

# **INSTALLATION REFERENCES**

# SYSTEM FOR RADIO BROADCASTING

(Updated: February 2012)

# 1. INTERNATIONAL REFERENCES

2011

# **ANGOLA**

360°

Delivery, installation and Start-up of a radio broadcast control/studio with the AEQ OPERA analogue mixing console as the heart of the installation. Both Control and Studio were equipped with play-out devices, new microphones and headsets plus AEQ TH-02EX MKIII digital telephone hybrids for the audience call-in system. Further a pre-fabricated cabling kit was delivered in order to simplify the installations together with the corresponding engineering drawings for cabling and interconnection.

# **ARGENTINA**

#### **CADENA 3**

Delivery, installation and Start-up of three radio on-air production studios with the AEQ ARENA as the Herat 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. Further, installations were completed with a multi-conferencing/multiplexing system AEQ SYSTEL6000 with 20 telephone lines that are dynamically shared between the studios.

## **BRASIL**

# **RADIO GAUCHA**

Delivery, installation and Start-up of four radio on-air production studios with the AEQ ARENA as the Herat 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 maximum number of circuits that can be routed through the Matrix is 1.024 x 1.024. System is rendered with distributed remote control. The studio interconnections are accomplished through multi-channel audio MADI-links.

# **GLOBO TV**



The AEQ BC-2000D central audio router in GLOBO TV Rio de Janeiro facilities was remodelled in order to be able to accommodate 256x256 channels. An additional frame was installed to increase the different capacities and in the different formats required; analogue, digital microphones, MADI, headphones monitoring systems etc.

# **CHILE**

## TVN

Delivery, installation and Start-up of a multi-conference/multiplex system AEQ SYSTEL 6000. The system was equipped with 10 independent analogue telephone line interfaces to provide service for a minimum of three studios simultaneously

# **GUINEA**

## **MALABO ARCHBISHOPRY**

## ARZOBISPADO DE MALABO

Delivery, installation and Start-up of a prefabricated kit for a control/studio installation based upon the AEQ BRAVO TT analogue mixing console, a MAR4Win broadcast automation system and all the necessary system play-out devices, microphones, headsets and monitoring systems including the audio and data cabling and patch panels.

# **RADIO NACIONAL BATA**

Delivery, installation and start-up of the new broadcasting centre in the city of Bata of the Guinea National Radio. System consists in 4 complete Studio/Control sets and a central broadcast control. The radio studios have been built around the AEQ ARENA 15 Fader digital mixing console and the MAR4Suiet Pro. In charge of the stations audience call in system are the AEQ TH-02EX MKIII and the new 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.

## **GUINEAN NATIONAL RADIO - PROVINCES**

Delivery, installation and start-up of three radio studio/controls built around the AEQ OPERA analogue mixing console. System includes 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 prefabricated cabling kits and the delivery of the engineering drawings for cabling and interconnection.



# **INDONESIA**

## INDONESIAN NATIONAL RADIO

Turn-key project consisting in three new radio broadcast studios for the Indonesian National Radios regional network. System built around the AEQ BC-2000D digital routers, three ARENA 15 fader digital consoles and 6 AEQ FORUM 12 fader compact digital mixing consoles. System interconnections are accomplished through MADI optical fibre links.

# **KENYA**

#### **METROPOLIS FM**

Delivery, installation and start-up of two radio broadcast controls with studios. System built around the technology of the AEQ FORUM 12 fader compact digital consoles. Projected as a turn–key 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 a central router based upon the AEQ IMPACT digital audio routing matrix, central control master clock system, studio ON-AIR signalling and the delivery of the engineering drawings for cabling and interconnection. AEQ also supplied AEQ PAW120 for the stations journalists and the AEQ Arrow radio reporter systems in order to improve the news gathering and immediateness of news coverage.

# **PORTUGAL**

## **RTP**

Delivery installation and set-up of a new multi-conference/multiplex system AEQ SYSTEL 6000. The system consists in 2 AEQ IMPACT digital routers, 2 AEQ CADDY AD/DA converters and a multi-audio codec system AEQ COURSE with the capacity of 8 independent analogue telephone line interfaces.



# **MEXICO**

# INSTITUTO MEXICANO DE RADIODIFUSION (IMER)

Delivery of 10 AEQ FORUM 12 faders compact digital audio mixer to renovate the central studios in the city of Mexico.

# **RUSIA**

## **RUSSIAN NATIONAL RADIO**

Delivery of four central routers AEQ BC-2000D and 19 AEQ FORUM 12 fader compact digital mixing console to form part of the renovated regional radio stations of the Russian National Radio network.

# **TUNEZ**

## **ERTT**

A 512 x 512 AEQ BC-2000D central router has been installed at ERTT's (Tunisian National Radio) installations in Tunis.

The matrix is composed of a central MADI HUB and 8 satellite frames. These frames are interconnected via MADI links and are equipped with analogue input/output boards. The router serves the system with the necessary routing of any signal to/from the On-Air, Recording, Production and Television studios, transmitters, receivers and different cabins. The configuration counts on 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.

The system can be controlled by software and 3 XY panels. Moreover, AEQ has installed and verified the whole monitoring and intercom desk.

# <u>USA</u>

#### NBC29

Delivery installation and start-up of an AEQ ARENA 15 fader digital mixing console for the audio control at the NBC network TV station in Charlottesville, Virginia.

# 2010



# **BRASIL**

## **RADIO UNISINOS**

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

## TV GAZETA

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

# **CUBA**

#### INSTITUTO CUBANO DE RADIO Y TELEVISION

Suministro, instalación y puesta en marcha de seis consolas digitales AEQ ARENA 15 faders para seis estudios centrales en La Habana, así como dos routers BC2000D 150x150 como sistema de interconexión entre ellos.

Se completa el proyecto con 42 consolas analógicas AEQ OPERA distribuidas en la totalidad de estudios de radio repartidos por las sedes provinciales.

## **EUROPA**

# **EUROPEAN BROADCASTING UNION**

System expansion with two AEQ BC-2000D audio multiplexer systems to be installed with the different Union members that are sustaining the broadcasting rights where the EBU Operations group is centralising operations with regards to on-site production, technical support and management.



# **MEXICO**

## **TECNOLOGICO DE MONTEREY**

Delivery, integration and start-up of an AEQ ARENA digital mixing console at a local radio station in Monterey. The station is associated to the technical university of Monterrey.

# **PORTUGAL**

## TVI PORTUGAL

Delivery, installation and set-up of a new multi-conference/multiplex system AEQ SYSTEL 6000. The system consists in AEQ IMPACT digital routers, AEQ CADDY AD/DA converters and a multi-audio codec system AEQ COURSE.

# **RUSSIA**

# **RUSSIAN NATIONAL RADIO**

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

# **TUNEZ**

#### **ERTT**

An AEQ BC-2000D central router installed at ERTT's installations in Tunis. The configuration consists in 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.



# 2009

# **ARGENTINA**

## RADIODIFUSORA DEL CENTRO

Expansion of the existing broadcast automation system MAR4Win.

# **VEC**

Expansion of the existing broadcast automation system MAR4Win. With three digital workstations.

