



AEQ REFERENCES FOR ATRIUM / ARENA CONSOLES AND X_CORE / CONEXIA / BC-2000 D DIGITAL MATRICES

Updated May 2021



X_CORE and ATRIUM are based on over 20 years of experience and the BC2000D / ARENA / CONEXIA technology, used since 2003 in several hundred large audio and intercom installations worldwide.

Now in 2020, fifth generation X_CORE and ATRIUM integrates IP connectivity on Dante, RAVENNA and AES67 protocols, as well as 3G-SDI, SMPTE ST 2110-30 and SMPTE ST 2110-31 formats, while remaining open to future standards.

But these products would not have the reliability and flexibility of use without these nearly 20 years of advancement. For this reason, we proudly show you some of the most important installations based on this technology, regardless of the generation and version.

To us, it is important that the value of our customer's investments can be upheld during the active life of the equipment. For this reason, this type of systems are backwards compatible in most of its important parts, and quite a few of the older ones have been expanded or upgraded for new features and functions. We are proud to be able to say that we have accompanied our clients for dozens of years and even developed friendships at personal levels.

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AFRICA

ANGOLA	INTERACTIVATE, EMPREENDIMENTOS MULTIMEDIA LIMITADA	
	<p>The audiovisual producer INTERACTIVATE initiated its activity in 2006 in the sound material and lighting rental business. In October, 2015 the company acquired two AEQ BC2000D digital audio routers.</p>	
ANGOLA	RADIO MAIS	
	<p>Delivery, installation and Start-up of an AEQ BC2000D switching matrix handling 512x 512 channels. In addition, the turnkey project includes the installation of the AEQ CAPITOL IP and AEQ FORUM IP digital mixing consoles for different studios as well as other AEQ pieces of broadcast equipment.</p>	
ANGOLA	RNA, RADIO NACIONAL DE ANGOLA	
	<p>In the central studios in Luanda, AEQ installed 24 BC-2000 D consoles with 15 faders. The consoles of each studio provide great benefits: they have 24 analogue inputs and outputs, in addition to 8 micro inputs and 4 headphone outputs. Also, they feature 16 stereophonic digital input and output channels.</p> <p>A 512 x 512 circuits matrix was installed in the Program Technical Centre (CTP), associated to two BC-2000 D consoles for Multiplex and Intercom, located in the Central Control Room. This is equivalent to the routing of 800x800 analogue and digital audio circuits.</p> <p>The matrix routes signals from mobile units, monitoring tuners, satellite receivers, terrestrial, mobile and satellite telephones, external lines, Internet, studios and cabins (some of them located in another building, connected by radio link), newsrooms, sonorous file, the discotheque file; and it sends, in addition to those destination, to transmitters and satellite uplinks.</p> <p>In order to be able to handle them properly, diverse software views of the matrix, salvos, macros as well as alarms to prevent absence of modulation in the program outputs, were</p>	



created.

When it is necessary to build multi-conferences (“all with all”), between diverse production centers and external links, the circuits are routed to the multiplex console of the CTP. Another console at the Central Control Room assumes the Intercom and technical coordination functions between the regional venues, external links, centers and other technical spaces that take part in the generation of a complex program.



The installation and completion of the system, as well as the process of supervisors' training extended during years 2006 and 2007

In 2014 the national broadcaster decided to acquire 8 AEQ ARENA digital mixing consoles, providing the studios with the latest technology that AEQ offered at the time.

Finally, in 2017 AEQ supplied another 4 units of ARENA mixing consoles to be installed in different studio across the country.



BURKINA-FASO	RADIODIFFUSION TÉLÉVISION DU BURKINA	
	<p>Delivery, installation, set-up and start-up of three broadcast studios with ARENA audio mixing consoles, each with 15 faders and a central, BC2000D-based routing system. The turn-key project included system drawings and interconnection diagrams.</p>	
EGYPT	EGYPTIAN RADIO AND TELEVISION UNION	
	<p>AEQ has supplied the equipment, supervised the installation and configured 6 radio studios using ARENA digital mixer (25 faders and black color) in the main ERTU facilities of Cairo: Maspuro building.</p> 	
ECUATORIAL GUINEA	NATIONAL RADIO - BATA	
	<p>Delivery, installation and start-up of the new broadcasting centre in the city of Bata for the Guinea National Radio. The system consists of 4 complete Studio/Control sets and a central broadcast control. Radio studios have been built around the AEQ ARENA 15 Fader digital mixing console and the MAR4Suit Pro. In charge of the stations audience call-in system are the AEQ TH-02EX MKIII and AEQ TH-03EX. The stations central control is run by the AEQ BC2000D digital router. System included play-out devices, new microphones, headsets and monitoring systems, new audio and data cabling, patch panels and the installation of the AEQ DSD-01 technical and studio furniture. System also included the MAR4Suite Pro DAWs and System Servers and the delivery of the engineering drawings for cabling and interconnection.</p>	



ECUATORIAL GUINEA	NATIONAL RADIO - MALABO	
	Same configuration executed previously in the city of Bata.	

MAURITIUS	MAURITIUS BROADCASTING CORPORATION	
	<p>The Mauritius Broadcasting Corporation (MBC) is the national public broadcaster of the Republic of Mauritius.</p>  <p>The MBC programmes are broadcast in 12 languages, notably French, Creole, English, Hindi, Urdu, Bhojpuri, Tamil, Gujarati, Telugu, Marathi, Mandarin/Cantonese and Hakka, it provides 17 television channels in Mauritius, 4 in Rodrigues and 2 in Agaléga and 7 radio channels.</p>	



Television production in so many languages provides an intense level of work for sound operators. For this reason, MBC's Technical Directorate recently published a tender to acquire an audio console that would modernize the workflows in the main studio and work with the future equipment to be acquired for this production place.

AEQ won the tender offering the AEQ Atrium console with the following configuration:

Console with 36 flying-faders, with 7 additional multitouch screens for signal measurement including Loudness and operation assistance, provided with the following connectivity:

32 microphone inputs, 8 stereo headphone outputs, 16 analog audio inputs and outputs, 4 AES3 digital inputs and outputs, 64 AES10 / MADI digital inputs and outputs, 64 inputs and outputs AES67 AoIP DANTE format, 128 inputs and outputs AES67 AoIP RAVENNA format compatible with IP video SMPTE 2110-30 or SMPTE 2110-31 with NMOS control, 16x2 input and output channels of embedded audio in SDI-3G digital video.

It is accompanied by an AoIP AES67 / DANTE connectivity expansion interface with 8 AES3 input and output channels and 16 analog audio input and output channels at line level for the MBC main auditorium.

MOROCCO	Société Nationale de Radiodiffusion et de Télévision - SNRT	
	<p>In 2015 the public broadcaster acquired the digital audio matrix BC 2000D through AEQ's distributor SAVE DIFFUSION. The matrix was fully equipped with analogue input/output boards. They are linked via multi-channel MADI links through optical fiber. It allows for the routing of any signal to/from the On-Air, Recording, Production and Television studios, transmitters / receivers and different cabinets.</p> <p>In 2017 SNRT has performed an extension of its audio system relying on AEQ technology again.</p>	

NIGER	NATIONAL BROADCASTING COMMISSION	
	<p>In 2017, the National Radio of Niger acquired a BC2000D digital audio matrix for the main studios in the capital of the country, thanks to our distributor STUDIOTECH.</p>	

SOUTH AFRICA	JACARANDA FM 94.2	
	<p>AEQ, through our local distributor Prosound, has finished the installation of one broadcast radio studio equipped with an AEQ ARENA digital mixing console. Placed at Montecasino, Johannesburg Jacaranda 94.2 is a major market radio.</p> <p>You can access more information at: www.jacarandafm.com</p> 	

<p>SOUTH AFRICA</p>	<p>MIX FM</p>	
<p>Mix 93.8 FM is a community radio station which aims to entertain, inspire and inform through programming that reflects the diversity of the community.</p> <p>The technical management decided to carry out a complex and ambitious technical renovation of the radio installations choosing the digital audio mixer AEQ ARENA as the heart of the new, 100% digital, ON AIR studio.</p> <p>“LS”, AEQ’s dealer in the country, has performed the integration and start-up of the installation.</p> 		

<p>TUNISIA</p>	<p>ERTT, GAFSA and TUNIS</p>	
<p>AEQ has installed two AEQ BC-2000D ROUTER matrices at the Tunisia National Radio facilities, one in the regional center of Gafsa, the other in the central studios in Tunis.</p> <p>The matrix of the city of Gafsa is made up of 2 subframes: fully equipped with analog input / output cards, they are linked by multichannel MADI links through fiber optics. It allows the routing of any signal to / from live, recording, production and television studios, transmitters / receivers and different cabinets.</p>		



The Tunis matrix consists of a total of six frames with internal power supplies, dual controllers and redundant DSPs. The system also includes a “hot” stand-by MAR4Win broadcast automation system as an emergency back-up to the main transmission.



AMERICAs

ARGENTINA	CADENA 3	
	<p>Delivery, installation and Start-up of three radio on-air production studios with the AEQ ARENA being the heart of the installation. Each ARENA counts on 15 Faders and is interconnected through the stations central control via an AEQ BC-2000D switching matrix. The studio interconnections are accomplished through multi-channel audio MADI-links.</p> <p>Further, installations were completed with an AEQ SYSTEL6000 multi-conferencing / multiplexing system with 20 telephone lines that are dynamically shared between the studios.</p>	
		
ARGENTINA	LV10 MENDOZA	
	<p>LV 10 is a TV/Radio Group. They have purchased two BC-2000D consoles for radio continuity and another one specially configured for providing service to a TV set.</p>	
BRAZIL	RADIO ATLANTIDA FM OF PORTO	
	<p>The capacity of the AEQ BC2000D central router at the station's headquarters in Portoalegre was expanded. A new chassis was added allowing the total system capacity to</p>	

reach beyond 256x256 Audio Inputs and Outputs in a variety of Audio formats: analogue, digital MADI, microphone inputs, headphone outputs, etc.



BRAZIL

SUPER NOTICIA

Super Noticia FM is a Brazilian radio station based in Belo Horizonte, covering the state of Minas Gerais in the 91.7 FM band using a central 30KW transmitter. It is part of the important editorial group Sempre Editora, which is also the owner of two newspapers.

In 2017 the company has installed an AEQ BC2000D digital audio matrix as a platform for the intercom system, named CONEXIA.



Carlos Penido, technical director of Super Noticia, emphasizes that «for the intercommunication of all the work areas of the station we have chosen AEQ's largest capacity intercom system, called Conexia, because on the same platform Super News obtains a professional audio router with broadcast quality from 20Hz to 20KHz and 24 bit depth.

The central router consists of a pair of Intercom Conexia TM



8000 controllers, an AEQ BC2000D matrix chassis with power supply and redundant controller modules, as well as backup DSP, three Dante IP audio cards and other cards with analogue and digital inputs and outputs for local central control service.



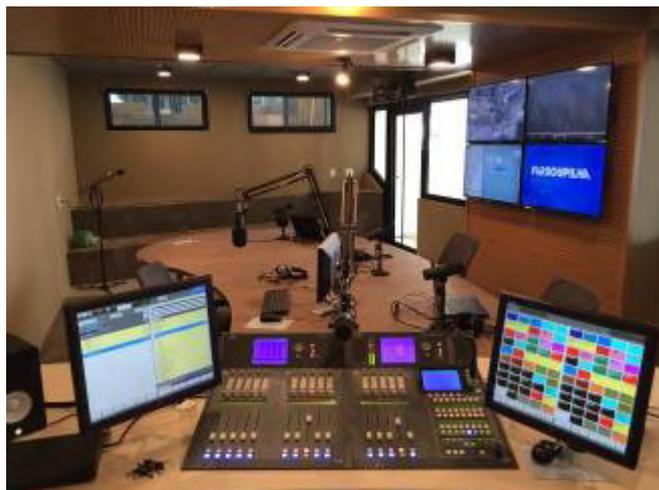
The final size of the system is 240 ports, which can be used for intercom services with Dante IP protocol, as well as a central audio router in AES 67 protocol, in the most diverse audio, analogue, digital, AES or SPDIF formats, and even AoIP over DANTE protocol, connected against Livewire+ in AES 67 mode.

BRAZIL

RADIO FARROUPILHA

FARROUPILHA

The Radio Gaucha company has renewed its confidence in AEQ technology once again with the acquisition of an AEQ ARENA digital mixing console for Radio Farroupilha new studio.



<p>BRAZIL</p>	<p>RBS FLORIANOPOLIS</p>	
	<p>RBS TV Florianopolis selected AEQ arena to be installed in two production control rooms inside the TV studios facilities. Both units have 25 faders and 9 virtual pages that allow them to comfortably manage up to 215 signals in each of the consoles. This demonstrates AEQ ARENA great capabilities and flexibility to adapt to different radio and TV applications.</p> 	

<p>BRAZIL</p>	<p>RADIO GAUCHA</p>	
	<p>Delivery, installation and Start-up of four radio on-air production studios using AEQ digital mixers. One 15 fader AEQ ARENA and three AEQ FORUM compact digital mixing consoles. Further, an AEQ BC-2000D central router for the audio signals with a central MADI chassis and six analogue audio satellite systems were provided, making up a total routing capability of 1024x1024 channels. System counts on a distributed remote control system and the Studio interconnections are accomplished through fiber-based multi-channel audio MADI-links.</p>	



BRAZIL

RBS RADIO GAUCHA PORTALEGRE



Radio Gaucha is a radio station with headquarters in Porto Alegre. It was founded in 1927 and traditionally broadcasts in the range of 600 kHz AM, this channel being station's exclusive in the south hemisphere. In 2008, Radio Gaucha starts broadcasting in FM Radio as well, using the 93.7 MHz frequency.

Recently, the technical direction of the company decided to renew their central studios facilities and chose AEQ as main contractor, specially focusing on AEQ BC2000D digital technology. The complete project equips 4 new ONAIR radio studios and one new central control room (MCR).

Two radio studios have been created, basing on AEQ ARENA digital audio mixers with 35 motorized faders control surface and redundant power supply, offering 24 analogue inputs/outputs, 24 digital AES inputs/outputs, and 8 microphones.

The third ONAIR studio uses another AEQ ARENA digital mixer of 15 faders, while the last radio studio's heart is the new digital compact AEQ FORUM console that offers a self-contained design including a 12faders control surface for 16 analogue inputs and 5mics.

There is a fifth digital AEQ ARENA mixer in the project working as a general backup for all studios during maintenance tasks or even emergency cases.

