO) in Berlin — two high-profile esports events held earlier this year — relied on Riedel's MediorNet real-time network, Artist digital matrix intercom, and Bolero wireless intercom solutions for sophisticated and reliable signal transport and communications.

Before a capacity crowd at Cologne's Lanxess Arena on July 8, Team Liquid defeated Team Vitality in the championship round of the ESL One Intel Grand Slam and completed the tournament in a record time of 63 days. ESL worked with the Artist-based intercom infrastructure recently installed as part of a technical overhaul of the Lanxess Arena.

Riedel supplied 2-way radios to ESL, and these devices linked seamlessly to the intercom backbone via Riedel RiFace interfaces to enable fast and reliable comms between crews in the Lanxess Arena and the nearby Hyatt Regency Cologne hotel, which hosted pool play earlier in the tournament. ESL gaming experts and commentators used Riedel keypanels via the Artist system to provide color commentary for viewers.

NEP supported the broadcast using a Riedel Artist frame with 11 Desktop Control Panels deployed to in-game directors and front-of-house engineers. NEP also deployed numerous Riedel MediorNet MicroN

high-density media distribution network devices and MediorNet Compact Pro stageboxes to facilitate signal distribution between the production van, in-game director, front of house, stage/backstage, partner lounges, the expert studio, and the commentary set.

The PMCO Spring Split Global Finals wrapped up at the Estrel Congress Center in Berlin on July 28 with Top Esports winning the championship match. The event was the year's first global esports competition for the mobile Battle Royale game, and 27 teams from across the globe qualified for the prelims and finals. Organizers deployed an Artist mainframe with 30 SmartPanels and 30 Bolero beltbacks to facilitate crew communications for this marquee esports tournament, which was streamed in 10 languages via YouTube, Twitch, and other streaming platforms.

"Our advanced signal transport and communications solutions are perfectly suited to the rapidly emerging and exciting world of esports," said Niklas Rautenberg, Account Manager at Riedel Communications. "Like other large arena-based sports events, esports tournaments require clear and reliable communications between all members of the production team. Our Artist, MediorNet, and Bolero systems played a key role in the ESL Grand Slam and PMCO events, two of the most important tournaments on the global esports calendar."



BOLERO STANDALONE ON STAGE AT SINGAPORE'S LASALLE COLLEGE OF THE ARTS



"Bolero is the ideal solution to take Lasalle safely into the future"

*Patrick Wong
Senior Technician*

Lasalle College of the Arts, Singapore's only dedicated contemporary arts college, has installed Riedel Communications' Bolero wireless intercom in the school's renowned Singapore Airlines Theatre. With its high audio quality and RF robustness, Bolero streamlines staff communications and facilitates the production of a broad range of performances. Operating in standalone mode, with no Artist mainframe required, the plug & play solution enables the team to quickly set up the system at various locations across the campus.

"When we needed to upgrade our wireless intercom capabilities to keep pace with the demands of modern theatre productions, Bolero was the perfect choice. We were well aware of the outstanding reputation of Riedel products, and we knew Bolero would provide a stable and reliable solution," said Patrick Wong, Senior Technician, Lasalle College of the Arts. "It was immediately apparent that Bolero would provide much better range, better audio quality, and a richer set of features than our previous system. Bolero is the ideal solution to take Lasalle safely into the future, with the flexibility to expand into a more complex intercom configuration when the need arises."

Lasalle chose Bolero on the recommendation of Riedel's local partner, AudioLink Solutions Pte Ltd. Key factors in Bolero's selection were the system's ease of deployment, ability to scale to different sizes of events, and straightforward user interface. The Lasalle technical crew especially appreciates their ability to achieve

full coverage over their entire facility with just a single antenna. But it was Bolero's capacity to interface with existing intercom systems via Riedel's NSA-002A AE567-to-4wire interface that ultimately sealed the deal.

"Lasalle is highly regarded for its cutting-edge educational programs in contemporary arts and design," said Rajveer Singh, General Manager, ASEAN and South Asia, Riedel Communications. "This installation is an outstanding example of how Bolero can fulfill even the most demanding communications requirements in live-performance theatre settings."



RIEDEL'S SWISS ARMY KNIFE MEDIORNET REDEFINES MEDIA INFRASTRUCTURE AT SWISS RE

Swiss Re, the world's second-largest reinsurance company, is using a decentralized MediorNet infrastructure for signal transport, routing, and processing as part of its extensive "Campus Mythenquai" renovation project. An Artist intercom system seamlessly integrates into this infrastructure to ensure reliable communications within the entire complex, which includes the original headquarters, the Swiss Re Next building, the Clubhouse, the Mythenschloss auditorium, and the Swiss Re Academy that is 6km removed from the main campus.