# **BRAZIL**

#### TV RURAL

TV Rural is a private national TV channel with a potential audience of 18M homes using cable and satellite distribution networks. TV Rural has selected ARENA digital audio mixing console, with 25 fader control surface and blue colour finished, for its new Master Room Control.

# **COLOMBIA**

## **NATIONAL POLICE**

Included in a project to renew the police radio facilities, AEQ has supplied one ARENA digital mixer for the master control room in this installation with 15 analogue AEQ BC-500 audio mixers.

## **CARACOL TELEVISION**

SYSTEL 6000 system to control all the incoming and outgoing communications in its facilities, used for the production of ONAIR programs. System includes AEQ COURSE multi-codec with 4 double telephone hybrid modules and two independent ISDN modules. Remote control using Systel6000 SW in external PC, together with E@SY server in a dedicated computer.



# **JORDAN**

## JORDAN RADIO AND TELEVISION

The Jordanian Radio and Television JRTV or Jordan TV, is the national broadcast corporation of Jordan. Founded in 1948 as radio station, JRTV integrated in 1968 the national television, and one year later JRTV formed part of EBU. Jordan RTV has selected to equip the audio control of one television studio the technology AEQ ARENA of mixing consoles.

#### **HAYAT FM**

Hayat FM, is one of the main broadcaster in Jordan, where possesses two independent radio channels. Hayat FM has selected for a new radio ONAIR studio one AEQ ARENA digital audio console with 25 faders control surface in black finished. The supplied unit has 4 microphone balanced transformer inputs with phantom power possibility, 8 digital stereo I/O in AES/EBU and SPDIF formats, and 16 analogical mono inputs / outputs.

# **SYRIA**

#### **ORTAS PUBLIC RADIO**

For the central studios ORTAS has acquired a digital console AEQ ARENA with a configuration of 15 faders.

# MINISTRY OF EDUCATION

Two ARENA digital mixers for the central studios of ORTAS and EDUCATION TV.

# **TAIWAN**

## OCEANIC TRADING CORPORATION

Supply, installation and start-up of one AEQ ARENA (15 physical fader control surface) main mixer in the main facilities of Radio Taiwan International.

## **YEMEN**

# **MINISTRY OF INFORMATION**

One AEQ ARENA digital mixer for the central radio studios.



# 2008

# **EUROPEAN BROADCASTING UNION**

For many years the EBU has used AEQ's Impact Digital Switching Centre and Course Codecs to deliver audio from the Games to Europe. For the Beijing Games, AEQ updated EBU's switching capability with the BC 2000 D Router Matrix, and for transport our new multiplexing modules were integrated into the BC 2000 D Router. So at Beijing 2008, the EBU christened the new AEQ BC 2000 D MPX: 34 units

# **BRAZIL**

RBS media group has selected three ARENA audio mixers to equip two TV studios in Florianopolis, and one radio studio in Radio Gaucha.

# **CHILE**

Supply and start-up of a complete new radio studio over AEQ digital mixer ARENA with 15 faders, and multi-conference SYSTEL 6000 system, for Radio Agricultura in its facilities in Santiago de Chile.

# **COLOMBIA**

Supply and start-up of a SYSTEL system with Nueva Imagen Ltd. for management of all the incoming / outgoing telephonic calls for the production of radio and TV programs. Includes: Course, Impact and Caddy as well as finished wiring necessary for the interconnection of the components, and the final integration in the general installation.

# **ECUADOR**

Supply and start-up of four independent radio studios over AEQ digital mixer ARENA for the Ecuador National Radio, in its facilities in Quito, Guayaquil and Cuenca. The supply is completed with communications units like IP codec Phoenix, ISDN Swing codecs and TH02 hybrids, and a complete automation system AEQ Mar4Win.

## **EGYPT**

Supply and start-up of six independent radio studios over AEQ digital mixer ARENA for the Egyptian National Radio and TV (ERTU), in its facilities in Cairo and Alexandria.



# **INDIA**

## TRIVENI COMMUNICATIONS

Supply and start-up of a SYSTEL system for management of all the incoming / outgoing telephonic calls for the national television channel VOICE INDIAN OF TV. Includes: Course, Impact and Caddy as well as finished wiring necessary for the interconnection of the components, and the final integration in the general installation.

# **BAG MEDIA & FILMS LTD**

Supply and start-up of a SYSTEL system for management of all the incoming / outgoing telephonic calls for the national television channel NEWS-24. Includes: Course, Impact and Caddy as well as finished wiring necessary for the interconnection of the components, and the final integration in the general installation.

# <u>ITALY</u>

#### **TELEIPPICA**

Supply, engineering diagrams, and start-up of a complete new studio with 5 independent commentary positions in Teleippica, TV channels focuses in horse-racings, using AEQ digital mixer ARENA.

# **MOROCCO**

# FM ATLAS, MARRAKECH

Supply, installation and start-up of a complete system in a turn-key project that includes BC2500 and BRAVO analogue consoles for the ONAIR studios and production cabin, as well as a SYSTEL system for management of the incoming / outgoing calls, and the equipment necessary for the interconnection of the central facilities with other studios or with reporters displaced to events using AEQ codecs: Eagle, Swing and TLE02D.

# **PORTUGAL**

#### RADIO RENASCENCA

Complete supply, installation and start-up of the new facilities in Porto, including five new studios over digital mixer ARENA in control-booth format, two new studios over analogue BC2500 mixer, two small production cabins, and one central router BC2000D. Supply is completed with the automation system Mar4Win and the multi-conference SYSTEL 6000 system.

# **ROMANIA**



#### **RADIO TRINITAS**

Radio Trinitas is the radio broadcaster of the Orthodox Church (90% of Romanians are Orthodox). From the station's headquarters in Lasi, the broadcaster's management moved the radio studios to downtown Bucharest, into the Patriarchate offices. AEQ set up a complete studio, including installation and start-up. The Arena console supplied has 15 faders. AEQ's distributor in Romania, Global Audio Systems, participated actively in the project.

# **RUSSIA**

## **RUSSIAN NATIONAL RADIO**

As a part of its modernization and broadcast equipment upgrading program, Russian National Radio has chosen AEQ to furnish professional quality audio solutions entailing the installation of new digital audio consoles in its Moscow headquarters.

The units selected are latest generation ARENA digital consoles developed by AEQ. The configuration supplied consists of a 15-fader control surface, an associated central frame in which the digital and analogue audio boards and the audio processing DSPs are installed, and a redundant 300-watt power supply.

All these elements were designed to offer the best audio quality in intensive working situations (24 hours a day, seven days a week), as is the case of these AEQ ARENA units to be installed in studios for On-Air applications, where the reliability and flexibility of the equipment are crucial elements.

The project was coordinated on the Moscow site by the excellent team provided by AEQ's Russian distributor, Qualitron, backed by technical personnel from the AEQ head office in the configuration and start-up phase.

# **SYRIA**

# **ADDOUNIA TV**

Supply, installation and start-up of two digital mixer ARENA in two independent TV studios, and another extra ARENA audio mixer in a production TV OB-van, all in Addounia TV facilities in Damascus.

# **UNITED STATES OF AMERICA**



## **KEDT RADIO**

Supply, installation and start-up of an audio digital mixer AEQ ARENA in its main emission radio studio.