Radio Gaucha Master Control Room has been designed around an AEQ BC2000D digital central router that includes in this configuration 7 chassis interconnected between them using multi-channel dedicated optical fiber links, to obtain a final size of 260 analogue ins/outs, 96 digital AES ins/outs, and 12 microphone inputs. All the audio signals in the central facilities of Radio Gaucha are managed by this new central digital router, so AEQ

equipped this system as 100 % redundant including double control modules in all the nodes, double power supplies for all the chassis and numerous DSP for backup. Control of the router AEQ BC2000D is decentralized by using PCs distributed in the diverse radio studios, as well as from 14 dedicated XY panels AEQ NCB100 for quick-operations, always controlled by passwords associated with different users' profiles and their adequate limited access levels.



BRAZIL

RADIO UNISINOS

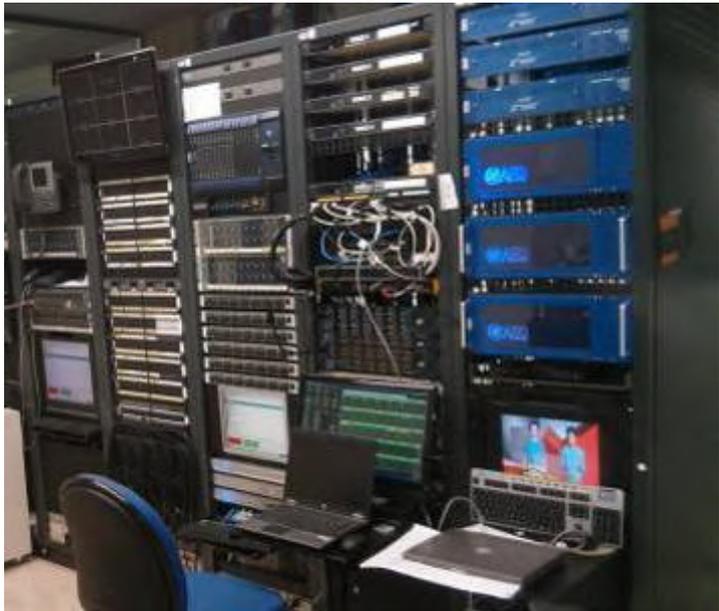
unisinos.fm **103.3**

Delivery, installation and Start-up of two radio on-air production studios based on the AEQ ARENA 15 fader consoles. The studios, producing dedicated talk shows among other contents, are using the AEQ TH02EX Digital hybrids to handle the stations call-in audience.



<p>BRAZIL</p>	<p>RADIO VERDES MARES</p>	
	<p>Also known as the Verdinha. In 2016 AEQ supplied, installed and Started up the main studios based on the AEQ FORUM IP digital mixing console.</p> <p>The system is interconnected through an AEQ BC2000D switching matrix handling 250x250 channels and with a distributed remote control.</p> 	

<p>BRAZIL</p>	<p>TV GAZETA</p>	
	<p>Delivery, installation and Start-up of four radio on-air production studios, two based on the AEQ ARENA 15 fader console and the other two on the same mixer but in a 25 fader system configuration. The system is interconnected through an AEQ BC2000D switching matrix handling 250x 250 channels and with a distributed remote control.</p> 	

<p>BRAZIL</p>	<p>TV GLOBO</p>	
	<p>AEQ supplied 3 digital audio switching matrices AEQ BC2000D in a 64x64 channels configuration and a central 4W and ISDN distribution system. System controller, processing system and power supplies are provided with full redundancy and failover configuration.</p>  <p>Later on, Globo TV has done an extension and has acquired another AEQ BC2000D central audio matrix for their principal headquarters in Rio de Janeiro, with a new chassis allowing 256x256 audio inputs and outputs in different formats: analogue, digital, MADI, microphones, earphones ...</p>	

<p>BRAZIL</p>	<p>TV RURAL</p>	
	<p>The latest installation of an AEQ ARENA mixing console within the RBS group was in TV Rural in Sao Paolo, where a 25 fader mixing system based on the BC2000D engine was taken into service.</p> <p>TV Rural is a private TV channel created in 2005 as a joint-venture between RBS and Rural Media. The channel is producing contents mainly for agricultural and livestock environments and with an audience of over 16 million households receiving the signals through cable networks and satellite distribution.</p>	



CHILE

RADIO AGRICULTURA



Radio Agricultura” is a Chilean opinion leader radio station, which has been operating for 75 years. Their programming is 100%-live, permanently interactive, plural and objective, self-defined as informative, sporty and, above all, entertaining. It has nation-wide coverage thanks to a large affiliate station network and its own installations, using FM and AM radio broadcasting. Its programming stands out by having the biggest stars and opinion leaders radio show in the Chilean radio.



Since 2001, Agriculture Radio has been a very satisfied customer of AEQ BC2000 audio mixing consoles as well as of AEQ Systel 3000 multi-conference system.

In 2008, within the frame of a plan for technological renovation, the network chose AEQ ARENA digital mixing console and AEQ SYSTEL 6000 for the centralized management of all incoming and outgoing communications associated to the company-produced programs, completely based upon on digital technology, but enabled to admit analogue lines.

Then, in 2017, “Radio Agricultura” moved to a new building and completely renewed their facilities. The broadcaster repeated its trust and placed a strong bet on the technology from AEQ for its headquarters studios. Two new radio studios were deployed around a 15-fader AEQ ARENA and a 12-faders AEQ FORUM mixing console respectively. Both of them are now interconnected using DANTE™ multichannel Audio over IP protocol.

The installation was completed with the new SYSTEL-IP platform, allowing for the management of up to 12 simultaneous Voice-over-IP calls dynamically on the three ON AIR studios, using touch screens.



<p>COLOMBIA</p>	<p>POLICIA NACIONAL</p>	
	<p>Included in a project to renew the police radio facilities, AEQ has supplied one ARENA digital mixer for the master control room, in an installation with 15 analog AEQ BC-500 audio mixers.</p>	



<p>COLOMBIA</p>	<p>UNIVERSIDAD NACIONAL</p>	
<p>AEQ has supplied to The National University of Colombia an AEQ ARENA digital mixing console for the central studio in Bogota. Users have expressed their satisfaction with AEQ for the functionality of the equipment.</p> 		

<p>CUBA</p>	<p>CUBAN INSTITUTE OF RADIO AND TELEVISION</p>	
<p>The Cuban Institute of Radio and Television or ICRT is an organism belonging to the Cuban State that is in charge of the control of all radio and television stations. It was founded in 1962. It is currently a member of the Ibero-American Television Organization and an associate member of the European Broadcasting Union.</p> <p>The ICRT, managed the installation of seven on-air radio production studios located in Havana based on AEQ ARENA, and two BC-2000D routing / distribution matrices with hundreds of inputs and outputs of audio each.</p>		



ECUADOR	RADIO PUBLICA ECUADOR	
	<p>AEQ has supplied, installed and configured six AEQ ARENA digital audio mixers, for the radio facilities in Quito, Guayaquil y Cuenca. All the mixers have 15 faders control surface.</p> <p>In 2017 the public broadcaster renewed its confidence in AEQ technology once again by the acquisition of the CONEXIA intercom matrixes.</p>	

ECUADOR	ECUADOR TV	
	<p>Ecuador TV is the country's public TV channel. It started back in 26th October 2007 and it is the first public TV channel in Ecuador. ECTV broadcasts contents from domestic and foreign independent producers, such as Discovery Channel documentaries, TVE, BBC, DW, NHK, KBS, CGTN, RAI, Voice of America, Señal Colombia, Canal Institucional, ViVe and Telesur.</p> <p>Ecuador TV broadcast a conventional signal on channel 7, and a SD and HD DVB-T signals on channels 7.1 and 7.2, while also counting with satellite-distributed signals using platforms as DirectTV or ClaroTV, or cable platforms in Quito and Guayaquil.</p> <p>The well-known international integrator Hitachi was granted with the largest technical renewal project in the history of the channel, which has relied on AEQ.</p> <p>. ECTV integrated a large CONEXIA intercom system, that integrates a BC 2000D audio router, in their new facilities, in order to provide service to all the production centers, technical rooms and production areas of the TV. Just in the same way, the control and monitoring of video signals from the Studio cameras and external sources is performed in the technical rooms using KROMA BY AEQ</p>	

video monitors.



The CONEXIA intercom system counts with 34 intercom panels in rack or table-top format, 32 wired belt packs and 23 XBP wireless belt packs, enabling nearly 100 people in 9 different TV workplaces to communicate and coordinate. The whole wireless intercom system operates in the 5 GHz WiFi band.



All this, as a whole, makes up a complex system where the required groups have been defined, so users can efficiently communicate within his work group, and this way all messages that have no relation to their tasks are not received, avoiding unnecessary distractions.

Just in the same way, the new control rooms integrate more than 30 KROMA by AEQ discrete video monitors, including 17", 18" and 24" screens and 9" and 4" preview monitors.

The complete project has been led by Hitachi Kokusai technical team in collaboration with Electrolab, AEQ's local partner in Ecuador. Mr. Roberto Tejero was AEQ's technical responsible for the startup, configuration and training of the whole installation.

MEXICO	CLARO SPORTS	
	<p>Claro Sports is a Latin American television channel of Mexican origin and is owned by América Móvil, which bases its programming on sports. Claro Sports had a very successful operation of the Olympic Games in Rio de Janeiro. With an audience in 17 countries and a potential market of 400 million people and 380 million smart phones in Latin America, Claro Sports deployed in Rio to produce its unilateral coverage based off OBS' multilateral production.</p> <p>Claro Sports' deployment included an AEQ ARENA / BC2000D audio routing and mixing system for signals originating at the venues where Claro Sports had booked fully equipped commentary positions as well as from 13 of the OBS off-tube cabins in the IBC. These were later providing OBS' OVP services with Spanish commentary. Claro Sports used a full bandwidth AEQ ConeXia intercom system with DANTE™ AoIP multi-channel networking simultaneously and on the same BC2000D matrix platform and that assured a perfect coordination between Claro Sports' talents at the commentary positions of the different venues and technical personnel both in Rio and Mexico.</p> 	

MEXICO	IMER (INSTITUTO MEXICANO DE LA RADIO)	
	<p>AEQ supplied two BC-2000 D digital audio consoles for IMER's central studios in Mexico.</p>	

<p>MEXICO</p>	<p>MVS COMUNICACIONES</p>	
	<p>MVS is a Mexican production company who commercializes and sells TV's channels and contents with an international distribution (Mexico, South America and The Caribbean). The company has acquired the AEQ BC2000D audio matrix with a MADI main chassis and six analogue and digital audio satellites (1024x1024 max. size) with a distributed control system.</p> 	
<p>MEXICO</p>	<p>RADIO EDUCACIÓN</p>	
	<p>AEQ delivered an AEQ ARENA digital mixing console to Radio Educación's studios in Mexico City. The station has projected another Studio to be equipped with an ARENA console.</p> 	
<p>MEXICO</p>	<p>TECNOLOGICO DE MONTERREY</p>	
	<p>Delivery, integration and start-up of an AEQ ARENA digital mixing console at a local radio station in Monterrey. The station is associated to the Technical University of Monterrey.</p>	



MEXICO	UNO TV	
	<p>In 2016 AEQ installed the AEQ BC-2000 D digital audio matrix, fully equipped with analogue input/output boards that are linked via multi-channel MADi links through fiber optic.</p>	

PERÚ	BETHEL, CULTURAL ASOCIACION	
	<p>Delivery, integration and start-up of a radio control and studio around the AEQ ARENA 15 fader digital console. Project included audio and data cabling and two independent AEQ MAR4Win Digital Audio Workstations.</p> 	

USA	KEDT, CORPUS CHRISTI, TEXAS	
	<p>Supply, installation and start-up of an AEQ ARENA 25 faders digital audio mixing console for continuity and recording in this station's new facilities.</p>	



USA

NBC29, VIRGINIA



Eventually their choice became clear and the initial routing system with a 30 x 30 I/O and 25 motorized fader mixer and up to 9 pages of snapshots was installed at the station. Initially the console was following their existing analogue system but bit by bit and in different phases the new digital ARENA board was migrated into a fully digital solution that finalized with the disconnection of the analogue system.

Project engineering and specifications were put in place by David Whitehead who also undertook the installation with the help of AEQ engineer, Gabriel Casco from AEQ Broadcast International in Miami.

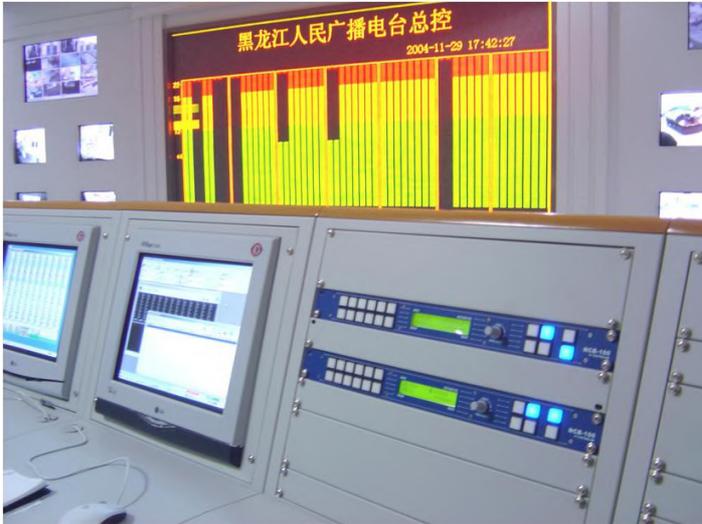


<p>USA</p>	<p>SUGARLAND, TEXAS</p>	
	<p>Supply, installation and start-up of an AEQ ARENA 15 faders digital audio mixing console for its main studios.</p>	

ASIA & PACIFIC

CHINA	LOCAL RADIO DALI	
	Local Radio Dali (in Yunnan province, in the south of China) has recently acquired a digital console AEQ ARENA for the central studio.	