With Riedel's MediorNet real-time media network, previously separate IT and AV networks are combined onto a single redundant fibre optic backbone, an update that significantly increases the performance and reliability of the entire infrastructure. Several auditoriums, meeting rooms, a studio, and a control room are included in the new infrastructure.



An Artist-32 node and 10 2300-Series SmartPanels ensure crystal-clear communication in all rooms. Almost a dozen MediorNet Compact frames with decentralized, redundant signal routing facilitate all routing, signal transport, processing, and communication, allowing all signals to be switched effortlessly to and from any point on the extensive campus. Swiss Re will soon augment this deployment by adding a Bolero wireless intercom system within its new Remote Location Center for Global Dialogue in Rüslikon, Switzerland.

The benefits of the Riedel's decentralized approach, which enables easy expansion using additional rented MediorNet nodes when needed, became clear at the 2018 Formula E race in Zurich. There,

the entire MediorNet infrastructure was expanded using just one fiber optic connection, and a complete media center with 300 workstations was quickly set up in an auditorium that was otherwise used for concerts, receptions, and networking events.

"Thanks to its modularity and scalability, MediorNet offers Swiss Re enormous freedom in setting up intelligent media architectures," said Erwin Engel, Sales Manager, Riedel Communications Switzerland AG. "The setup at the prestigious Swiss Re-Campus not only forms the perfect basis for an eventual migration towards IP-based network solutions, but also serves as a solid investment for the future."



IMPRINT

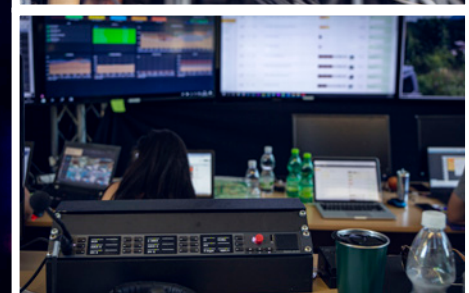
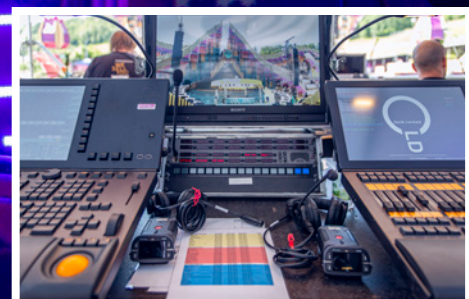
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RIEDEL'S ARTIST AND BOLERO SHARE THE

AT SIXTH ANNUAL ELECTRIC LOVE FESTIVAL IN AUSTRIA

Love was in the air at the sixth annual Electric Love Festival in Austria, which wrapped in early July with more than 180,000 visitors and featured nearly 160 artists. The festival, which has been held at the Salzburgring race course since 2013, is one of Europe's largest venues for electronic dance music. And once again, Riedel was on hand to provide an extensive Artist- and Bolero-based communications backbone and on-site support. Revolution Event GmbH, an Austrian-based, full-service event management company, partnered with Riedel to ensure a smooth production.

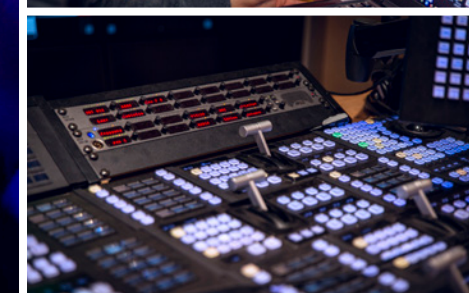


Throughout the four-day event, the Bolero wireless intercom provided clear and reliable communications for all mobile staff including sound, camera, and lighting crews, as well as the show management team. Revolution Event deployed nearly 50 Bolero belt packs to crew members, with only eight Bolero antennas providing full coverage throughout the vast, 18,500-square-meter venue. Bolero's ability to integrate easily and seamlessly with Artist components, including frames, keypanels, and SmartPanels, was a huge asset.

"We knew we could count on Bolero to guarantee optimal communications between all of our teams," said Hannes Schnappinger, Revolution Event stage production manager. "Riedel's sophisticated wireless technology and Bolero's great range gave us unprecedented flexibility and mobility."

In the days prior to the event, Riedel teams installed more than 1,300 meters of fiber-optic cable to feed the Bolero signals into the central Artist matrix. All cables converged at the Event Control Center, the heart of the production, where Revolution Event staff supervised all teams with an RSP-2318 SmartPanel. A 12-camera OB van behind the main stage broadcast the entire event live over social media channels, with an additional 2300-Series SmartPanel onboard the OB unit helping to ensure the highest broadcast standards.