# **VENEZUELA**

#### **RED TV**

Supply, engineering diagrams and start-up of 30 complete independent radio studios to give service in remote areas, using BRAVO analogue console and Mar4Win associated workstation in each one. Supply is completed with all the communications devices, microphones, furniture and cabling kits necessaries for the perfect operation of the final installation.

## <u>2007</u>

#### **CHINA**

## **RADIO JIANGXI**

This regional radio station has purchased two BC-2000 D digital consoles for the first phase of the technical upgrade of its main centre in the southern city of Nan Chan Later, in the 2007 spring, after one year and a half of operation, they have continued with the technical upgrade in part thanks to a project financed in part by the Spanish government.

They have acquired for the master control room a BC-2000 D Router, pre-cabled 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 one 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

#### YUNAN RADIO



Two studios in format control / booth, supply and start-up of two digital console units AEQ ARENA with 15 physical faders.

# **INDIA**

## **MEOW RADIO**

Meow Radio, New Delhi, is the radio branch inside India Today Media Group. Commercial station with access to 35 million listeners. Today Radio purchased through the local AEQ distributor, Falcon Technologies, two ARENA consoles, one for its main studio and the other for the recording and backup studio.

All the installation has been done by the local engineers backed by technical personnel from the AEQ head office in the configuration and start-up phase

# **PORTUGAL**

# **RDP**

Supply and start-up of a SYSTEL 6000 SYSTEM for management of all the incoming / outgoing ISDN connections over 8 different simultaneous full-duplex lines, available in all the studios in its facilities of Lisbon. Includes: Course, Impact and Caddy as well as finished wiring necessary for the interconnection of the components, and the final integration in the general installation.

# **UNITED KINGDOM**

## **KM RADIO**

After a thorough market analysis, KM Radio placed its trust in AEQ technology for the supply of digital mixers for all of its facilities in the United Kingdom. The final decision was made after a visit by KM Radio top brass to AEQ's recently completed installations in the new EITB headquarters in Bilbao, where the visitors could see, in full operation, the perfect integration between tables and matrixes into a complete system.

The British company has its central studios in Canterbury and Medway, where they produce the base signals for the different regionally-adapted programs they currently offer, with generalist contents cantered on music and periodic news bulletins.

For its Canterbury site, KM Radio purchased a black 15-fader AEQ ARENA console for its new On-Air studio, as well as a BC2000D digital matrix to interconnect the various previously installed and operative studios.



Most of the project is focused on the Medway site, where KM Radio now has three five-fader AEQ ARENA digital mixing consoles to install in studios for news broadcasting, as well as a 15-fader AEQ ARENA for use in a production studio. All these consoles are interconnected through multi-channel MADI links over optical fibre to a central AEQ BC2000D matrix, which is the heart of the installation.

This major project, together with previous installations for such prestigious clients as Globecast UK and Liberty Radio, enable AEQ ARENA and BC2000D to be consolidated in the extraordinarily demanding British market as a high performance, high reliability solution.

# **SOUTHAFRICA**

## **JACARANDA FM 94.2**

AEQ, through its distributor, Prosound, completed the installation of the Jacaranda FM radio studio, located in Johannesburg's

Monte Casino shopping area, which they equipped with a digital mixing console that was fully tailored to the stations, needs .This radio station is one of the most important broadcasters locally.

Technical Manager Andrew Pike sent Prosound a warm letter to be forwarded to AEQ, in which he expresses his appreciation to the Prosound people involved in the installation: Vaughan, François and Prince, as well as the AEQ staffers who supported them: Antonio and Daniel. In the letter, he recalls the hours invested in installing, starting up the system, configuring it so that it would be adapted to the way the Radio Jacaranda staff works, patiently training the users and solving little problems that came up.

He also expresses his pleasure and satisfaction because they are sure of having chosen the right product in a market that is teeming with competitors. For AEQ it was also a pleasure to work for a customer that has shown so much professionalism; we are delighted to have had the occasion, through Prosound, to add this great South African radio broadcaster to our reference list.



# **TUNISIA**

#### **ERTT**

For ITS regional facilities in Nador, AEQ supplied, installed and started-up, with the correspondents trainings to both advanced and basic-level users, an audio router AEQ BC2000D for the central ONAIR control, like central point where all the available audio signals in the centre necessarily are available, for transfer between studios inside the same building, as well as final step towards the correspondents STL and links between stations.

It is provided together with the software of control in real time and corresponding licenses and definite users, three panels of control XY NCB100 model completely configured.

# ANGOLA, 2006 - 2008 SUPPLIES AND INSTALLATIONS

#### RNA RADIO NACIONAL DE ANGOLA

# Central Head of Luanda

Inclusive of the design and construction of:

# a complete central control room with the functions of:

- Reception and sending of satellite programs
- Reception and coordination with reporters and OB van via satellite, radio, telephone
- GSM and POTS
- Centralization of synchronized timing system by GPS
- Digital and analogue Matrix AEQ BC 2000 Router of 512 x 512 circuits witch 2 Digital
- Consoles BC 2000D for Intercom and Multiplex in the Central Control Room
- Control and supervision of the matrix
- Monitoring of own and other signals
- Recording of chronicles and emissions
- Control of link permanent network with regional centres via VSAT
- Centralization of servers for the automatic system of emission and computerized newsroom system
- Multi-channel link of audio and data via radio with the FM Musical Stereo program production centre.
- Centralized system of UPS and control of generator sets, etc

20 studios for continuity and recordings, 2 self-operated studios for continuity and a studio for debates.

Provided with AEQ ARENA digital audio console, AEQ Mar4win Automation System and



audio sources of the highest quality, wiring carefully on AEQ DSD 01 technical furniture with all the necessary integration accessories.

# A studio for music multitrack recording, with studio room, room of battery and audience

Provided with AEQ ARENA digital audio console, recording system - Pro Tools edition, Genelec monitors, condenser and other types of Neumann microphones, audio processors and multi effect set, projector with 6 meters screen, system of simultaneous translation of 250 positions, AEQ Mar4win automation system and audio sources of the highest quality, wiring carefully on AEQ DSD 01 technical furniture with all the necessary integration accessories. It also has a transportable track and voice recording studio.

# 10 cabins of edition and chronicle and music assembly

Provided with AEQ BC-2500 audio analogue console, AEQ Mar4win automation system and audio sources of audio of the highest quality, wiring carefully on technical furniture AEQ DSD01 with all the necessary accessories of integration.

# Outside equipment

For taking testimonies and live broadcastings, through Inmarsat telephone and AEQ Swing codec, through conventional telephone line, by GSM or file transference.