CHINA	HARBIN LOCAL RADIO	
	<p>AEQ BC-2000 D installed a digital audio matrix in the control centre. Real time control is accomplished from some 6 workstations using the BC-2000 D RTC software application concurrently with a dedicated XY panel.</p> <p>Besides the switching matrix, we delivered two BC 2000 D digital audio consoles for two newly created studios.</p> <div style="display: flex; justify-content: space-around;">   </div> <p>In December, 2006, the Harbin Local Radio extended its installations with a new studio, equipped with one 15-fader AEQ ARENA.</p> 	

CHINA	HEILONGJIANG PROVINCIAL RADIO	
	<p>The heart of the system is an AEQ BC-2000 D digital audio matrix which is redundant and distributed among three physical locations: the central control facility, the network centre located in the Dragon Tower, 500 meters (1500 feet) away, and the transmission centre, which is 10 kilometers (6,25 miles) away. For this installation we designed a special MADi link with high-power optical fiber transceivers. Real-time control is ensured from 12 workstations using the BC-2000 D RTC software application concurrently with two dedicated XY panels. In addition to the switching matrix, we have delivered three BC 2000 D digital audio consoles for three new studios.</p>  <p>Panels and control software in the Central Control Supervision Console.</p>  <p>Continuity – Central Control.</p>	



On Air and monitoring sub-router Control in the Dragon Tower.

Main matrix in the Central Rack Room.



Studio in Korean language

<p>CHINA</p>	<p>DAQUIN LOCAL RADIO</p>	
	<p>This radio station is situated in the Shan-Xi Province. Its Switching Center is equipped with an AEQ BC-2000 D Router with MAD1 links that connects it to additional digital consoles in other studios.</p> <p>Real time control is accomplished from 4 workstations using the BC-2000 D RTC software application.</p> <p>In addition to the switching matrix, we have delivered a BC-2000 D digital audio console.</p>	

CHINA	LIUZHOU LOCAL RADIO	
	<p>This local radio station the Guang-Xi Province has acquired a BC-2000 D Digital Console.</p> 	

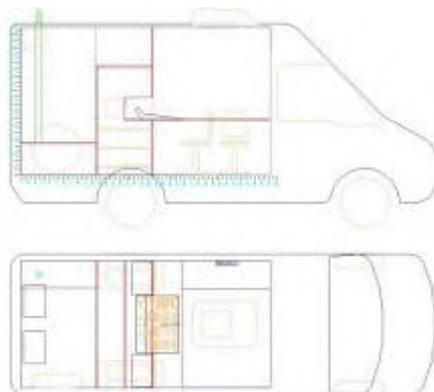
CHINA	YUNAN LOCAL RADIO	
	<p>AEQ BC-2000 D installed a digital audio matrix in the control center. Real time control is accomplished from 4 workstations using the BC-2000 D RTC software application.</p> <p>In addition to the switching matrix, we have delivered a BC-2000 D digital audio console.</p> 	

CHINA	REGIONAL RADIO OF JIANG XI	
	<p>This regional radio station has purchased two BC-2000 D digital consoles for the first phase of the technical upgrade of its main center in the southern city of Nan Chan.</p> <p>Later, in the 2007 spring, after one year and a half of operation, they have continued with the technical upgrade</p>	

thanks to a project financed in part by the Spanish government.

They have acquired a BC-2000 D Router for the master control room, pre-wired for 80x80 inputs and outputs. This matrix can be controlled by a PC, with output for two monitors, or via a dedicated XY panel. Six patch-panels plus 10 TH02 digital hybrids from AEQ have been provided.

Also, 4 studios have been added to the previous 2, with BC-2000 D digital mixers with 25 faders, pre-cabled at the factory.



Moreover, all the engineering and mounting of a BC-2000 D console of 15 faders has been done in an OB Van (IVECO 35C13) with capacity to broadcast from anywhere thanks to its 100W transmitter. As a complementary function, this OB Van is capable of making live shows opening 2 panels with 4 high-power loudspeakers.

All the installation has been done in China by the engineers from our local dealer, Infomedia, and AEQ engineers, from the diagrams made in Spain.



CHINA	REGIONAL RADIO GANSU	
	<p>Placed in Baiyin City, with an approximate population of 275 thousand inhabitants, this radio station provides service to an important part of Gansu's province (25 million habitants).</p> <p>Regional Radio Gansu has recently acquired an AEQ ARENA digital console for the central studios.</p>	

CHINA	REGIONAL RADIO KUNMING	
	<p>Kunming is the capital of Yunnan's province in the Popular Republic China. It is located at the north side of Lake Dian and has a population of more than four million inhabitants in the city, and three millions to add up in the adjacent region.</p> <p>Kunming's provincial radio has recently acquired two AEQ ARENA digital consoles for the central studios.</p>	

CHINA	RADIO XIAMEN	
	<p>Three AEQ BC-2000 D digital audio matrixes for the control centers, making a total of 80x80 analogue lines and 20x20 digital lines. Real time control is accomplished from a dedicated XY panel and one RTC software. All the matrixes are equipped with redundant controller and DSP boards, to ensure continuous operation.</p>	

INDIA	MEOW RADIO, NEW DELHI	
		

	<p>Meow Radio is a part of the radio division of the India Today Group. This commercial radio station has around 35 million listeners.</p> <p>Two ARENA consoles have been installed: one for the ON-AIR studio and another one for the Recording/Backup studio.</p>	
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<p>INDONESIA</p>	<p>RADIO REPUBLIK INDONESIA</p>	
	<p>Various turnkey radio broadcast studio projects for Indonesian National Radio (RRI) regional network.</p> <p>Each system was built around AEQ BC-2000D digital routers, plus 15-fader ARENA digital consoles and AEQ FORUM 12-fader compact digital mixing consoles. The system interconnections were made through MADI fiber optic links.</p> 	

<p>IRAN</p>	<p>IRIB</p>	
	<p>. The Islamic Republic of Iran Broadcasting (IRIB), is an Iranian media corporation which holds a monopoly of domestic radio and television services in Iran, and is also among the largest media organizations in the Asian and Pacific regions.</p> <p>With 13,000 employees, the Islamic Republic of Iran Broadcasting offers both domestic and foreign radio and television services. The IRIB provides twelve radio</p>	

	<p>stations for domestic audiences and through the IRIB World Service thirty radio stations are available for foreign and international audiences.</p> <p>IRIB bought in 2017 two units of ARENA console in 15 faders configuration.</p>	
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<p>TAIWAN</p>	<p>OCEANIC TRADING CORPORATION</p>	
	<p>Supply, installation and start-up of one AEQ ARENA (black color 15 physical faders control surface) like workbench in the main facilities of Radio Taiwan International.</p> 	

EUROPE

BELARUS	MINSK STADIUM	
	<p>The Minsk Dynamo Stadium features Dante-AES67 multichannel AoIP technology supplied by AEQ.</p> <p>In addition, the facilities have a powerful AEQ BC2000D matrix to centralize and distribute all audios that are carried out on the premises, especially those from 150 AEQ Olympia commentator units.</p>	
		

BULGARIA	NATIONAL DARIC RADIO	
	<p>It is the major private national Radio Station. They have acquired one AEQ ARENA (15 faders) digital console through AEQ dealer "Insat Electronics".</p>	 DarikNews.bg

GERMANY- UK

2018 EUROPEAN CHAMPIONSHIPS

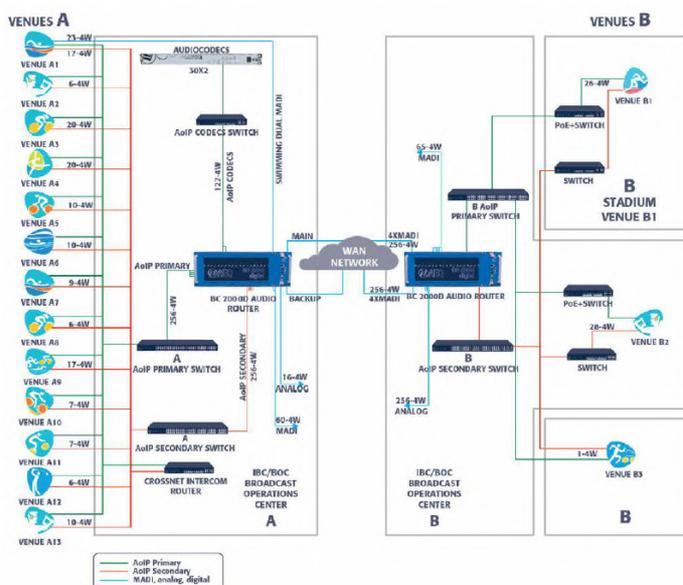
The EUROPEAN CHAMPIONSHIPS 2018 took place during the first 10 days of August 2018.

The multi-sports event had two main locations and 16 different venues. In Berlin, athletics competitions took place, while Glasgow held other sports. They were more than 1000 km away from each other.



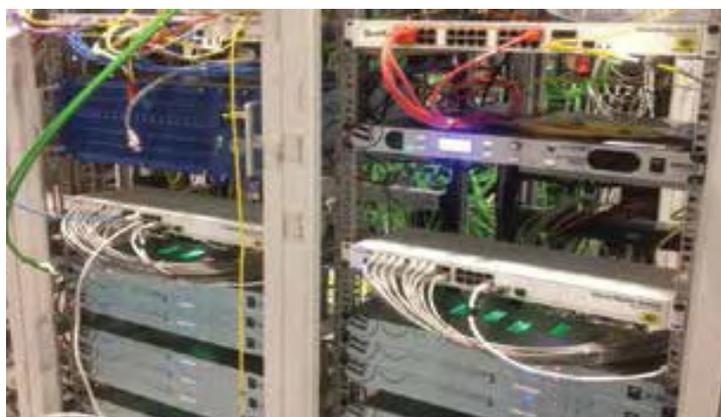
For the event's technical development, the Host Broadcaster decided to use the AEQ OLYMPIA 3 Commentary System for the very first time in a multi-venue event, using Dante AoIP connectivity.

Having two distant locations supposed a technical challenge that was solved by installing two twin BC 2000D routers, one at each city, linking them with 4 x MADI synchronous links able to transport up to 256 bi-directional audio channels in total.



Audio transport between all venues at Glasgow and the Broadcast Operation Center has been deployed on an IP network with Dante redundancy logic. Transport between

Berlin venues and the International Broadcasting Center was solved in just the same way. However, MADI synchronous transportation has been preferred for the communication between both cities, due to the long distance.



Real time supervision and operation was performed with BC 2000D RTC control application, while the static routing infrastructure was established using Dante Controller software.

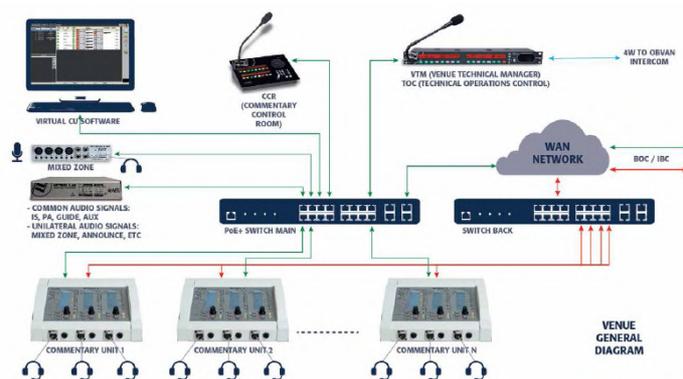
A list of inputs, outputs and cross-points was planned according to the Booking, and implemented both on BC 2000 RTC software tool and in Dante Controller. BC 2000 RTC macros and salvos were also created, as well as the required routing of GPIO over IP signaling transport, using the corresponding configuration tools.



The BC 2000D RTC tool allowed to establish planned routings according to the event's booking, changing the configuration during the different journeys and time ranges, automatically performing the switching in blocks of crosspoints.

The typical deployment of a venue consisted on the

connection of the OLYMPIA 3 commentary positions to a TOC (Technical Operations Control) using Dante IP technology. The TOC is the audio centralizing, supervision and control room at the venue. It was built around NETBOX 8 or NETBOX 32 interfaces. Control stations for the commentary units running the OLYMPIA 3 CU Control software were usually located in an area known as the CCR (Commentary Control Room) on top of the stages, above the commentator's it provides support to. Besides the interfaces, there is an Ethernet switching system using PoE switches to route the audio and remotely feed the commentary units.



General venue schematic diagram

The deployment simplicity, flexibility and scalability of Olympia 3 system, Netbox interfaces, BC 2000 D router and Crossnet / TP 8000 Intercom systems have been demonstrated in this very first implementation of a multivenue sports event based on AEQ devices with Dante connectivity.

HUNGARY

SLAGER HUNGARY, BUDAPEST

SLAGER RADIO is a private radio station, which covers the whole country using 60 Transmitters. It has purchased two BC-2000 D Consoles for its new On Air Studios.