"Our partners at Revolution Event faced a very challenging infrastructure, with just one single road leading to and from the festival grounds. Seamless and reliable communication was essential for properly managing cabling and equipment in this bottleneck, and also to guarantee the safety of festival-goers," said Jürgen Diniz-Mallek, General Manager Austria and CEE at Riedel Communications. "With the reliable Artist and Bolero intercom systems and our experienced engineers by their side, Revolution Event succeeded in making this Electric Love Festival an amazing experience for everyone involved."



#meet the determined

RIEDEL PROVIDES INFRASTRUCTURE FOR SPECIAL OLYMPICS WORLD GAMES 2019 IN ABU DHABI

■ Bringing together more than 7,000 athletes representing over 195 countries, the 2019 Special Olympics World Games 2019 (SOWG) was the largest, most inclusive, and most unified in the history of the organization. Headquartered in Abu Dhabi, United Arab Emirates, the SOWG showcased initiatives and activities at 30 venues across all seven Emirates. Riedel Communications was there supplying a comprehensive, integrated communications infrastructure that included the Artist digital matrix intercom system and Bolero wireless intercom.

Artist and Bolero were at the core of a massive comms deployment across all 30 venues that also included a managed IT network. The numbers speak to the sheer size and scale of this event: Riedel deployed more than 30 Artist-64 nodes, supporting over 180 Bolero beltpacks on 56 Bolero antennas, plus another 170 C3 Digital Performer beltpacks, and 1,500 Tetra radios.

At the SOWG opening and closing ceremonies in Abu Dhabi's Zayed Sports City Stadium, Riedel provided seamless crew and announcer communications through 65 1000-Series control panels, 60 Bolero wireless beltpacks, and more than 250 Tetra radios. A preexisting MediorNet infrastructure greatly simplified the integration of the communications system in the largest stadium in the United Arab Emirates.

At each of the 30 venues, Riedel provided comms for all sports and medal ceremonies — with an Artist mainframe and six Artist panels. The venue deployments marked the first time the SOWG achieved seamless communications without radios, with event crews relying solely on a Bolero wireless intercom that included six Bolero beltpacks per venue.

In addition, Riedel provided an IT infrastructure to support a managed network service at seven SOWG venues, which included firewall management, broadband internet, more than 165 access points, and more than 80 switches.

"...more than 30 Artist-64 nodes, supporting over 180 Bolero beltpacks on 56 Bolero antennas, plus another 170 C3 Digital Performer beltpacks, and 1,500 Tetra radios..."

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Nacho Lee, Sales Manager, UK

■ Riedel is on the move, and our company's phenomenal growth over the last year is demonstrated by several major appointments and office openings in diverse locations across the globe.

Reflecting Riedel's rapidly growing presence in the U.S. and Canada, two key executives have recently joined the Riedel North America sales operation. Industry veteran **Rich Zabel** has been named vice president of sales for North America, with responsibility for the entire sales organization and a focus on building business in key vertical markets. Rich's illustrious career spans more than 30 years, and it includes senior executive and sales management positions for some of the biggest names in the video industry.



Rich Zabel, Vice President of Sales, North America



Deidre Piper, Marketing Manager, APAC

RIEDEL HIRING ON THE UPSWING, REFLECTING STRONG GROWTH WORLDWIDE

In addition, **Ash Condon** has joined the North America team as regional sales manager for the Southeastern U.S., reporting to Rich. An 18-year veteran of the broadcast and professional video industries, Condon has presented at several SBE, SMPTE, NAB, and PBS events on the evolution of television and broadcasting.

In Italy, **Eugenio Menichella** has been appointed as a Riedel system consultant. Menichella brings more than 20 years of experience in technical and quality assurance management to his new role, including almost 13 years at EVS Italia SRL. He is based in Milan and reports to Giuseppe Angilello, sales manager for Italy.

Another experienced industry veteran, **Tobias Kronenwett**, is the new head of sales for Riedel Scandinavia. Reporting to Director of Sales Jens Miedek, Kronenwett has almost 20 years of sales and product management experience in companies such as Lawo and SonoVTS, with deep technical knowledge in audio engineering and mixing consoles.

Meanwhile, **Nacho Lee** has joined Riedel U.K. as sales manager for theatre and industry, bringing 15 years of experience in the pro AV and electronics industries. Prior to joining Riedel, Lee served as sales manager for ATEN UK, helping the company's pro AV product range realize significant growth.

Continuing Riedel's investments in new technologies, the **Porto R&D** hub in Portugal has expanded the company's global R&D team to over 100 engineers. A complement to Riedel's Rental Innovation department, the Porto hub is tasked with delivering pioneering innovations and real-time analytics centered around nautical technology with a focus on water sports.