# Integral management system of the station

Including among others the services of: automation of the emission, news, invoicing, sonorous file, discotheque, recording of the emission and copies with the following characteristics:

- Separation of the transmission and news networks from the current ofimatic and Internet network and strict security policies for the system.
- 24 digital studios with a computer for the control room, to generate the audio signal through the Mar4Win application, and another one for the studio room, in which the news gathering in real time is facilitated by (Mar4News) and the reading of the selected news through teleprompter application (Mar4Studio). There are also 10 production studios available.
- 85 workstations distributed in different news rooms to facilitate the audio, text and play list creation with the Mar4Schedule application. The multitrack application, the AEQ-Track, helps create small audio editions. Also the recording of On-Air programming is made by the application Mar4Mark that makes fast searches of transmitted programming. When the recordings are stored in the system, the user has easy access to interviews, reports and other stored audio segments ...
- The workstations are networked and each has specific functions: such as access to the historical files, transferring between Production centres and the Mar4Win application, also there are specialized centres for monitoring, audio reproduction centre, music storage, publicity, On Air programming extraction and reproduction on DVD format and distribution and generation of internet channels.



- All the hardware is HP: the 16 servers of the central station are ML350 which are configured as RAID 10, except the cluster main server that is made up of two DL380 units, with a disc cabin MSA 500 G2, formed equally in RAID 10. The workstations for the newsroom are DC7600 and those of emission XW4300. All the workstations for On Air have double screen.
- The network elements are HP Procurve and the printers are 4250 and 2300 L

# 11 regional heads of more reduced dimension but similar technical or functional Characteristics

The Project exceeds the ten millions of euros and is in phase of execution. All the equipment has left towards Angola after the tests in factory and they will be put in service progressively in 2008.

# 2006

# **COLOMBIA**

## MATRIZ DE RCN

Cadena Radial Colombiana RCN, Radio Cadena Nacional, installed a new IMPACT / CADDY matrix block, after dedicating a few months to the progressive assembly of four other modules.

When the current installation phase at RCN is complete, the Colombians will have at their disposal a system of five IMPACT audio matrixes and five CADDY converters, with capability for managing 120 analogue or digital audio inputs and 120 outputs.

This routing matrix interconnects the main audio signals from all the broadcaster's studios, distributes them to various floors of the RCN headquarters building in Bogotá, and is controlled from three management stations located in different parts of the building.

# **PORTUGAL**

#### **RADIO CLUBE**

Radio Clube is a historic radio station in Portugal with 75 years of broadcasting experience behind it. In 2006, when the PRISA group bought shares in Media Capital Radio, the programming model changed to include a strong news and debate component. In this regard, a new editorial staff was created and a studio / auditorium and a control-studio added with the new AEQ ARENA console.

## RADIO COMERCIAL



Radio Comercial covers all of Portugal with a musical format oriented to a young audience. It is one of the country's most listened-to stations. It equipped its new studio with the new black finish ARENA console. With 15 paged faders, the Radio Commercial staff controls 12 analogue inputs / outputs and 24 AES / EBU inputs. The station will soon renovate its reserve broadcasting and recording studio with a second ARENA console with the same configuration.

# UNITED KINGDOM

#### **UCKG - MEDIA CENTRE**

AEQ UK is completing an installation in London at UCKG's Media Centre, equipping five broadcast radio studios. Two radio services come from the Media Centre: Liberty Radio and Record Radio as well as Record TV. AEQ's installation comprises two on-air studios, a backup studio and two production studios.

To give greater flexibility the backup studio is totally digital using the AEQ ARENA console which is physically linked to the AEQ BC2000D digital audio router using a short MADI fibre link. Using the BC2000D router, any of the five studios can go to one or more of the transmission outputs in addition to the control of a digital delay unit. This is all controlled by the BC2000D RTC software and closing contacts from the station's automation system.

# **MOROCCO**

## **CAP RADIO**

Installation of 2 studios with AEQ BC-2500 and BC-500 analogue mixer consoles and Mar4win automation system.

# <u>2005</u>

# **HUNGARY**

## **SLAGER RADIO**

Commercial radio station that covers all the country with its network of 60 transmitters. Two AEQ BC-2000 D digital audio consoles have been installed for their continuity studios.

# **ARGENTINA**

# **LV10 MENDOZA**



LV10 is a mixed television and radio station. They have installed two AEQ BC-2000 D digital mixing consoles for the continuity of the radio station and one of them is specially configured to provide service to a TV studio.

# **UNITED KINGDOM**

# **GLOBECAST**

Globecast UK Limited, subsidiary of France Telecom, has installed the first AEQ BC-2000 D digital mixing broadcast console of the United Kingdom.

This modern digital studio is used for the nights & weekends programs of Globecast Radio. Totally equipped with installations usable for production and live programs, it includes Master Control RCS, Burli, incoming lines multi-line telephone system, and an AEQ EAGLE ISDN codec.

# **PORTUGAL**

# RDP (RADIO E TELEVISAO DE PORTUGAL)

AEQ has installed the ON AIR studios number 6 and 7 for its main program Antena 1. In two of its main broadcasting studios, RDP (Radio e Televisão de Portugal) has installed a 25-fader digital mixing console plus a remote extension module with 10 more faders. Additionally, AEQ designed a special module for "external element shoots", from which users can start or stop the automation systems or any other element that operates by means of external shoots. Also controlled through this equipment are all the switching and studio monitoring levels.

Thus, RDP's two most important control facilities will be equipped with AEQ BC-2000 Digital consoles.

# **NORWAY**

# TV2, BERGEN

Norway's TV2 installed an AEQ BC 2000 D digital crosspoint matrix in Bergen for the routing of audio sources. Eivind Mikkelsen, TV2's Technical Services Manager, congratulated AEQ for their excellent job.

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.

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 ready in good time for the elections on 12 September, 2005.

# **CHINA**

## PROVINCIAL RADIO OF HEILONG JIANG

In cooperation with our local partner Infomedia, AEQ supplied redundant AEQ-BC 2000 D Digital Audio Matrix in three physical locations. The Control Centre and The Network Centre are located 500 meters away. The Transmission Centre is located approximately 20 Kilometres away. The connection is made using a MADI link with high power optical fibre transceivers. Real-time control is ensured using the BC 2000 D RTC software application concurrently, with two dedicated XY panels. In addition to the switching matrix, we delivered three BC 2000 D Digital Audio Consoles for the three newly constructed studios. The BC 2000 D Digital Audio Consoles are also linked by MADI

# **2004**

# **CHINA**

## MUNICIPAL RADIO OF HARBIN

In cooperation with our local partner Infomedia, we supplied redundant AEQ BC-2000 D Digital Audio Matrix. Real-time control of six stations running the BC-2000 D RTC software application concurrently with a dedicated XY panel. In addition to the Switching Matrix, Three BC-2000 D Digital Audio Consoles, which are linked by MADI, were installed in the two newly constructed studios.

# **MUNICIPAL RADIO OF YUNAN**

In cooperation with our local partner Infomedia, we supplied redundant AEQ BC 2000 D Digital Audio Matrices. The four stations, using the BC 2000 D RTC software, can do Real-time control. In addition to the switching matrix, a BC 2000 D Digital Audio Console as installed for a newly built studio. They are linked by MADI.



# **MOROCCO**

# RTM (Moroccan Radio and Television Authority) TECHNICAL CENTRE, RABAT

It is equipped with an IMPACT Digital Audio Matrix with 2x120x120 circuits. A Course Codec, with ten boards, is controlled through a network of nine stations running IMPACT+ and SYSTEL 6000 applications. Work on defining, installing and transferring non-stop signals, training, and adjusting the system that routes the signals generated at each of the network's eight radio studios in the Moroccan capital, as well as the contributions from regional stations is continuing and establishes mobile and temporary communications for live broadcasts of outside events.