<p>ITALY</p>	<p>TELEIPPICA</p>	
	<p>The Italian satellite television channel Teleippica specialized in worldwide horses races, has selected to equip AEQ ARENA digital audio console in its central control room for the control of all the audio signals required for the production and edition of the final television programs.</p> 	
<p>ITALY</p>	<p>RAI</p>	
	<p>In 2016 ARET, an Italian broadcast company well known for their OBvan turnkey projects worldwide, acquired a CONEXIA intercom system for the intercommunications of RAI studios in Milan.</p>	
<p>LITHUANIA</p>	<p>NATIONAL OPERA OF LITHUANIA</p>	
	<p>Lithuania's National Opera and Ballet Theater (in Lithuanian, Lietuvos nacionalinis operos ir baletu teatras) is an opera and ballet theater located in Vilnius, the country's capital. It was built in 1974. Besides standard western and Russian play repertoire, national opera pieces are also performed there.</p> <p>In 2016, the theater's technical management decided to carry out a complex and ambitious technical renovation of the installations. AEQ CONEXIA intercom system, built around an AEQ BC 2000D router, was selected to implement the main internal intercom system of the building and KROMA BY AEQ monitors were chosen to be part of the new central control room design.</p> <p>The system provided includes 53 desktop and rack-mount intercom panels with 24, 16 or 4 keys (depending on their location), as well as 20 AEQ XPLORER wireless belt packs.</p>	

NORWAY	TV2, BERGEN	
	<p>Norway's TV2 installed an AEQ BC-2000 D digital cross point matrix in Bergen for the routing of audio sources. Eivind Mikkelsen, TV2's Technical Services Manager, congratulated AEQ for their excellent job.</p> <p>TV2 is the leading commercial TV network in Norway and selected the BC-2000 D over competing routers, not just for its features, but also for AEQ's willingness and commitment to a shorter lead time as the system was required for TV2's coverage of the Norwegian General Elections.</p> <p>The system handles over one hundred digital and analogue input and output channels controlled by AEQ's comprehensive Real Time Control software using IP. From purchase to installation, commissioning and training, the entire process took just one month over the holiday period, and was ready in good time for the elections on 12 September, 2005.</p>	

POLAND	RADIO 5	
	<p>Radio 5 is a private radio station placed in Suwalki, in the North-East of Poland. They have two frequencies to cover this geographical zone. This radio is focused on regional interest programs. Radio 5 has acquired one ARENA digital console in 15 faders config.</p>	

PORTUGAL	“CORREIO DA MAÑHA”	
	<p>The newspaper “Correio da Manhã” (<i>Morning Post</i>) belongs to the Cofina group that launched a general content TV channel in March 2013, called CMTV. This channel is available on the “Meo” platform. The channel is also present in Angola and Mozambique through Pay-per View platforms and is very successful.</p> <p>In 2017 the Journal relied on AEQ for the expansion of its intercom system. When CMTV was expanding its technical facilities they acquired an AEQ-KROMA CONEXIA. CMTV wanted to use the new system not only as a regular intercom system but also as a global audio solution for their operations.</p>	

	<p>The CONEXIA is based on the TM8000 master controller and the AEQ BC-2000D audio routing matrix. This system has the capacity to manage up to 1024 x 1024 crosspoints, is modular and 100% redundant.</p>  <p>The entire project has been piloted by the technicians in charge of Correio da Manhã, Mr. Ricardo Lima, and Mr. Ricardo Matias in collaboration with the AEQ's technical team led by engineer Mr. Mario Rodriguez.</p>	
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PORTUGAL	RADIO CIDADE	
	<p>AEQ ARENA digital mixer for one recording radio Studio. 15 faders black color control surface.</p>	

PORTUGAL	RADIO CLUBE - MEDIA CAPITAL	
	<p>Radio Clube Portugues is an historical radio station with a past extending for 90 years. It was founded on 1930 by the mayor Jorge Botelho Moniz, and RCP had a determining function when spreading through his transmitter network music that indicated the beginning of the combat operations of the “Revolucion de los claveles” in day 25th of April.</p> <p>In the year of 2006 with the entrance in the Media Capital group of the Prisa group, the programming model happens to have a strong component in information and debates.</p> <p>In that sense, a new newsroom, a studio/auditorium and a control-studio -that were equipped with the then new AEQ ARENA console- were created.</p> <p>http://radioclube.clix.pt/</p> <p>The Media Capital groups some of the most important</p>	

	<p>communication channels. Some of them are: TVI, the television channel leader, Commercial Radio, Cidade FM vestibule IOL, Financial Agency and NBP producer, among others.</p> <p>http://www.mediacapital.pt/</p> 	
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PORTUGAL	RADIO COMERCIAL DOS ACORES	
	<p>AEQ ARENA digital mixer for one recording radio Studio. 5 faders black color control surface for on air broadcasting. It includes 32 programmable keys.</p>	

PORTUGAL	RADIO COMERCIAL – MEDIA CAPITAL RADIO	
	<p>This private radio station has national coverage, has music contents and is orientated to the young public. It is one of the most heard radio stations in Portugal.</p> <p>The new studio was equipped with the ARENA console in black color, with 15 faders and 9 virtual pages, allowing for the control of 12 analog I/O and 24 AES/EBU I/O.</p> <p>In 2014 they renewed their on air and recording studios, based on two AEQ ARENA digital audio mixers.</p>	

PORTUGAL	RADIO E TELEVISAO DE PORTUGAL	
	<p>Radio e televisao de Portugal relied on AEQ again in 2014 to update its audio matrix with two AEQ BC 2000D.</p>	

<p>PORTUGAL</p>	<p>RADIO RENASCENCA PORTO</p>	
	<p>The project includes the supply, installation and start-up of the totality of the radio studios, including all the technical equipments, furniture and cabling parts necessities for the correct operation of the complete system, within a turn-key project. The studios created in the new facilities include two boxes for edition (Ilhas) on small 4 faders mixers, two studios (B and C) are based on AEQ ARENA 15 faders digital mixer in self-operation configuration, another two studios (Mega 1 and 2) use AEQ BC2500 analogue mixer in self-operation configuration, a double studio (A and A') is based on ARENA 15 faders in control room and ARENA 5 faders in associated booth, and a TOC central control on ARENA 15 faders for multiplex type management. All the ARENA mixers are finished in black color. All the studios are connected to the BC2000D central router over simple 32-channel bidirectional optical fiber MADI links or direct high-quality digital audio connections. The central router acts like a hub for all the available signals in the installation.</p> 	

<p>PORTUGAL</p>	<p>RADIO RENASCENCA LISBOA</p>	
	<p>This is, so far, the largest installation in the world of a Radio Program Production Center with Audio over IP distribution using Dante protocol.</p> <p>4 AoIP networks using Dante technology have been deployed as a flexible audio transport and distribution infrastructure, centralized on a TDM-bus based matrix that combines the circuits of all 4 AoIP networks with several hundreds of other signals through other direct connections. This way, the matrix audio processing and hierarchical control capabilities are extended to all circuits distributed with AoIP.</p> <p>Two consoles have been installed for <u>RR1 broadcasting studio</u>: One AEQ Arena for automatic broadcasting and an AEQ Capitol for the journalist. In the Control room, behind the glass, another AEQ Arena console has been installed that is configured for Audio Technician addicted Control-</p>	

Studio Operation and for the On-Air production of programs of certain complexity.



RR2 broadcasting studio is identical to RR1, with the same equipment and topology and the SIM broadcasting studio is very similar in its layout.



On the other hand, RFM broadcasting studio never operates in Control-Studio configuration, so two consoles have been installed (Arena for automatic broadcasting and a Capitol for a journalist).

MEGA FM is a music station with a very straightforward programs production, so a single Arena console for automatic broadcasting has been installed.

All recording studios in Radio Renascença are automated. Three studios have been equipped with an ARENA console, one with a CAPITOL console and another two studios are using FORUM consoles.

Technical Control Center

All systems and technical equipment that are usually

	<p>distributed throughout the different studios and cabins of a large radio station have been centralized and integrated into the Technical Control Center, a controlled and safe place.</p> <p>This includes, for example, the audio engines for all ARENA audio consoles installed in the different recording and broadcasting studios, audio PC frames, Off-Air receivers for FM, satellite and television, and encoders for the links to different destinations. This centralized installation has reduced the use of radial cabling, as all the devices are located together. Also, and as is common practice, all devices for communications, audio processing and management, Transmission, Receiving and monitoring are installed here.</p>  <p>These pieces of equipment have been wired to an audio switching and distribution system based on BC 2000 D digital audio matrix, terminated in AoIP Dante and an ARENA mixing console. Everything can be managed from the Technical Center, the Studios or remotely from any place that has Internet access. Maintenance tasks are simplified, as technicians no longer need to travel to the Program Production Center for every intervention.</p>	
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<p>PORTUGAL</p>	<p>RADIO ROMANTICA – MEDIA CAPITAL RADIO</p>	
	<p>Romantica FM is a thematic radio station of the MCR group, that renewed central studio in July, 2007 installing a new AEQ ARENA console.</p>	

<p>PORTUGAL</p>	<p>RDP - PORTUGAL NATIONAL PUBLIC RADIO</p>	
	<p>RDP is the National Public Radio of Portugal. It is a member of UER and is very “high tech”. It purchased two BC-2000 D for On Air Studios 6 and 7 at its main channel, Antena 1.</p> <p>Antena 1 offers variety in its Programming with News, Sports, Music, and a showcase of Portuguese music. It covers Europe, Africa, Asia and the South Pacific via satellite. It is also online at http://www.rdp.pt It covers the entire Portuguese country with AM, FM and DAB.</p>	



In each studio, the control room console has one ARENA DM and two D10 Control Surfaces. A total of 25 faders can be use to control 225 channels. Each studio also has a D10 mirroring the console in the control room thus allowing it to operate 90 audio channels.

PORTUGAL

TSF RADIO JOURNAL, LISBOA

TSF is a Portuguese radio station that produces a newscast every half an hour. It counts on a great network of international correspondents. The coverage area of TSF FM includes the North and Center of Portugal, but its programs are also broadcasted through a series of local stations in the South, thus practically reaching national coverage.

In 2004 TSF purchased a BC-2000 D Console for its new On Air Studio.



In 2016, recent popularization of AoIP (audio over IP) distribution systems opened new paths for technical



intercom and audio distribution for broadcasters: it reduced required wiring and made operation simpler, but even in that case, it is not a good idea to completely renounce to the advantages of former TDM bus-based systems.

ON AIR STUDIOS 1 AND 2

Both ON AIR studios are equipped with 15 fader ARENA consoles. The audio engine frames are located in the Technical Center and are connected to the matrix using 64 AoIP channels with AES/EBU backup.

To send microphone audio and receive the returns to each headphone, two new Netbox 4 MH AoIP interfaces have been installed in each of these studios.



TECHNICAL CENTER

AoIP technology has made the integration of all devices and systems within TSF Technical Center possible. Such systems are still usually distributed among the different studios and technical rooms in other large radio stations. In particular, the six engine frames of the audio consoles for the studios and control rooms can be found there.



The main elements in this new Technical Center are two AoIP-connected matrixes: CrossNet intercom matrix, and AEQ BC-2000C TDM-bus based matrix for audio

	<p>switching and distribution with AoIP interfaces, as well as AEQ NETBOX 32 audio interface devices.</p> <p>Also in this Technical Center, AEQ ARENA and CAPITOL IP audio engines can be found, both of them featuring AoIP Network connectivity.</p> <p>These systems are related to a variety of devices outside the Technical Center: Arena and Capitol control surfaces, the DANTE™ interfaces included in the emission and production PCs, specific audio interfaces Netbox 4MH, Netbox 8 and Netbox 32, as well as user intercom panels.</p>	
ROMANIA	TRINITAS RADIO	
	<p>It is the radio of the Orthodox church (90 % of the people in Romania belongs to this religion). They had the base in IASI but they moved the radio studios to the centre of Bucharest, inside same Patriarchy. AEQ has supplied a complete studio with installation and start-up. The console used is AEQ ARENA with 15 faders. The distributor of AEQ in Romania "Global Audio Systems " has actively taken part in the Project.</p>	
RUSSIA	DNK CORPORATION	
	<p>This private corporation acquired a CONEXIA intercom system based on the BC2000 audio matrix.</p>	
RUSSIA	ECHO RADIO	
	<p>Echo Radio acquired an AEQ ARENA 15 faders audio mixing console for its main radio Studio located in Moscow.</p>	
RUSSIA	RUSSIAN NATIONAL RADIO	
	<p>VGTRK is the Russian public radio-television broadcaster. It currently manages five radio stations, several TV channels, a digital TV platform and several video-on-demand services. It has also been an active member of the EBU (European Broadcasting Union) since 1993.</p> <p>Back in 2010, it started the installation of Moscow</p>	

headquarters basing on AEQ BC2000 D central audio routing systems and AEQ ARENA digital mixing consoles.

The project started with the delivery, installation and start-up of 12 radio controls and studios for RUSSIAN NATIONAL RADIO in Moscow. All 12 studios were equipped with the AEQ ARENA 15 fader digital console.

The audio of this complex studio is managed through the AEQ BC-2000D digital router with a total switching capacity of 300 x 300 circuits – both summing and distributing. System is rendered with distributed remote control.



Now, when the renewal has been expanded from the production centers to the entire network, involving hundreds of studios across the whole Russian territory, the systems have been resized in a more cost-effective way, which suits local and regional stations better, but when choosing equipment and conditioning the spaces, the transcendence of the service they provide to the society has always kept in mind. The main regional stations where installed using also AEQ BC 2000 D routers and AEQ ARENA mixing consoles.

<p>RUSSIA</p>	<p>RUSSIAN RADIO</p>	
	<p>The Russian Public Radio Station has acquired through Qualitron, AEQ dealer, 6 ARENA (with 25 faders) consoles for the central studios in Moscow. Additionally, the Russian Radio has acquired another ARENA console (15 faders) for the technical training of their personnel.</p>	

SPAIN	13 TV	
	<p>Spanish TV station TRECE has recently renewed its image, moved to new facilities located in Madrid, and expanding their installations, now composed by two studios and a central TV control. That's why they acquired the new AEQ CONEXIA matrix, built around an AEQ BC 2000D router, to perform the studios' audio and intercom management.</p>  <p>CONEXIA, covers Intercom and broadcast audio employing the same hardware. It is a redundant and modular audio matrix simultaneously managing broadcast-quality audio and 4-wire intercom circuits. The included switching and processing capability sums more than 300 inputs and outputs.</p> <p>14 series-4000 intercom user panels are reused and connected by digital links, while the new 16 series-8000 panels are connected to AoIP circuits, better voice clarity is also provided by their new acoustical design and audio processing, which includes dynamics, equalization and feedback control.</p> <p>Also 24 matrix input and output circuits have been routed to two Systal IP 16 VoIP systems and two STRATOS audiocodecs for external intercoms.</p>	

SPAIN	ACADEMIA DE LA RADIO	
	<p>Delivery, installation and start-up of a radio control and studio based on AEQ ARENA digital mixing console and AEQ MAR4Suite Pro. Projected as a turn-key system, it included new audio and data cabling, patch panels and the installation of the AEQ DSD-01 technical and studio furniture.</p>	<p>Academia Española de la Radio</p>

SPAIN	ALLARIZ RADIO	
	<p>Turn-key project consisting of a new radio broadcast studio. System built around the ARENA 15 fader digital console servicing both the Studio and an associate recording cabin with a BRAVO analogue mixer. Both Studio and recording cabin were equipped with play-out devices, new microphones and headsets plus AEQ TH-02EX MKIII digital telephone hybrids for the audience call-in system. The Turn-key Project was completed with the complete audio and data cabling and the installation of the AEQ DSD-01 technical and studio furniture.</p>	

SPAIN	ATRESMEDIA	
	<p>Antena 3 is a conglomerate of Spanish open television channels, owned by Atresmedia Corporación, Its main products are A3, La Sexta, Neox, Nova, Mega, Atreseries, Antena 3 HD and La Sexta HD, as well as Antena 3 Internacional and Ver-T</p>  <p>In 2015 this private Spanish group acquires CONEXIA intercom as the center of communications, as well as desktop and rack user panels distributed among multiple TV studios. CONEXIA intercom system uses the BC 2000D matrix hardware to route and process the audio.</p>	

<p>SPAIN</p>	<p>BADALONA COMUNICACIÓ</p>	<p>BDN Ràdio Ciutat de Badalona</p>
<p>Technical renovation of their radio studios using IP-based digital technology is now complete, after this last incorporation</p> <p>Badalona Comunicació is a Public company depending on the Badalona's Council. Located 10 km to the North-East of Barcelona, Spain, Badalona has a population of more than 200,000 people. Badalona Comunicació manages three communication media: written press, radio and television.</p>  <p>BDN Radio Ciutat de Badalona is Badalona Comuniació's radio station. It was founded back in 1981 and broadcasts 24 hours a day, 7 days a week at the 94.4FM dial and through Internet. Its contents are composed of music and, mostly sports, paying special attention to local events.</p> <p>Radio Ciutat de Badalona is a traditional AEQ customer, and in 2019 they initiated a deep renovation of their technical infrastructure which supposed the migration of most audio connections towards IP-based formats, transported on managed packet-switching networks, as well as the installation of the AEQ CAPITOL and AEQ FORUM digital mixing consoles in their production studios.</p> <p>Now, in 2021, Badalona Comunicació has decided to upgrade their main broadcasting studio, which was formerly</p>		

based on an AEQ ARENA-BC2000D digital mixing console, to install ATRIUM, the most powerful mixer develop by AEQ to date.