Riedel's expanding footprint in the Asia Pacific is on display not only through two key appointments, but also with **two strategic new office openings**. In Japan, the Riedel team has recently moved to a spacious new office that will accommodate many years of future growth. And, with the opening of a brand-new office in Beijing, Riedel's APAC presence now spans Japan, China, Singapore, and Australia. To broaden knowledge and empower Riedel customers, **Julian Hewitt** has been appointed regional training manager based in Singapore. In addition, **Deidre Joubert** is the new regional marketing manager, Asia-Pacific, based in Sydney, with a goal of further strengthening pan-regional communication and awareness.

In the Middle East, **Mohamed El Sawy** has joined Riedel as a regional sales manager based in Doha, Qatar. In addition, **Ahmed Abdelwahab** is a new service engineer working out of Riedel's Dubai office.

Barça Studios, owned and operated by the FC Barcelona football club, is one of the latest sports broadcasters to embrace Riedel's MediorNet real-time signal network for video signal connectivity. MediorNet creates a signal transport backbone for the sharing of video resources between Barça Studios in Sant Just Desvern, just outside of Barcelona; FC Barcelona's Camp Nou Stadium in the center of Barcelona; and the FC Barcelona Sport City, located in Sant Joan Despí.

The MediorNet network not only connects Barça Studios with the Camp Nou Stadium and Sport City, but also facilitates decentralized signal acquisition, processing, and routing between different areas of the stadium. The overall setup is comprised of a MediorNet Compact PRO and nine MicroN devices equipped with the Standard and Processing Apps. CWDM optical multiplexing allows the links to function redundantly on just two dark fibers.

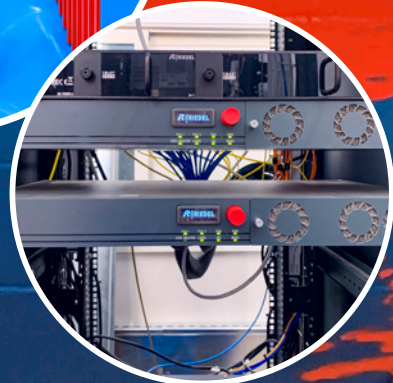
Five of the MicroNs are used in the stadium: one on the pitch, one each in the TV compound, data processing room, and video scoreboard control room, and one that serves as a mobile node that can be flexibly positioned anywhere in the stadium. Two more MicroN units, also with the Standard and Processing Apps, connect the Barça Studios to FC Barcelona Sports City.

The onboard signal processing capabilities of MicroN provide Barça Studios with embedders/de-embedders, frame sync, frame store, and a timecode generator. Additional functionality is provided by the Processing App that includes color correction in the RGB and YCbCr color spaces, up/down/cross conversion, and two multiviewers — all of which streamline Barça TV's workflows and eliminate single-purpose devices.

For control and operation, Barça Studios uses Riedel's MediorWorks software on its corporate network. For certain specific users, 2300-series Smartpanels loaded with the MediorNet Control App allow them to route signals directly from the panel.

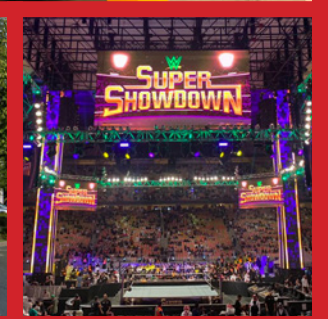
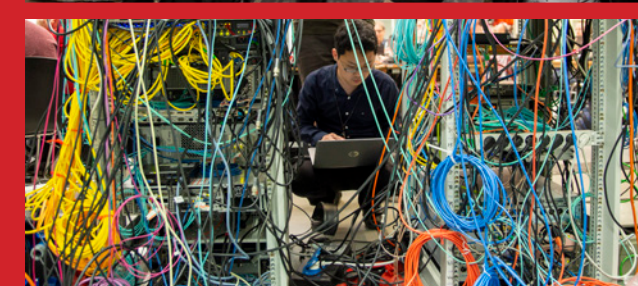
"Ensuring total reliability and flexibility were the biggest challenges of this project," said Adrián Lorenzo, System Consultant, Southern Europe at Riedel. "With MediorNet, we were able to provide the perfect solution, providing the essential redundancies that the client required for their critical live TV and sports production environment."

RIEDEL'S MEDIORNET CREATES MULTI-FACILITY VIDEO CONNECTIVITY FOR FC BARCELONA'S BARÇA STUDIOS



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MICRON ■ **TANGO** ■
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