# **2003**

# **SLOVENIA**

# SLOVENIAN RADIO, KOPER, LJUBLJANA AND MARIBOR

Master Communications Control Rooms for Slovenian Radio in Koper, Ljubljana and Maribor. Course Codecs and Impact Matrices controlled by the SYSTEL 6000 software.

# **BRASIL**

# **GLOBO RADIO, SAO PAULO**

Production and Program Centre for Globo Radio in Sao Paulo, Brazil. BC-2500 Consoles and AEQ Eagle ISDN Codecs.

# **EAST TIMOR**

## **RADIO POVO VIQUEQUE**

Pre-wired and tested radio studios. BC 500 console, TH-02 Hybrid and Mar4Win Automation System for Radio Povo Viqueque in East Timor, and ISDN link between Dali and Baucau.



# **HUNGARY**

## **RADIO 17, BUDAPEST**

Program Production Centre for Radio 17 in Budapest, Hungary. AEQ, in cooperation with our local distributor DIGIPRO, equipped Radio 17 with BC 2500 Consoles, TH 02 Digital Hybrids and Mar4Win Automation System.

# **ANGOLA**

# RADIO ECCLESIA, LUANDA

Creation of a Mobile Unit for the Radio Ecclesia Control Centre in Luanda, Angola. Prewired BC 300 Console and PA system.

## **2002**

# **DOMINICAN REPUBLIC**

# RADIO ENRIQUILLO, BARAHONA

AM and FM Transmitting Facilities and Program Production Centre for Radio Enriquillo in Barahona, Dominican Republic. Equipped with a 5-kW AM transmitter using a Tunipole™ folded Unipole™ antenna. A 5-kW FM transmitter with a four-element antenna and reserve system. Power Generators, Radio Links, Newsroom Computer System, Two Studios with Consoles and AEQ Automation Systems. Auxiliary Studio and reporting equipment.

# **MOROCCO**

# RTM, AGADIR Y OUJDA

New RTM (Moroccan Radio and Television Authority) facilities in Agadir and Oujda, Morocco. AEQ, in cooperation with our local distributor ABCHIR, equipped these facilities with BC 2500 mixing Consoles, TH-02 Digital Hybrids and Mar4Win Automation System.

# **BRASIL**

# RADIO ITAITAIA, BELO HORIZONTE

Program Production Centre for Radio Itaitaia in Belo Horizonte, Brazil equipped with BC 2500 Consoles and TH 02 digital hybrids.

# **COSTA RICA**



# RADIO RELOJ AND GRUPO LATINO DE RADIODIFUSIÓN, SAN JOSÉ

Program Production Centres for Radio Reloj and Grupo Latino de Radiodifusión in San José, Costa Rica. AEQ in cooperation with our local distributor INRESA, furnished this facility with BC 2500 and BC 500 Consoles, ACD 5001 ISDN Codecs and Mar4Win automation Systems.

# **ARGENTINA**

# **RADIO DISNEY, BUENOS AIRES**

Program Production Centre for Radio Disney in Buenos Aires, Argentina. AEQ in cooperation with our local distributor VEC supplied BC 2500 and BC 300 Consoles, TH-02 hybrids and NAE Cable.

# **ANGOLA**

## **RADIO ECCLESIA**

Creation of the entire Regional Radio Station Network for Radio Ecclesia's "Baby-Ecclesias" in Angola. They were furnished with 16 pre-wired stations equipped with BC 500 Consoles and Mar4win automation system. Assembly of the control centre in Luanda, with AEQ impact switching matrix.

# **BELIZE**

# **EDUCATIONAL RADIO OF THE UNIVERSITY OF BELIZE**

Design, set up and installation of the Educational Radio for the University of Belize, including studio, transmitter and antenna

# <u>2001</u>

## **ANGOLA**

## RADIO ECCLESIA

Set up, on demand of Non Governmental Organizations of two Radio Studios pre-wired, tested and documented, for Radio Ecclesia in Angola.

# **EAST TIMOR**



## **EAST TIMOR RADIO**

Set up, on demand of the municipality of Lisbon of two Radio Studios pre-wired, tested and documented for Radio Timor Oriental for the new independent country.

# **2000**

# **INDONESIA**

# **EDUCTRADE**

Set up, for Eductrade, one studio for educational Radio and audiovisual material for Indonesia, from our office ready to operate and fully tested.

# 1999

# **ARGELIA**

# **RADIO SAHARAUI**

Set up, for Radio Saharaui of one movable Programs Production Centre, with two studios and one central control, departing from our factory in auto-transportable container, fully finished and verified to the Southwest of Algeria.

# <u>1997</u>

# **CHILE**

## RADIO COOPERATIVA DE SANTIAGO DE CHILE

Refurbishment and amplification of the studios at Radio Cooperativa de Santiago de Chile with:

- 1 Central Control
- 3 Continuity Studios
- 3 Recording Studios
- 1 Journalist Studio
- 1 Movable Production Studio
- 4 Broadcast Systems

# **1996**

# PERÚ



# **RADIO MAR, LIMA**

Supply of special audio wiring for the studios at Radio Mar, Lima (Peru)

# <u>1995</u>

# **ECUADOR**

Supply of 10 special audio wiring for different stations in Ecuador

# <u>1994</u>

# **ARGENTINA**

# **RADIO LV-3**

Refurbishment of Radio LV-3 Córdoba, Argentina, including, studios, transmitters, energy system, automation system and other equipment.

# **1993**

# **ANGOLA**

# RADIO NACIONAL DE ANGOLA

Set up for the Commercial Radio Network, associated to Radio Nacional de Angola, of 6 Movable Program Production Centres, with two studios and 1 news room at each one, departing from our factory in auto-transportable container, fully finished and verified.



# <u>1992</u>

# **ARGENTINA**

# **RADIO MITRE**

Refurbishment and amplification of the installations at Radio Mitre, Argentina (1992) with:

- 10 studios.
- 1 Central Control with matrix NTP, controlled from the studios by software.
- 2 News Rooms



# SYSTEMS FOR RADIO BROADCASTING 2. REFERENCES FROM SPAIN

## 2009

#### RADIO OLESA

Supply, installation and start-up of most of the units in its new facilities, based on two control + associated studios, one using AEQ BC2500 and the other over AEQ BC500 audio analogue consoles.

Complete project includes CDM and reconfiguration of the old material.

## **TELECINCO**

SYSTEL 6000 installation extension. Today Telecinco has 2 independent system. New operation license for remote control over dedicated Workstation.

## RADIO MARCA CALAHORRA

Installation extension. New Mar4Suite PRO automation system network, with three dedicated workstations.

# RADIO AUTONOMICA DE CANARIAS (TENERIFE)

AEQ won the public tender for the turn-key project of the new facilities in Tenerife of the Autonomous Radio of Canaries, which includes:

- 2 control/booth studios including AEQ ARENA with 25 faders.
- 1 self-op Studio using AEQ ARENA 15 faders.
- 2 production cabins using AEQ ARENA with 5 faders.
- 1 CTA, using AEQ BC2000D central router with aprox. 400 inputs/outputs. All the connection between studios and CTA use MADI links over fibre optic
- SYSTEL system to manage all the incoming/outgoing communications in the facility, installed in the CTA and available in all the studios.
- Complete network for Mar4 automation system, with associated workstations in all the studios and 6 dedicated workstations in the journalist area. All the central servers are included.
- This turn-key project includes all the furniture, wiring and extra units for the total correct operation.