AEQ ATRIUM is specially designed for broadcast audio production for Radio and TV in the most-demanding operating environments. It can handle up to 1000 local or IP audio channels, operated on one or more control surfaces, with up to 96 powered and page-organized faders each.



Developed with the user always in mind, AEQ ATRIUM provides great operation simplicity by means of a powerful set of touch screens, rotary encoders, indicators and keys which can be pre-configured and which function may dynamically change according to the context, avoiding unnecessary steps and always keeping the required information at sight, so the operation is simple and, at the same time, safe.

Mr. Marti Santander, Chief Engineer at Badalona Comunicació, confirms: "The new operating workflow using colour touch screens has greatly improved daily workflow".

AEQ ATRIUM was created taking advantage of all the improvements that current technology provides: audio over IP systems allow for inputs & outputs and the processing and control elements to be distributed among several equipments, which are sometimes physically far away from each other. It incorporates tools to develop redundancy capabilities at all levels, instant storing and retrieving of snapshots, convergence of physical and virtual control elements, mixing and level adjustment automation, control input and output signal transport over the several devices comprising a system, etc. All these state-of-the-art features generate a new concept where the sum of the different components is able to develop a combined functionality by far superior to that of each individual part.

Each AEQ ATRIUM control surface can be completely customized. This way, classic operation can be implemented: for example, each fader may have A/B signal configuration, or each channel may have direct access to pre-defined sends and buses; it is even possible to define signals that take part on bi-directional multiplex groups, so each user is provided with the total mix, except for its own contribution.

Also, mixed or very special operating ways can be configured, with flexible programming for each key so it can act on the console routing, control external devices such as routers, audio-codecs, broadcast telephony or automation systems. Also, ATRIUM is very easily configured and integrated into a system which already covers not only the production centre, but it can also be expanded to connect to external events and other locations, so audio networks of any required size can be created.



Mr Jordi Coloma, CTO at Badalona Comunicació, remarks: "The migration from our former ARENA digital audio mixer to the new ATRIUM system was performed in, literally, two afternoons and, as most of the already installed hardware could be re-used, so now we have a latest-generation console yet with minimal investment".

The complete project has been led by AEQ Sales Area Manager for Catalonia, Mr. Nacho Olivella, in coordination with the technical services of Radio Ciutat de Badalona.

SPAIN

BETEVE

Betevé (formerly known as Barcelona Televisió) is a public local TV channel, oriented to the metropolitan area of Barcelona (Catalonia, Spain).



During Betevé's latest technological upgrade, the Technical Management of the channel decided to go for the KROMA by AEQ CONEXIA intercom system, based in the BC 2000

betevé

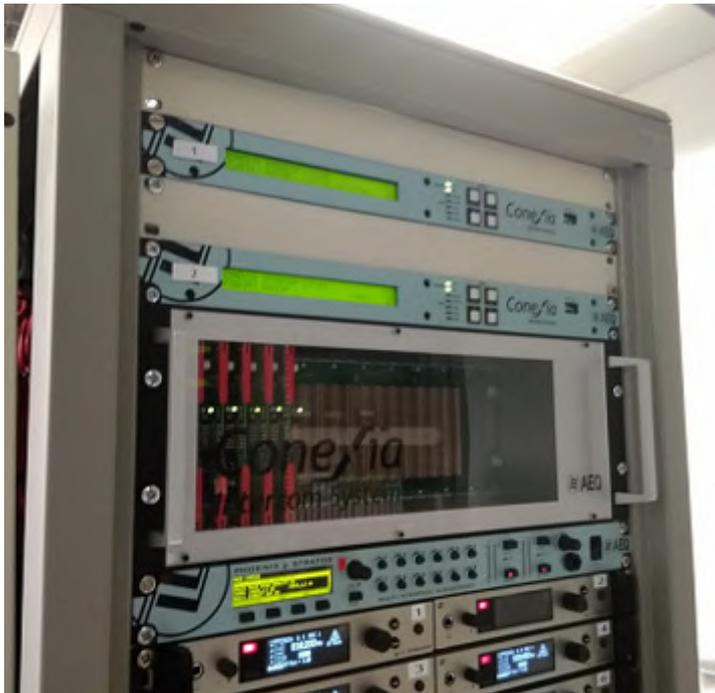
D core, including the new TP8000-series panels, allowing for professional audio quality over IP networks.

CONEXIA intercom system has capacity for up to 1024x1024 audio crosspoints, with modular cards architecture. But what really makes CONEXIA special is the possibility to integrate Intercom and Broadcast audio sources into the same matrix, with 48 kHz / 24 bits sampling and a 100% redundant system.



The full project has been led by Betevé's Technical Manager, Mr. Jordi Colom, in collaboration with the technical services at AEQ Leganés headquarters and the sales support of Nacho Olivella, Sales Manager at AEQ's Catalonia office.

<p>SPAIN</p>	<p>CADENA COPE, MADRID.</p>	
	<p>This network has close to one hundred active radio stations in Spain. They purchased a BC-2000 D console to upgrade the On Air studio at their headquarters in Madrid.</p> 	

<p>SPAIN</p>	<p>CANAL EXTREMADURA</p>	
	<p>Canal Extremadura Television is the regional television of Extremadura, in Spain. It was created on 2005. Its facilities are located in Mérida, the autonomous capital. In addition, it has delegations in Cáceres and Badajoz.</p> 	

The TV channel has renewed their old Kroma intercom system for a new Conexia intercom system, built around an AEQ BC 2000D router, at the beginning of 2019.

The system features full redundancy with Conexia intercom super-controllers, BC2240 mirrored frame controllers and dual power supplies. All this is integrated to build a fail-over system that is seamlessly able to overcome failures in any critical part of the system. This is one of the most important AEQ equipment features: flexibility and reliability.

Connections are performed through an IP network offering capacity for 192 AoIP ports with broadcast audio quality. However, in order to be compatible with panels which are already installed in the former Kroma system installed in 2005, the system features two legacy 8-channel cards for Kroma digital panels with point-to-point wiring. It also has cards for 24 analogue audio channels and an additional one for the connection of virtual panels installed in PCs and iPod running the Xplorer software app.

The analogue cards allow for the integration of the cameras' CCU, through which the producers, lighting technicians and other production operators and coordinators can communicate with the cameramen and director. Analogue audio inputs and outputs can also be used to connect the Intercom system to the sound mixing consoles, as the user panels feature auxiliary inputs and outputs and the system's quality is 100% adequate for broadcasting. This way, any user panel can be used as an audio input interface to the mixing console.



Intercom user panels have been delivered together with the matrix to be installed in new workplaces: 19 TP8116 16-key rack-mount user panels have been provided, as well as 7 expansion channels in order to offer more keys to the most versatile positions where many different destinations are usually called (specially in executive coordination locations).

	<p>Once the actions to be performed by these panels are adequately programmed, they -together with an expansion panel- will allow their users to talk to 32 destinations, different user groups or make crosspoints –each one on a dedicated physical key-. This number can grow to 128 destinations if required by simply using the page function of the panel.</p> <p>On the other hand, 12 Xvirtual licenses have been provided in order to install virtual panels on PC or iPod devices, located inside or outside the building. This make very ease the inclusion into the system of users that need to be connected in a simple way from their own office PC or even from their iPhone or iPad.</p> <p>Last but not least, an AEQ Phoenix Stratos dual audio codec has been installed to perform external communications over IP.</p> <p>The installation was completed by the engineers at Canal Extremadura after they attended an AoIP training course given by AEQ Engineer Raúl Moreta.</p> <p>The configuration and operating assessment has been developed by Canal Extremadura Operation Management with the support by AEQ Product Manager Roberto Tejero, in coordination by the Sales Area Manager, Eduardo Guerrero</p>	
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<p>SPAIN</p>	<p>CANARY ISLAND REGIONAL PUBLIC RADIO</p>	
	<p>Gran Canaria facility is the initial start-up phase of the two main program production centers in the region. To transmit its programming, this new regional radio station uses 23 broadcasting centers installed throughout the islands.</p>  <p>The Gran Canaria centre includes two studios (control room and live broadcasting studio), one self-monitoring system, two booths and an unattended central control facility.</p>	

	<p>The studios, including the booths, are equipped with AEQ ARENA digital mixers interconnected with the AEQ BC-2000 D Router matrix.</p> <p>The self-monitoring system has a 15-fader surface and 5 faders in the booths. All the BC-2000 D input/output devices are housed in the rack room (central control room) together with the AEQ BC-2000 D Router matrix.</p>	
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<p>SPAIN</p>	<p>CHICLANA RADIO</p>	
	<p>Delivery, installation and start-up of two broadcast controls and studios based upon the AEQ ARENA digital console and AEQ MAR4Suite Pro.</p> 	

	<p>Projected as a turn-key system, it also included new audio and data cabling, patch panels and the installation of the AEQ DSD-01 technical and studio furniture. The delivery also included a complete announce cabin with an AEQ BRAVO TT analogue mixer.</p>	
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<p>SPAIN</p>	<p>COM RADIO, AGENCIA DE COMUNICACIÓ LOCAL, BARCELONA, LA XARXA</p>	
	<p>COM Radio broadcasts News and Entertainment Programs throughout the Catalonia Region. COM Radio uses the BC-2000 D Console in the studio 4. A DM and two D10 Control Surfaces provide 25 faders, which are capable of controlling 225 channels simultaneously.</p>  <p>The Technical Room includes an Audio Router with 160 digital AES/EBU inputs and outputs. To manage the transition phase and accommodate the many analogue circuits, a pool of Caddy AD/DA converters were installed. The router control is totally decentralized. There are work positions for supervision, configuration and programming in which macros, salvos, scheduling, other system events as well as the daily controls are implemented via 6 AEQ NCB-100 XY control panels. The panels were placed in studios, technical room and other locations. This allows each operator to have access to his or her specific On Air control functions.</p> <p>As part of a second Project, the BC 2000D matrix was extended to house the audio contribution and distribution circuits for 125 local and regional stations grouped within the "La Xarxa" network.</p>	

In this Project, special software interacts with the matrix, executing certain crosspoints to connect and disconnect up to 10 codec channels to 4-wire auxiliary and program circuits of the selected studio console, and create the necessary mixes (N-1, coordination).



That is, it acts on a small logical sub-matrix within the BC2000D, with up to 10x2 contribution channels, where all lines are defined as stereo and bi-directional.

<p>SPAIN</p>	<p>CTV., S.A.</p>	
	<p>This Galician production company, belonging to the Araganey group acquired a BC-2000D digital audio matrix.</p>	

<p>SPAIN</p>	<p>EFE AGENCY</p>	
<p>The EFE Agency produces multimedia and radio news. It is a leader in the Spanish speaking market. It has its own radio production studios, news editing, production and audio reporting in Madrid.</p> <p>They have acquired three BC-2000 D Digital consoles. Two of them come with a standard configuration for radio production and the third one with a multiplex configuration in which each channel handles an incoming line and the N-1 audio (Mix-Minus) send to each correspondent. This special application is very popular among Spanish sports and news radio. It has been in use for 90 years by a device supplied by <i>Tecnologia Electronica</i>. EFE Agency was using it for the last 15 years. The BC-2000 D replaced this technology.</p> <p>The three studios are connected by MADI links.</p> 		

<p>SPAIN</p>	<p>EITB BILBAO</p>	
<p>AEQ has installed the necessary AEQ ARENA digital consoles for the 8 studios (1 double) and 4 cabins plus 1 digital matrix with 1024x1024 inputs and outputs, for the new facilities of the Autonomic Radio of Euskadi.</p>  		

A console ARENA and a BC-2000D routing/distributing matrix were installed for the first operators and administrators training phase.

During equipment selection phase, all the providers were requested to pass a set of tests lasting 3 days, covering more than 90 technical requirements, before the equipment could be homologated and an economical offer could be provided.



In the final installation, the 9 studios have been configured in several ways: self-operating, Studio-control, recordings, regional disconnections, etc. All of them share lines with the Master Control Room located upstairs at a distance of 130 meters, via multi-channel MADI links and AES lines for back-up. The configuration is adapted to the specific needs of EiTb: back-up system, integration with UMD systems, alarm systems, use of digital microphones and monitors, remote control of the automation systems, etc.