## **TECNIVISION**

AEQ BC2500 analogue audio console extension. New automation system dedicated workstation using AEQ Mar4.



## **TVE**

SYSTEL 6000 multi-conference system extension: two additional independent telephone lines installed in COURSE multi-codec unit. One extra CADDY ADA converter.

# RADIO BALEAR (MAHON E IBIZA)

Supply, installation and start-up of two independent studios over big analogue mixer BC2500, and small studio using analogue console BRAVO. Supply is completed with all the microphones, players...and cabling kits necessaries for the correct operation of the final system.

#### **CANAL 4 TENERIFE**

Supply, installation and start-up of a new complete studio (furniture, cabling, extra units ...) using analogical console AEQ BC2500, with associated Mar4 automation system workstation.

## **RADIO DELTA**

New studio over analogue mixer BC2500. Supply is completed with all the microphones, players...and cabling kits necessaries for the correct operation of the final system.

## **RADIO ARNEDO**

New studio over analogue mixer BRAVO. Microphones, players and cabling kits included.

# **2008**

# **MATARO RADIO**

Supply, installation and start-up of two independent studios over digital mixer ARENA, and production Studio using analogue console BC306. Supply is completed with all the microphones, players...necessaries for the correct operation of the final system. New central technical room with AEQ audio distributors.

## **EITB IRUÑA**

New radio studio over digital mixer ARENA and central router BC2000D for the new central technical room. Supply is completed with all the microphones, players...necessaries for the correct operation of the final system.



## FRANCISCO DE VITORIA UNIVERSITY

Supply, installation, start-up and training for six new radio studios dedicated to education purposes. Two of these studios use digital mixer ARENA in control-booth configuration, and the rest are designed with analogue mixer BC2500. All the furniture, auxiliary technical devices and cabling kits are provided.

## **COM RADIO**

Updated of the BC2000 mixer with new ARENA digital audio console.

## **CUERDA Y TELON**

Supply, installation and start-up of two studios using analogue console BC500 and automation system Mar4Win, and BRAVO small analogue console BRAVO. Supply is completed with all the aux units (CD players, microphones, cabling...) necessary for the correct operation.

# **ONDA MADRID (TELEMADRID RADIO)**

Migration of all the automation system from Mar4Win to Mar4Suite Pro format.

## **ONA MALLORCA**

Supply, installation and start-up of a complete automation system network with Mar4win software, using distributed workstations and central dedicated server.

## **POMPEU FABRA UNIVERSITY**

Supply, installation and start-up of two radio studios over digital mixer ARENA 15 faders in control-booth format, and two productions cabins with Protools.

#### COPE

Installation extension. Four new automation system Mar4Win workstations operating inside the previous network configuration.

# **IES SAN BLAS**

Supply, installation and START-UP of a complete studio, USING the analogue mixer AEQ BRAVO. Includes the whole additional material for the correct operation: wiring, microphones, CD players...



## **PUNTO RADIO LA RIOJA**

Update of its facilities in La Rioja, Includes:

- Supply, installation and start-up of a new studio inside its facilities in Logroño, using digital console AEQ ARENA with 15 faders.
- Installation and start-up of a new studio inside its facilities in Calahorra using analogue console AEQ BC2500. Includes the installation of one Mar4Win workstation.

## **ULTIMA HORA RADIO CIUDADELA**

Supply, installation and start-up in its facilities of a new ONAIR studio and a new production cabin, as turn-key project.

The studio developed over analogical mixer AEQ BC2500, including all the necessary extras (microphones, earphones, CD players ...) as well as Eagles as ISDN codec, and a system of automation associated Mar4 model. Furniture and wiring included in the project.

The cabin of production includes analogical mixer AEQ BC306 and one Mar4Win workstation

## **ULTIMA HORA RADIO IBIZA**

Inside the project of update of its facilities in Ibiza, AEQ has supplied and installed an analogical mixer AEQ BC500 in a new ONAIR studio, where also the whole furniture has been provided and wiring necessarily for correct operation, as well as one Mar4 workstation and Eagle ISDN codec.

In the associate production booth, there have been realized tasks of update of the peripheral units.

# RADIO AUTONOMICA DE CANARIAS

AEQ won the public tender for the turn-key project of the new facilities in Great Canary of the Autonomous Radio of Canaries, which includes:

- 2 control/booth studios including AEQ ARENA with 25 faders.
- 1 self-op Studio using AEQ ARENA 15 faders.
- 2 production cabins using AEQ ARENA with 5 faders.
- 1 CTA, using AEQ BC2000D central router with aprox. 400 inputs/outputs. All the connection between studios and CTA use MADI links over fibre optic
- SYSTEL system to manage all the incoming/outgoing communications in the facility, installed in the CTA and available in all the studios.
- Complete network for Mar4 automation system, with associated workstations in all the studios and 6 dedicated workstations in the journalist area. All the central servers are included
- This turn-key project includes all the furniture, wiring and extra units for the total correct operation.

## 2007



## **CANAL 4 RADIO MALLORCA**

Supply, installation and start-up of a new complete studio (furniture, wiring, extra units ...) using analogical console AEQ BC500, including portable codecs AEQ M-PAC and digital recorders PAW120 as units for reporters.

#### **DIARIO ALERTA**

Complete ONAIR studio, turn-key project, using analogical console AEQ BC500. Includes extra units, wiring and technical complete furniture.

## **GUIPUZCOA FM**

Complete studio in control / booth configuration using analogical console BC500, including the whole technical furniture.

Production cabin using analogical console BC-306, including the whole technical furniture.

## **IB3 RADIO TELEVISION DE LAS ISLAS BALEARES**

Supply, installation and start-up of a complete SYSTEL 6000 system for management of all the in/out call to the station. The supply includes AEQ Course as unit of communications and Impact+Caddy for the routing module.

#### MIORMISA ELCHE

Supply, installation and start-up of its new facilities that include two ONAIR studios and an associate booth, including wiring and technical furniture.

The studio 1 works on analogical console AEQ BC2500, together with Mar4 automation system workstation.

The studio 2 works on analogical console AEQ BC300.

The supply is completed by material for reporter as digital recorders AEQ PAW-120 and portable codecs AEQ TLE02D model.

## **ONDA AZUL**

Complete studio working on AEQ BC300 and automations system AEQ Mar4 workstation associated to the console. There are included peripheral, wiring and technical furniture necessary for a complete fully operative studio.

## **ONDA REGIONAL MURCIA**

Supply, installation and start-up of an ONAIR studio working on digital console AEQ ARENA with15 physical faders and possibility of up to 9 virtual pages, which create a working space for up to 135 different I/O channels. Technical furniture included.

#### PERIODISTA DIGITAL



Complete ONAIR studio in configuration control / booth working on analogical console AEQ BC2500 and software of automation AEQ Mar4.

# **PUNTO RADIO MADRID**

Turn-key project key for the execution of a mobile unit in configuration of control / booth working on digital console AEQ ARENA of 5 physical faders physicists and 9 virtual pages, with space to manage up to 45 I/O channels. The zone of talent is designed for a maximum of 8 simultaneous occupants.

## **PUNTO RADIO CORDOBA**

Turn-key project, for a complete ONAIR studio working on analogical console AEQ BC2500, with associate automation system AEQ Mar4 workstation.

## **RADIO AGELCO LEON**

Supply, installation and start-up of two studios in mirror configuration for backup working on AEQ BC2500 consoles inside a turn-key project.

Main studio includes wiring and technical furniture, as well as mixer and Mar4 workstation as system of automation, together with a telephonic hybrid TH02 for the part of rack mounted communication units and several portable codec.

Identical configuration for the backup studio.

The supply is completed with a system AEQ LIVE20 as radiofrequency unit for reporter with 3W of power, in OB applications with bidirectional format.

## RADIO AYUNTAMIENTO DE CALPE

Turn-key project, for the creation of two ONAIR studios and an associate booth.

Both studios are identical, and work on an analogical console AEQ BC2500 with software of automation Mar4 associate.

# **RADIO AYUNTAMIENTO LOS INFATES**

Local radio station working on analogical console AEQ BC500. Complete supply includes portable recorders AEQ PAW120 as reporter's units.

## **RADIO ARANJUEZ**

Installation and start-up of a complete studio working on analogical console BC2500, including a hybrid TH02 for rack mounted communications and a codec TLE02 for reporter's units.

# **RADIO BALEAR**



Supply, installation and start-up of two new ONAIR studios and an associated production cabin.

Both studios include analogical console AEQ BC2500, whereas the cabin works on analogical small console of the type AEQ BC306.

In communications for all the facilities there has been selected the multi-codec AEQ Course with up to 20 independent bidirectional channels in the same unit.

## **RADIO CEBOLLA**

Installation and start-up of a complete ONAIR studio (furniture, wiring and extra units included) working on analogical AEQ BC500 mixer and one associate Mar4 workstation like system of automation.

## **RADIO PEGO**

Installation, start-up of a complete radio station, with a couple of studios in its central facilities, as turn-key project.

- Studio 1 developed on analogical console AEQ BC500.
- Studio 2 developed on analogical console AEQ BC300.

The installation is completes with a transmitter FM 500W system.

# **RADIO IBIZA**

Complete studio working on analogical console BC500, together with automation Mar4 workstation, including the modules Mar4Cont and Mar4Edit. The supply is completed with Eagle as unit for ISDN communications, and all the extra necessary equipments in a full operative system (microphones, CD players...)

## **RADIO RIAS ALTAS**

Supply, installation and start-up of a complete studio working on digital console AEQ BC2000D of 15 physical fader, with hybrid AEQ TH02EX like equipment of communications.

#### RTPA RADIO TELEVISION DEL PRINCIPADO DE ASTURIAS

Supply, installation and start-up of a SYSTEL 6000 system for management of all the incoming / outgoing calls to the station. The supply includes AEQ Course as unit of communications and Impact+Caddy for the routing module.

# TELE5

National Television channel.

Supply, installation and start-up of a SYSTEL 6000 system for management of all the I/O calls on the station used in talk shows program type with participations of the viewers in a telephone hot line.



The supply includes AEQ Course as unit of communications and Impact+Caddy for the routing module.

## ALCALA DE HENARES UNIVERSITY

Supply, installation and start-up of the whole material necessary for a control / booth and an associated cabin in its facilities of Madrid.

Inside the turn-key project, for the control / booth AEQ has installed an analogical mixer AEQ BC500, with furniture and wiring, and in the cabin a small mixer BC306, as well as the whole additional material (microphones, earphones, CD players ...). To conclude the installation, there has been supplied equipment of high frequency, composed by FM 250W transmitter.

## **ELCHE UNIVERSITY**

Turn- key project for one completely functional ONAIR studio used in the training courses of the institution working on analogical console AEQ BC300 and software of automation AEQ Mar4.

#### **GRANADA UNIVERSITY**

Complete studio WORKING on digital console AEQ BC2000D with 15 PHYSICAL faders and system of automation Mar4.

## **REY JUAN CARLOS I UNIVERSITY**

Supply, installation and start-up of one new complete studio working on analogical console AEQ BC500, as well as wiring and technical furniture, together with peripheral to complete one of complete radio station orientated to the activities of media sciences of the institution.

## 2006

# RADIO EUSKADI ETB BILBAO, PAIS VASCO

AEQ installed its ARENA digital consoles to meet the needs of the eight studios (one of which is double), as well as four booths plus one digital audio matrix with 1024x1024 inputs and outputs, for the new Basque Country Self-governing Community radio (EiTB) facilities.

During an initial training period for the operators and managers, an ARENA console was delivered with a BC-2000 D routing / distributing digital audio matrix. In the selection of this equipment, all the bidders had to conduct a three-day series of tests through which they were to make practical demonstrations of compliance with 90 technical requirements in order to be type approved and thus be allowed to submit their tenders.

In the final installation, nine studios were equipped with different configurations: auto control, studio control, recording, disconnections, etc.



All of the configurations share signals with the central control matrix located more than 130 meters away, through MADI multi-channel links and AES reserve lines. The configuration responds to all the specific requests made by EiTB: reserve configuration, integration with UMD systems, alarm system, digital monitors and microphones, automating systems remotes, etc.

Similarly, 40 ISDN encoders are shared thanks to the SYSTEL 6000 system, with Systelset studio intercom stations. Other accessory equipment was included, such as self-amplified AM-03 monitors and SCR-03 studio boxes.

AEQ executed the production centre start-up, training and configuration within the time it had estimated for these operations.

Project Manager Mr. Koldo Lizarralde and the Chief of the Technical Services of Radio Euskadi Mr. Goio Torrontegui, has sent a mail expressing their satisfaction with the equipment and estimating the professionalism, dedication and availability demonstrated in the installation, start-up and adjustments.

# RADIO AUTONÓMICA DEL PRINCIPADO DE ASTURIAS (RTPA)

AEQ S.A. has completed the installation, start-up, and training of all the necessary equipment for the radio section of the Radio Television of the Principality of Asturias (RTPA). The installation includes the integration of all the necessary elements for the start-up of the Radio Production Centre: ARENA digital mixer consoles, RDSI system of communications consisting of EAGLE and COURSE audiocodecs controlled by the SYSTEL system (IMPACT matrix, A/D D/A CADDY converters and SYSTEL 6000 software) and Central Control Room with BC2000D ROUTER routing/mixing matrix.

# **CANAL NOU TELEVISION**

Canal Nou Televisión has just brought an AEQ SYSTEL 6000 ISDN communications system on stream. The SYSTEL 6000 is the most advanced system of its kind in today's international market.

The system acquired by Canal Nou has capacity for 20 simultaneous communications in multiplex mode or the creation of as many multiplexes of different communications as may be needed.

The multi-station control (in this case, through non-tactile monitors) allows users to have as many lines as they need at their disposal at all times through any of the control stations.