	<p>Moreover, up to 40 ISDN codecs are shared between the 9 studios thanks to the Systel 6000, with intercom positions using Systelset equipment. Other complementary equipment includes AM-03 rack mounted monitors SCR-03 studio boxes.</p> <p>All the configuration, start-up and training tasks were completed within the foreseen period.</p>	
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<p>SPAIN</p>	<p>EITB VITORIA</p>	
	<p>AEQ has installed three ARENA consoles with 15 faders and one with 25 faders in 2019 to retrofit the EITB production center in Vitoria.</p> <p>A Crossnet audio and intercom matrix with TP8416 panels makes things easier for producers.</p> 	

<p>SPAIN</p>	<p>EMCO</p>	
	<p>Delivery, installation and Start-up of three announce cabins based on the AEQ BRAVO TT analogue mixing console, plus a central control based upon the AEQ BC-2000D digital router. System also included the necessary audio and data cabling for the stations, 6 broadcast automation system workstations, 6 workstations for journalists and 2 dedicated central servers.</p>	<p>INTEGRACION AUDIOVISUAL</p>

<p>SPAIN</p>	<p>GETXO COUNCIL</p>	
	<p>Delivery, installation and start-up of a radio control and studio based on the AEQ ARENA digital console. Projected as a turn-key system, it also included play-out devices, new microphones, headsets and monitoring systems, new audio and data cabling, patch panels and the installation of the AEQ DSD-01 technical and studio furniture.</p> 	
<p>SPAIN</p>	<p>GRANADA UNIVERSITY RADIO</p>	
	<p>This university has equipped a high-level digital radio studio for students' training on new communications technologies. The AEQ ARENA digital mixing console was chosen in its 15 faders configuration.</p>	
<p>SPAIN</p>	<p>IMEFE</p>	
	<p>Instituto Madrileño de Formación y Empleo's radio station has acquired one AEQ ARENA digital mixing console for its continuity studio.</p>	
<p>SPAIN</p>	<p>MATARO RADIO</p>	
	<p>Delivery, installation and Start-up of two on-air radio production studios based upon the AEQ ARENA digital mixer. This turn-key project also included, among other things, new structural cabling of the station and studio furniture. The station's remote audio I/O's are handled by AEQ EAGLE audio codecs.</p>	

<p>SPAIN</p>	<p>ONDA CADIZ</p>	
	<p>AEQ has provided the first part of the project for the radio & TV local communication platform of Cadiz, equipping its radio installations with one AEQ ARENA digital mixing console.</p> 	

<p>SPAIN</p>	<p>ONDA CERO ALMERIA</p>	
	<p>AEQ has installed the AEQ ARENA digital audio mixing console with 15 faders at the new Onda Cero studio in Almeria city.</p> 	

<p>SPAIN</p>	<p>ONDA CERO CALAHORRA</p>	
<p>AEQ ARENA digital audio mixers were installed in the continuity and recording radio studio. AEQ provided the mixer itself, as well as installation, cabling, engineering, and auxiliary equipment as part of this turn-key project. The mixing console has black surface and 15 faders.</p>		

<p>SPAIN</p>	<p>ONDA MADRID RADIO</p>	
<p>Onda Madrid was the first radio station installed by AEQ, back in 1985. Since then, we have always helped them to keep their technology up to date</p> <p>Onda Madrid is a public radio station run by the Autonomic Government of the Community of Madrid, Spain. This station is integrated into the Madrid Radio-Television group and has been affiliated to the FORTA association since it was created. News oriented to the region's population have always predominated in their programming, together with local and regional sports contents. Onda Madrid started broadcasting on 18th February 1985 from García de Paredes street, right in the center of Madrid. This station was installed by AEQ using the first BC 2000 analogue consoles.</p>		
		
<p>Onda Madrid moved to its current facilities in the Image City and performed all technical updates throughout more than 30 years counting with AEQ equipment, project designers and installation services. It has many mixing consoles, audiocodecs and even radio automation systems as part of their technical equipment inventory, studios and OB vans.</p>		

AEQ ARENA digital audio mixer for continuity and recording Studio, exactly with the same capabilities that another studio in these facilities already had using the old model AEQ BC-2000 D digital audio mixer.

In 2016, Telemadrid renewed its audio console with the AEQ's newer ARENA 25 faders mixer.



Again, in 2018 a new ARENA console was installed in a Visual Radio studio, and in 2019/2020, a Project to update all ARENA and BC 2000 D consoles is being undertaken, until four ARENA consoles with AoIP Dante connectivity are configured, adding a BC 2000D matrix for audio routing and processing.

And in 2020, AEQ has technically updated Onda Madrid with new, IP-based, audio matrix, studios and communications:



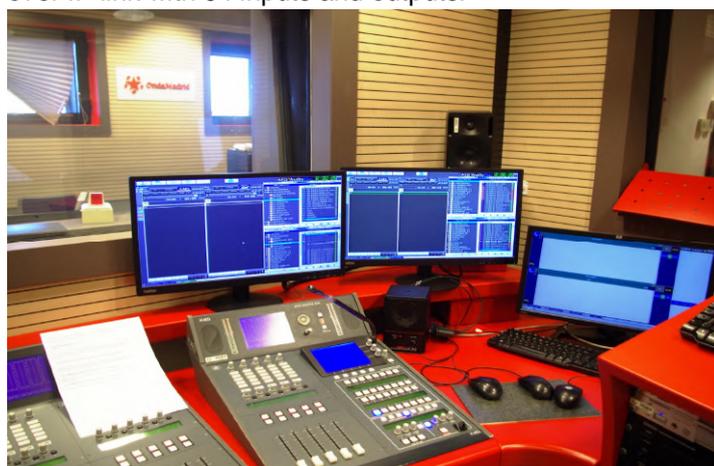
In 2021 they have just finished the most important technical update since they moved to City of the Image more than 20 years ago, by incorporating an AEQ BC-2000 D ROUTER audio matrix with AoIP connectivity, updating all their digital

mixing consoles in order to also support AoIP connectivity, and including a new AEQ SYSTEL IP 16 VoIP broadcast phone system with a pool of PHOENIX STRATOS audiocodecs -all integrated into a new software which unifies the control of broadcast telephony and audio routing for these audiocodecs.

Furthermore, an AEQ ARENA digital mixing console has been installed in the Recording Studio 1, replacing the AEQ analogue console which has equipped it for more than 20 years.



ARENA consoles at the Continuity, Recording 2 and Recording 3 studios have been updated to include an Audio over IP link with 64 inputs and outputs.



The BC-2000 D ROUTER central control room matrix is modular and includes redundant controllers, power supplies and DSP cards, as well as 16 analogue, 8 AES/EBU digital and 128 AoIP Dante inputs/outputs.

It is complemented by three AEQ NETBOX 32 AD Dante AoIP interfaces: one for additional routing of the central control and link rooms, a second one to provide booth connectivity and the last unit is kept as a backup. Each NETBOX 32 AD connects 32 AoIP inputs and outputs to 16 analogue and 8 AES/EBU digital stereo I/O.

This system is quite productive, based on a double-routing architecture, corresponding to the AoIP network

and the AEQ BC-2000 D ROUTER matrix.

Steady inputs and outputs which don't require processing are established between the different ARENA consoles, the NETBOX interfaces and SYSTEL IP broadcast phone system just in the same way as it would be done using a patch panel, but using Dante Controller software.

ARENA console's important inputs and outputs requiring processing, mixing, silence detection, to be displayed in VU-meters or to be switched in blocks –automatically, according to a schedule or in response to a command by the software or console's programmable keys- are routed through Dante Controller to the 128 BC-2000D ROUTER Audio over IP inputs and outputs, where they are processed, mixed or distributed according to programmed actions or commands executed in each user's view in AEQ BC-2000D RTC software.



The communications system includes support for IP telephony and ISDN / IP audiocoders, which are controlled by a unified software application developed just for this purpose.

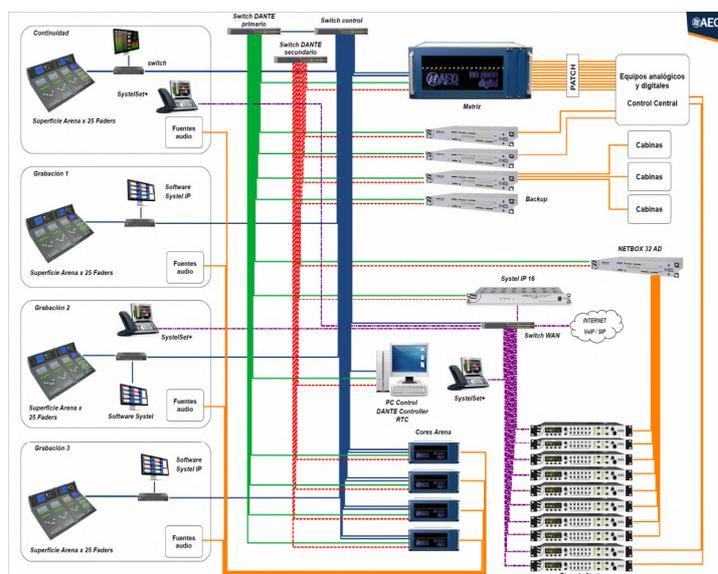
On one hand, in the Central Control Room, there is an AEQ SYSTEL IP 16 system providing 16 voice over IP lines and supporting four AEQ SYSTELSET+ communications terminals (which include an IP phone and a touch screen running the communications control software). These have been installed in the Continuity Studio and the three recording ones. The 16 available phone lines can be dynamically assigned among these studios as required by each of them at any particular moment



On the other hand, the system also includes 10 AEQ PHOENIX STRATOS dual audiocodecs supporting ISDN and IP connectivity. They can be assigned to the creation of permanent links to transmitter centers, to external studios and to OB vans.

Eight workplaces have been licensed for this unified communications software. It allows for the management of the audiocodecs and the IP broadcast telephony system from a single screen. This way, each user can operate the external links using audiocodecs and prepare the phone calls for a studio, –acting as a producer, supervisor or developing a combined function depending on his access rights-.

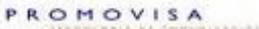
The deployment has been completed with ten AEQ ALIO external reporting systems with IP connectivity, each one provided in their own transportation case which also includes a battery system and router/modem for autonomous connectivity over 3G/4G mobile IP networks.



The complete project has been led by AEQ Sales Manager for Onda Madrid, Mr. Bernardo Saiz, in coordination with Onda Madrid technical services.

<p>SPAIN</p>	<p>ONDA REGIONAL DE MURCIA</p>	
	<p>Installation of 2x AEQ ARENA Digital Consoles into the Murcia Radio Network main studios.</p> <p>Later on, they have added another studio with a 15 fader console configured as auto-control.</p>	



SPAIN	PROMOVISA BARCELONA	
	<p>Delivery of a new radio broadcasting studio. System was built around the ARENA 15 fader digital console. The project was completed with the complete audio and data cabling and the delivery of the engineering drawings for cabling and interconnection.</p>	

SPAIN	PUNTO RADIO BILBAO	<p>Radio Bilbao</p>
	<p>Delivery of a new radio broadcasting studio. System built around the ARENA 15 fader digital console. The project was completed with the complete audio and data cabling and the delivery of the engineering drawings for cabling and interconnection.</p> 	<p>SEIZ</p>

SPAIN	PUNTO RADIO LOGROÑO	
	<p>It is a member of the associated radio stations of Punto Radio network in Spain. PLA RIOJA PUNTO RADIO has selected AEQ's digital console ARENA for the renewal of the central studio in the city of Logroño, using a configuration with 15 faders.</p>	

SPAIN	PUNTO RADIO OB VAN	
	<p>the 2007's spring, at the Radio Week of Ponferrada, Punto Radio used their new mobile Studio for the first time. It was installed by Broadcast 10 company and equipped with the last technology from AEQ.</p> <p>AEQ has covered the needs of this Punto Radio mobile studio with the new ARENA digital console with 5 faders, Eagle rack-mounted ISDN codec, TLE-02D portable codec/telephone hybrid and an OnAir signaling system. This unit will move across all the Spanish territory performing emissions from different places. With an internal area of 16 sq. Meters, the Studio can hold up to 8 journalists and 1 or 2 technicians.</p> 	

SPAIN	UNIVERSIDAD CEU SAN PABLO, MADRID.	
	<p>This prestigious private university has established two digital studios to facilitate training on new communication technologies.</p> <p>Each studio has a BC-2000 D Console with 15 faders. Each one has 12 analogue inputs and outputs and 16 digital</p>	

inputs and outputs, 8 mic inputs and 4 headphone outputs. Both studios are connected together by means of a 64-channels MADI link.



SPAIN

RADIO ANTENA MARTORELL

ONAIR digital radio Studio based on the AEQ ARENA mixing console with 15 faders.

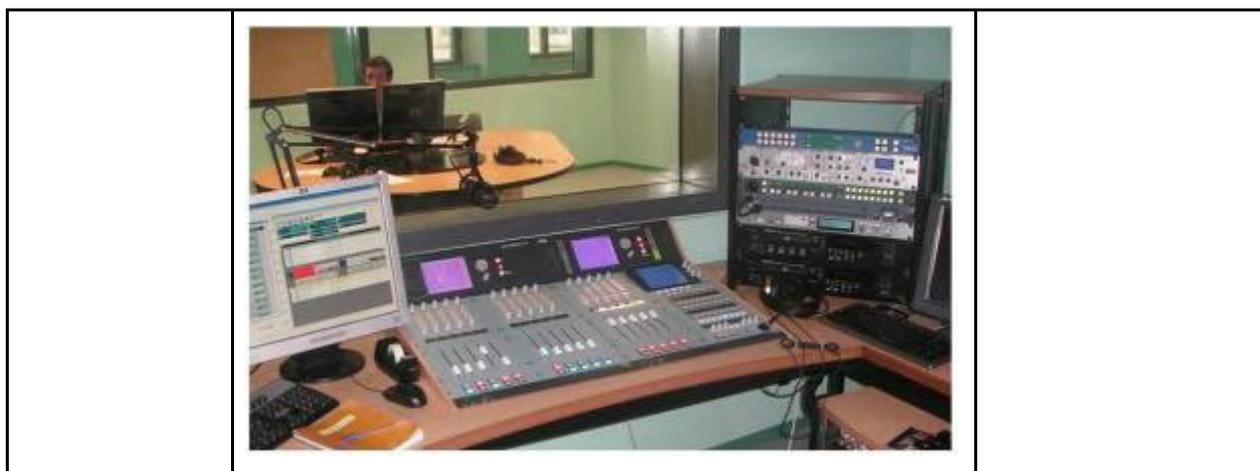


SPAIN

RADIO DEL PRINCIPADO DE ASTURIAS

3 x AEQ ARENA Digital Console plus 1 Digital Router in the Central Control Room, connected by optical fibers and redundant coaxial cable, to be linked with the AEQ Systel 6000 for telephone lines switching and multiplex and connected to the TV Matrix for signal sharing.





<p>SPAIN</p>	<p>RADIO EUSKADI ETB IRUÑA, NAVARRA.</p>	
<p>EITB's division in Navarre has equipped its studio with an AEQ ARENA digital console with capacity to handle to 12 mono analogue inputs and outputs, 12 AES/EBU inputs and outputs and 4 microphones; in addition, 3 AEQ EAGLE ISDN dual audio codecs were installed. Besides, the complete installation has been made, integrating equipment from other manufacturers. In the future, an AEQ BC-2000 D routing / distributing matrix and another studio will complete the installation.</p>		

<p>SPAIN</p>	<p>RADIO GUADALAJARA, CADENA SER.</p>	
<p>Cadena SER has purchased a BC 2000 D console for its Guadalajara Program Production Centre.</p> 		

<p>SPAIN</p>	<p>RADIO IB3, PALMA DE MALLORCA</p>	
<p>IB3 is the new regional radio station of the Comunidad Autonoma de Baleares. It now covers all the Balear Islands from its main studios in Palma de Majorca.</p> <p>It has installed three BC-2000 D Consoles, with Control and Studio Control configurations, which are used On Air and in Production.</p>  <p>In 2014, IB3 relied once again on AEQ technology when they purchased another three AEQ ARENA 15 faders mixing consoles and one BC2000D audio matrix.</p>  <p>One year later, in 2015, IB3 acquired the CONEXIA intercom matrix as the heart of the OBvan intercom system.</p> <p>And now, between 2020 and 2021, they renewed equipment and developed a great Radio Project through a public tender, which was awarded to AEQ with the ATRIUM consoles and an AoIP Dante audio network.</p>		

ATRIUM in Mallorca, Menorca and Ibiza centers.

This tender was launched shortly after the release of the ATRIUM Console, a product specially designed to cover the needs of this type of production centers that demand a high level of performance from the consoles based on high technical quality programming and a fast rhythm of content production, especially in informative programmes, in which there is a complex work very dynamic.

IB3 tender includes the supply of three ATRIUM consoles for the Palma de Mallorca center, one for the main studio in Menorca and one for the Ibiza center.



Atrium console in the main studio in Menorca

Two high-performance digital audio mixers AEQ FORUM IP SPLIT have also been installed for the editing booths in Palma de Mallorca, one in Menorca, one in Ibiza and another with a larger composition for the Formentera delegation, where it may be necessary to produce programmes with several microphones.

On the other hand, two Systel-IP16 talk-show systems have been included to manage the broadcast communications in the Menorca and Ibiza studios. AEQ has also developed the adjustment of the technical furniture to the new consoles, including a very aesthetically booth table for the main studio in Palma de Mallorca, designed and prepared to enhance Visual Radio's broadcasts platform.

Special features of ATRIUM consoles

Each ATRIUM console has 3 modules of 6 motorised faders in each one. Associated to each fader module there is a touch screen module that displays up to three pairs of VU meters for each of its six channels, according to configuration, for example one pair for the main signal, another for the return signal and a third for the alternative A/B signal. In addition, this screen allows contextual adjustment by touch-gesture, mouse or encoder of the processes applied to each channel.



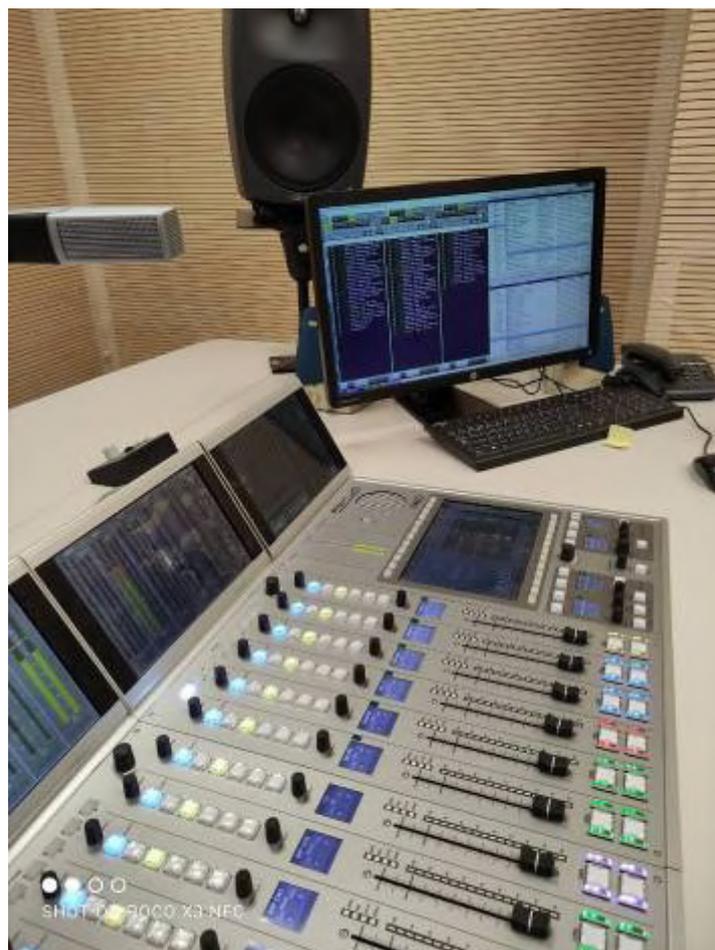
Atrium console in the main Ibiza studio

The console also has a control and monitoring module with an internal display and 24 programmable keys, plus precision VU meters, CUE loudspeaker, USB connection, control and paging monitoring sections and intercom section. The control and monitoring module is complemented by a further external touch screen with loudness measurement and correlation measurement detail.

The audio engine of each of the consoles supplied has a controller and redundant power supply, as well as very extensive connectivity: inputs for 8 microphones, 8 analogue lines, 8 AES/EBU digital lines, 64 MADI digital lines and 64 audio over IP in a choice of Dante or AES 67 format. Outputs are for primary and secondary headphones, 12 analogue lines, and the same number of outputs as inputs of the other types.



Studio 2 in Palma de Mallorca: Atrium view from the radio booth



Studio 3 in Palma de Mallorca: auto-control configuration

Palma de Mallorca continuity studio

The ATRIUM console in the main studio in Palma de Mallorca has some special features for developing more complex programmes:

A second control and monitoring module, programmed specifically for the use of the producer, a person who supports the console technician, preparing content, organising telephone calls, coordinating the mobile units and other resources, such as intervening on air in sports programmes, providing information and data on the events taking place in real time.

For this reason, the programming of its specific control and monitoring module allows the easy listening of all the console input and output signals, as well as the intercommunication with all the local actors that participate in a programme.



Main studio in Palma de Mallorca: Atrium Console and studio table for Visual Radio

It also has an additional microphone module, which along with the other two, totals 12 microphones and two specific headphone outputs, and an additional AES/EBU card, totalling 12 AES/EBU digital input and output lines.

Conclusion

The development of the project took place in the last months of 2020 and the first months of 2021 in parallel with the acoustic refurbishment of all the studios. The basis of the work consisted of keeping the services active while the changes took place in a planned manner.

The entire project has been led by the sales manager of AEQ for IB3, Mr. Bernardo Saiz, in coordination with the technical services of IB3 Radio. We consider that the final result meets the requirements of high level of performance and robustness necessary to provide the quality service required of a public autonomous channel. It should be able to meet the qualification of "reference installation", possibly the most complete and technically up-to-date installation developed in Spain in recent months.

<p>SPAIN</p>	<p>RADIO IBIZA</p>	
	<p>Delivery, installation and start-up of a radio control and studio for Radio IBIZA. System was built around the AEQ ARENA 15 fader digital mixing console. Projected as a turn-key system, it also included play-out devices, new microphones, headsets and monitoring systems, new audio and data cabling for a 3 workstation AEQ MAR4Win broadcast automation system, patch panels and the installation of the AEQ DSD-01 technical and studio furniture.</p>	

SPAIN	RADIO LAGUNA DEL DUERO	
	<p>Local Radio Station, with coverage in the entire Laguna del Duero region. Its central studio includes one AEQ ARENA digital console with 5 faders, demonstrating that AEQ technology is perfectly accessible to all the budgets.</p>	

SPAIN	RADIO M21 CIBELES	
	<p>The installation is deployed around the powerful AEQ ARENA digital mixing console, which, with 25 control faders, offers enough inputs for all their operation alternatives. As a complement, a second AEQ CAPITOL IP console was provided, with 8 faders for coordination and organization tasks.</p>  <p>A complete AEQ SYSTEL IP phone-in system manages all the external contributions. Last, we want to highlight that the digitized contents storing, edition and playout system will be carried out using AEQ AudioPLUS automation platform, comprising up to 5 broadcast workplaces, and the same quantity at the newsroom offices.</p>	

SPAIN	RADIO MARCA LOGROÑO	
	<p>AEQ ARENA digital mixer for continuity and recording, with 15 fader control surface in black color.</p>	

SPAIN	RADIO MENORCA	
	<p>Delivery, installation and start-up of a radio control and studio for Radio Menorca, which is part of the SER network. System was built around the AEQ ARENA 15 fader digital console. Projected as a turn-key system, it also included</p>	

play-out devices, new microphones, headsets and monitoring systems, new audio and data cabling for the AEQ MAR4Win broadcast automation system, patch panels as well as the installation of the AEQ DSD-01 technical and studio furniture.



SPAIN

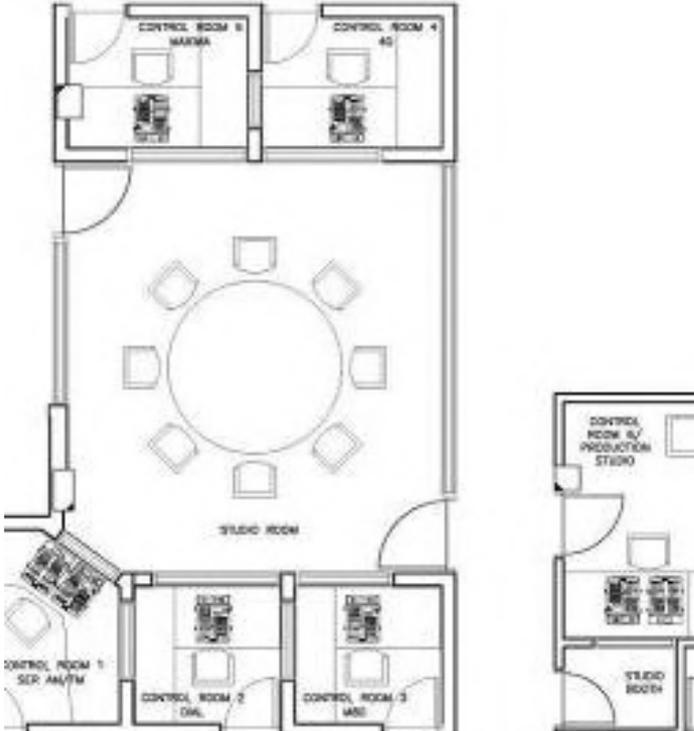
RADIO MUNICIPAL BENIDORM

Delivery, installation and start-up of two controls and studios. System built around the AEQ ARENA 15 fader digital console, Projected as a turn-key system, it also included play-out devices, new microphones, headsets and monitoring systems, new audio and data cabling, patch panels and the installation of the AEQ DSD-01 technical and studio furniture. The project also included master clock system, studio ON-AIR signaling and the delivery of the engineering drawings for cabling and interconnection.



<p>SPAIN</p>	<p>RADIO MUNICIPAL DE MANLLEU, BARCELONA</p>	
<p>BC-2000 D console for continuity and recording.</p> 		

<p>SPAIN</p>	<p>RADIO MUNICIPAL DE REALEJOS</p>	
<p>Delivery, installation and start-up of several broadcast controls, studios and central control based upon the AEQ ARENA digital console and AEQ BC2000D digital router. The station's system is equipped with AEQ PHOENIX Studio and AEQ MAR4Suite Pro broadcast automation. The totality of the BC-2000 System frames, including the ones for the on-air mixing consoles, have been centralized together with the rest of the stations networking equipment like system servers and DAWs for the MAR4Suite Pro. System included new audio and data cabling as well as all the required peripheral equipment.</p> 		

<p>SPAIN</p>	<p>RADIO VIGO, CADENA SER, VIGO, GALICIA</p>	
	<p>Radio Vigo has been a leading station on Spain's northwest coast for three generations. Recently, it moved into a renovated building near the city's marina and re-equipped the station with the most advanced technology.</p> <p>AEQ worked closely with the station's technical Management on the development of a very special engineering project to adapt the station to the particular characteristics of the new studio space, and the great variety of radio broadcasting products that Radio Vigo produces and markets. Radio Vigo is an affiliate of the Cadena Ser network.</p> <p>A BC 2000 D switching matrix was installed in the central control room which is linked by optical fiber with the BC-2000 D consoles in the studios.</p> <p>There are six studios:</p>  <p>The production studio has a console with 15 faders and an exclusive studio booth. A shared studio room can also be used.</p> <p>The main continuity control facility for SER, AM and FM, has a console with 15 faders. The continuity control facilities for the station's four musical products —40 Principales, Máxima FM, Dial, and M80— are equipped with consoles</p>	

having only five pages of channels (equivalent to 45 faders), and they normally work in control room mode.



The five continuity control facilities and the production studio share a single studio room.

Technical coordination among the control rooms is also ensured through an intercom system integrated into the BC-2000 D system.

SPAIN

SAN PABLO CEU UNIVERSITY

This prestigious private university has established two digital studios to facilitate training on new communication technologies.

Each studio has a BC-2000 D Console of 15 faders. Each one has 12 analogue inputs and outputs and 16 digital inputs and outputs, 8 mic inputs and 4 headphone outputs. The two studios are connected by a 64-channel MADI link.





SPAIN

SAN VICENTE DE RASPEIG RADIO. VALENCIA



AEQ has finished the installation of a turn-key project for the San Vicente de Raspeig local radio. The requested configuration comprised two control rooms and one studio room. One of the control rooms has been equipped with an AEQ ARENA digital console while the other one uses an AEQ BC500 analogue console. Moreover, AEQ Mar4Win automation system and SYSTEL 6000 multi-conference system (with a configuration of 4 lines, expandable to up to 20 lines) have been installed.

The high frequency section has also been installed by AEQ using equipment from Link Comunicaciones.



<p>SPAIN</p>	<p>TEIDE RADIO</p>	
	<p>Supply and set up of two on air radio studios employing an AEQ ARENA digital audio mixer and a compact AEQ FORUM console with 12 faders.</p>  <p>The Project was completed with AEQ AudioPLUS radio automation software.</p>	

<p>SPAIN</p>	<p>TELECINCO – MEDIASET SPAIN</p>	
	<p>Mediaset España Comunicación is a Spanish communication group created in March 1989, by the Italian company Mediaset, Its activity focuses on the production and exhibition of television content. He currently operates the television channels Telecinco, Cuatro, Factoría de Ficción, Boing, Divinity, Energy and Be Mad</p> <p>In the last years, the Mediaset group has acquired AEQ BC2000D audio matrixes as a platform for the CONEXIA Intercom system as their centre of communications, complemented by intercom user panels distributed among multiple TV studios.</p>	



In Mediaset Spain, 6 different Conexia routers have been installed joined by tielines that the Crossmapper configuration application manages transparently. The objective is to give greater security to a possible failure of the equipment or operation.

- The central control has a matrix with two frames with 486 ports, of which 60 are equipped with user panels
- Studios 4 and 5 have a matrix with a frame with 140 ports, of which 51 are equipped with user panels
- Studio 6 has a matrix with a frame with 210 ports, of which 30 are equipped with user panels
- Studio 7 has a matrix with a frame with 218 ports, of which 26 are equipped with user panels
- The news studio has a matrix with a frame with 193 ports, 48 of them equipped with user panels
- o Mobile unit number 5 has a matrix with a frame

<p>SPAIN</p>	<p>TV3</p>	
	<p>TV3 is the main television channel in Catalonia (Spain), part of the CCMA public broadcaster. It is the first to broadcast all its programming exclusively in Catalan.</p>	

The public broadcaster has acquired an AEQ BC2000D audio matrix, as a platform for the CONEXIA Intercom system, as centre of the communications, and intercom user panels distributed in four or more TV studios. It is sized with three frames of the BC 2000 router, for 508 ports, of which 141 service wired user panels and 20 Xplorer wireless user panels



This matrix provides redundancy in all its components, since the double controller, redundant power supply unit, automatic backup DSP cards and extra input/output modules, ensuring 24/7 operation.

In 2020 it was updated to Dante AoIP technology (AES67 compatible) with the installation of two redundant network cards, for a total of 128 channels to connect panels, audio consoles and input/output terminals using audio over IP.

More than 60 intercom user panels have been installed so far in all the Sports, News and Traffic TV departments and the rest of CCMA TV channels in Barcelona headquarters, as well as in three provincial offices at Gerona, Lérida and Tarragona.

Thanks to the great flexibility of CONEXIA, the project implies a wide variety of panels in order to adjust to TV3's specific needs. TV3 system has 24 and 16-key user panels, with analogue, digital and even AoIP Dante audio.

A software suite for the system's configuration and real time operation has been developed according to TV3's operative requirements, so the need to download a complete pre-configuration file each time that a live modification to the system is required has been avoided.



The complete project has been led mainly by CCMA's Technical Manager of Central Control and Traffic, Mr. Albert Bargallo, in collaboration with AEQ Technical Services in the Madrid central office, and Mr. Nacho Olivella as AEQ Catalunya Office Manager.

In order to obtain more information about CCMA and TV3, please visit <https://www.ccma.cat/tv3/>

SPAIN

UNIVERSITY EUROPEAN

Delivery, installation and start-up of a radio control and studio based upon the AEQ ARENA digital console and the AEQ MAR4Suite Pro. Projected as a turn-key system, it also included new audio and data cabling, patch panels and the installation of the AEQ DSD-01 technical and studio furniture. AEQ EAGLE AudioCodecs were installed for the stations External communications.





<p>SPAIN</p>	<p>UNIVERSITY FRANCISCO DE VITORIA</p>	
	<p>University Francisco de Vitoria has selected AEQ for the complete execution of six new studios dedicated to technical training for the degrees associated with Information Technologies, with special attention to radio and television.</p> <p>These six new studios operate in control-booth mode. Four of them feature AEQ BC2500 analogue mixers, while the remaining two were installed using AEQ ARENA latest digital audio console technology. All the studios have dedicated workstations to run the AEQ Mar4Suite Pro automation system.</p> 	

<p>SPAIN</p>	<p>UNIVERSITY OF BASQUE COUNTRY</p>	<p>eman ta zabal zazu</p> 
	<p>Turn-key project consisting of three new radio broadcast studios. System is built around the ARENA 15 fader digital consoles and was complemented with new play-out devices, microphones and headsets, plus AEQ TH-02EX MKIII digital telephone hybrids for the audience call-in system. The Turn-key Project was completed with audio and data cabling and the delivery of the engineering drawings for cabling and interconnection.</p>	
<p>SPAIN</p>	<p>UNIVERSITY OF VIC, BARCELONA</p>	<p>UVIC UNIVERSITAT DE VIC UNIVERSITAT CENTRAL DE CATALUNYA</p>
	<p>BC-2000 D console for university training of journalists in new radio technologies.</p> 	
<p>SPAIN</p>	<p>UNIVERSITY OF ZARAGOZA</p>	<p> Universidad Zaragoza</p>
	<p>Zaragoza University acquired an AEQ ARENA digital mixer with 15 faders for university training of journalists in new radio technologies.</p> 	

<p>SPAIN</p>	<p>UNIVERSITY POMPEU FABRA</p>	
	<p>Integrated into a big project to update all the facilities that this university includes for training, AEQ has been selected to design and supply two full-operational radio studios in control-studio configuration (studios 1 and 2), using their latest digital audio mixer technology.</p> <p>The supplied AEQ ARENA digital console includes a 15 physical faders control surface (black-grey color) and integrates the remote control of AEQ TH02 telephone hybrid in the programmable keys section.</p> 	

<p>SPAIN</p>	<p>VAV</p>	
	<p>VAV Group supplies all kinds of television production services with specialized crew and technical equipment, and was complemented with Uvetech and its wide range of broadcast engineering services.</p> <p>In 2016 AEQ supplied the CONEXIA intercom matrix to manage the intercommunications of the VAV OBvan destined to Abu Dhabi.</p>	

<p>SPAIN</p>	<p>XARXA MEDIA</p>	
<p>COM-Radio (radio division of XARXA Media Group) has updated and remodeled their central facilities in Barcelona, upgrading some audio production and radio studios with digital mixers like AEQ GRAND FORUM with 20 faders control surface, AEQ ARENA in 25 faders configuration and 12-faders AEQ FORUM consoles.</p> <p>COM-Radio was founded in March 1995, as a regional public broadcaster for Catalonia, on the base of a group of local and community small public radio stations, stimulated by Diputació de Barcelona (Barcelona Regional Government) and managed by the Consorci de Comunicació Local (public media management organization). Today, COM-Radio has more than one hundred associated radio stations.</p> <div data-bbox="373 853 1099 1285" data-label="Image">  </div> <p>In 2016, the group extended its audio system acquiring a new BC2000D audio matrix unit to migrate to an IP network. Besides the AEQ audio matrixes, AEQ has contributed with the new AEQ VENUS audiocodecs as well as control and operation software applications.</p>		

<p>UNITED KINGDOM</p>	<p>GLOBECAST UK, LONDON</p>	
<p>Globecast UK Limited, a subsidiary of France Telecom, has just purchased the first AEQ BC2000D digital broadcast console in the UK.</p> <p>Installed in Globecast Radio's new central London studio, which is based in the prestigious ITN building, this state-of-the-art digital studio will be used for Globecast Radio's evening and weekend programming. Fully equipped with facilities for production and live broadcast, it includes RCS Master Control, Burli, a multi-line telephone call-in system, and completed with an AEQ Eagle ISDN codec.</p>  <p>The studio also has facilities for "off-tube" commentaries. Globecast will also be hiring out the studio, which will give many other persons the opportunity to experience the new BC-2000 D for themselves.</p>		

<p>UNITED KINGDOM</p>	<p>KM RADIO, CANTERBURY AND MEDWAY</p>	
<p>KM Radio Station is part of Kent Messenger Group, with participation in both written and radio mass media in the zone of Kent's county, some of them being more than 200 years old.</p> <p>KMFM has 7 dedicated frequencies, and production and transmission centers in Canterbury, Shenway, Ashford, Medway, Thanet, West Kent and Maidstone; The headquarters are located in Canterbury and Medway.</p> <p>KM Radio programming schedule is mainly musical, with inserted news bulletins every 15 minutes, and traffic-related</p>		

	<p>information due to the proximity of the M-25 highway. For the Canterbury KM facilities, AEQ has installed two AEQ ARENA digital consoles with 15 faders. Its flexibility and modular design allows for the possibility of integrating analogue and digital (AES/EBU or SPDIF) audio inputs and outputs. There is, as well, an AEQ BC2000-D 512x512 audio matrix for the central management of all the available audio signals in the installation. The interconnection between both studios -where the ARENA consoles are installed- and the central control -where the matrix is located- used 64-channel MADI digital audio links. Both studios are in use for ON AIR applications.</p> <p>For the installation of Medway production centre, AEQ supplied one AEQ ARENA console for each of the three studios, all in 15 faders configuration; and one AEQ BC-2000D central matrix for routing and distribution purposes, connected to the studios using 64-channel MADI optical fiber links. Two of the studios are in use for News applications, while the third one is used for Production functions.</p>	
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<p>UNITED KINGDOM</p>	<p>UCKG – MEDIA CENTRE</p>	
	<p>AEQ UK has completed the installation of UCKG's Media Centre, in Finsbury Park, London. Two radio services are broadcasted from this Media Centre: Liberty Radio and Record Radio, as well as Record TV. AEQ's installation comprises the master control room, with an AEQ BC-2000 D ROUTER, and the backup studio, with an AEQ ARENA CONSOLE. Budgetary constraints meant that only one of the studios could have the Arena digital control surface. However, the system has been designed with future digital studio upgrades in mind.</p> <p>To provide greater flexibility, the backup studio is completely digital using the AEQ ARENA console which is physically linked to the AEQ BC2000D digital audio router using a short MADI fiber link. Using the BC2000D router, any of the five studios' outputs can go to one or more of the transmitters and, in addition, to the control of a digital delay unit. This is all controlled by</p>	

	<p>the BC2000D RTC software and contact closures from the station's automation system.</p> <p>All installed cards are identical and have 4 analogue inputs and outputs.</p> 	
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<p>SWITZERLAND</p>	<p>EUROPEAN BROADCASTING UNION</p>	
	<p>For many years, the EBU has used AEQ's Impact Digital Switching Centre and Course Codecs to deliver audio from the Games to Europe.</p> <p>For the Beijing Games, AEQ updated EBU's switching capability with the BC 2000 D Router Matrix, and for transport they used our new multiplexing modules, integrated into the BC 2000 D Router. So at Beijing 2008, the EBU christened the new AEQ BC 2000 D MPX, 34 units in total.</p> 	

MIDDLE EAST

<p>JORDAN</p>	<p>HAYAT FM</p>	
	<p>Hayat FM, is one of the main broadcasters in Jordan, where it owns two independent radio channels. Hayat FM selected, for a new ON AIR radio studio, one AEQ ARENA digital audio console with 25 faders, black finished control surface. The supplied unit has 4 transformer-balanced microphone inputs with phantom power option, 8 digital stereo I/O in AES/EBU and SPDIF formats, and 16 analogue mono inputs / outputs.</p> 	
<p>JORDAN</p>	<p>HUSNA FM 93.4</p>	
	<p>Husna FM is other of the main broadcasters in Jordan. Husna FM has selected for a new ON AIR radio studio one AEQ ARENA digital audio console with 25 faders, black finished control surface. The supplied unit has 4 transformer-balanced microphone inputs with phantom power option, 8 digital stereo I/O in AES/EBU and SPDIF formats, and 16 analogue mono inputs / outputs.</p> 	

<p>JORDAN</p>	<p>JORDAN RADIO AND TELEVISION</p>	
	<p>The JORDAN Radio and Television JRTV or JordanRTV, is the national broadcast corporation of Jordan. Founded in 1948 as a radio station, JRTV integrated in 1968 the national television, and one year later JRTV formed part of EBU. JordanRTV has selected to equip the audio control of one television studio with the AEQ ARENA mixing console technology.</p>	
<p>JORDAN</p>	<p>P.S.D., AMMAN</p>	
	<p>The Public Department of Security of Amman has acquired an AEQ ARENA CONSOLE with 25 faders for its radio studio in Amman.</p> <p>Its configuration establishes a maximum of 36 analogue mono signals or 18 stereo inputs and outputs, 3 AES/EBU inputs and 8 microphones simultaneously. Adding the processing capacity of multiple simultaneous effects as well as the hardware backup capacity of its DSP boards, it integrates a truly trustworthy and robust console according to their needs</p>	
<p>JORDAN</p>	<p>RADIO TTU</p>	
	<p>Radio TTU 91,3 is a recently created radio station with installations at the Technical University of Tafila (Jordan). It currently counts on an important audience in the area thanks to their varied programming and mainly local contents.</p> <p>As the station was born recently, its managers have had the chance to develop an ambitious project using state-of-the-art technology. They have chosen AEQ ARENA digital audio mixer -using a large, 25 fader configuration- as the heart of a new 100% digital ON AIR studio. Also, a second Production and backup studio has been built, based on AEQ GRAND FORUM digital mixer in its largest configuration with 20 faders.</p> <p>JORDAN integration company HEAT For Engineering & Technology was entrusted with the project and has been responsible for the installation, integration and start up phases of the complete</p>	

	<p>system, including the control surfaces and all the integrated equipment.</p> 	
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<p>LEBANON</p>	<p>TRADECOM</p>	
	<p>TradeCom is a broadcast company located in Lebanon and Dubai. In 2014 TradeCom acquired the new AEQ ARENA 15 faders digital audio console based on the AEQ BC2000D audio matrix.</p>	

<p>SYRIA</p>	<p>ADDOUNIA TV</p>	
	<p>ADDOUNIA TV, the first Syrian private channel with broadcasting license will be the more technologically advanced and efficient one in the whole region soon. Addounia TV has acquired 3 ARENA consoles for the audio in the TV sets. Addounia transmits in DVB on Arabsat and Atlantic Bird satellites.</p> 	

<p>SYRIA</p>	<p>EDUCATION TV</p>	
	<p>ARENA digital mixer for the central studio at SYRIAN EDUCATION TV. Launched by the Syrian Ministry of Education on 2008 on Arabsat , it was later launched in 2009 to broadcast from Damascus on Nilesat.</p>	
<p>SYRIA</p>	<p>ORTAS- NATIONAL RADIO</p>	
	<p>ORTAS has acquired ten AEQ ARENA digital mixing consoles with 15 faders and a large BC2000D central router for their central studios.</p> 	
<p>TURKEY</p>	<p>AKFA_TEKNOLOJI</p>	
	<p>AEQ supplied 20 BC-2000 D audio digital matrixes back in 2014.</p>	
<p>TURKEY</p>	<p>TRT</p>	
	<p>Delivery, integration and start-up of six AEQ ARENA 15 fader digital mixing consoles for TRT's central studios in Ankara.</p>	



<p>YEMEN</p>	<p>MINISTRY OF INFORMATION</p>	
	<p>One AEQ ARENA digital mixer for the central radio studios.</p> 	