ONDA REGIONAL DE MURCIA.

They have installed two digital self operated studios with the AEQ ARENA digital console. These consoles were shown and tested at the AEQ's booth at the Broadcast Show held in Madrid in 2005. The consoles include 15 motorised faders, layers and memories, high



resolution LCD screens to visualize the Vu-meters associated to all the inputs and outputs of the console.

# IMEFE (Instituto Madrileño de Empleo y Formación Empresarial)

They have installed one digital Studio with the AEQ ARENA digital console.

# MATARÓ PUBLIC RADIO

Installation of one complete radio station composed of 2 studios with AEQ BC-500 analogue console mixer and Mar4win Automation System.

# **COPE JUMILLA**

Installation of the main continuity studio with AEQ BC-500 analogue console mixer.

# **GRANADA PUBLIC RADIO**

Installation of 2 studios with AEQ BC-500 consoles and Central Control Room.

## **REGIONAL GOVERMENT OF MURCIA**

Installation of the recording studio for the press office.

# ONDA CÁDIZ

Installation of the main studios with 4 units of AEQ ARENA Digital console mixer. Central Control Room with AEQ BC-2000 Router of 280 x 280 in size, and Mar4win Automation System.

# **PUNTO RADIO SEVILLA**

Supply, installation and start-up of a SYSTEL 6000 system for management of all the incoming / outgoing calls to the station. The supply includes AEQ Course as unit of communications for high quality audio.



## SAN VICENTE DE RASPEIG PUBLIC RADIO

Turn-key installation of 2 control rooms and 1 studio with AEQ ARENA Digital console mixer, BC-500 analogue console mixer, Impact matrix, Mar4win automation system and SYSTEL 6000 multi-conference system.

## RADIO EUSKADI ETB IRUÑA, NAVARRA.

The division of EITB in Navarre has equipped its studio with a digital console AEQ BC-2000 D with capacity to handle to 12 mono analogue inputs and outputs and 12 AES/EBU inputs and outputs and 4 microphones; in addition to 3 ISDN two lines codecs, AEQ EAGLE. In addition the complete installation has been made integrating equipment of other manufacturers. In the future a routing and distributing matrix, AEQ BC-2000 D Router, and another studio will complete the installation.

## AGENCIA EFE, MADRID.

Agencia EFE produces the multimedia news and broadcasting contents. It is the leader in the Hispanic market and has facilities of radio production and generation and sonorous treatment of the spoken news and testimonies in Madrid.

They have installed three digital consoles AEQ BC-2000 D. Two of them in standard configuration for production of Radio and third with special configuration of multiplex or multi-conference, so that each channel handles the incoming line and the N-1 program that is sent to each correspondent. This very useful special application in sport and news radios was covered in the 90's in the Spanish radio with a popular equipment with the disappeared manufacturer Tecnología Electrónica that is been working in EFE more than 15 years waiting for a suitable solution that AEQ has implemented in BC-2000 D.

The three consoles are interconnected via optical fibre by MADI connections to interchange signals.

## <u>2005</u>

## CADENA COPE, MADRID.

This station almost has a hundred of local stations in all Spain, emitting two programs. It has installed a console BC-2000 D to update one of the continuity studios of the headquarters in Madrid.

# COM RADIO, AGENCIA DE COMUNICAÇIÒ LOCAL, BARCELONA, ESPAÑA.

It uses a BC-2000 D console for studio 3, composed by 1 DM and 2 D10 surfaces, totalizing 25 faders that can control simultaneously up to 225 channels. COM Radio transmits programs of news and entertainment through an ample network of stations in Catalonia.



## TELEMADRID RADIO, MADRID.

Public station dependent of the regional government of Madrid, has acquired a console BC-2000 D to handle two studios from which two programs can be made simultaneously.

## RADIO GUADALAJARA, CADENA SER.

The private station SER, has installed a BC-2000 D digital console for its Programs Production Centre of Guadalajara

## CEU SAN PABLO UNIVERSITY, MADRID.

The prestigious private university has equipped two digital high level radio studios for formation in the new technologies of the communication. In each studio there is a 15 fader console BC-2000 D. Each one has 12 digital inputs and outputs, 16 analogue inputs and outputs, 8 mic. inputs and 4 headphone outputs. Between both studios a multi-channel MADI link of 64 circuits has been settled down.

## **IB3 RADIO, ISLAS BALEARES**

This includes acoustic treatment, equipment for studios, central control room, newsrooms and mobile units. In Palma (Majorca), we are equipping three studios with the AEQ BC 2000 D Digital Console. A central control room is outfitted with SYSTEL 6000 software and AEQ Impact – Caddy matrices. There are also two reporter's booths. The automation system is made up of more than 50 workstations: broadcasting, production, continuity recording, the recording of reports, composition, Internet access, administration and programming. The other facilities have one or two studios per facility with an analogue console, a control centre with Eagle Codecs, and an Automation System. Also, Wireless Transceivers, Radiotelephones, Portable Mixers and the corresponding Base Stations to receive the signals from the mobile units.

# CANAL SUR RADIO, MALAGA Y JAÉN

Reconstruction of the new Studios and Control Centres of Canal Sur Radio in Malaga and Jaen.



#### **CADENA SER DE VIGO**

Radio Vigo has been a leading station on Spain's northwest coast for three generations. It moved into a renovated building near the city's marina and re-equipped the station the most advanced technological systems.

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.

In the central control room, a BC-2000-D switching matrix was installed and linked by optical fibre with the BC-2000-D consoles in the studios. There are six studios:

- The production studio has a console with 15 faders and an exclusive studio booth. A shared studio room can also be used.
- 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 having only five pageable channels (equivalent to 45 faders), and 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.

## **RADIO MARCA SANTANDER**

1 studio with AEQ BC-500 analogue console mixer and Mar4win automation system.

#### SALAMANCA UNIVERSITY

1 studio with AEQ BC-500 analogue console mixer.

#### **MONCADA RADIO**

1 studio with AEQ BC-500 analogue console mixer.

#### DIARIO SUR MÁLAGA

1 studio with AEQ BC-2500 analogue console mixer.

## **RADIO GIGANTE**

AEQ BC-2000 Router of 24 x 24 I/O.



### **LANZAROTE RADIO**

Control studio with AEQ BC 2000 digital console mixer and another studio for recordings with BC-500 analogue console mixer. Both studios equipped with Mar4win automation system

## **PUNTO RADIO, BADAJOZ**

Main continuity studio and recording studio, both equipped with AEQ BC-500 analogue console mixer.

## RADIO EL DIA, TENERIFE

Control Central Room with Impact matrix of 48 x 48 and Mar4win automation system.

## RADIO ELDA, CADENA SER

1 studio with AEQ BC-500 analogue console mixer.

#### **RADIO PEGO**

1 studio with AEQ BC-500 analogue console mixer.

## **DIARIO DE CÁDIZ**

1 studio with AEQ BC-2500 and 1 studio with AEQ BC-500 analogue console mixers.

## MUSICAL AND FUENGIROLA, MALAGA

1 studio with AEQ BC-500 analogue console mixer and Mar4win automation system.

### **PUNTO RADIO RIOJA**

1 studio with AEQ BC-500 analogue console mixer and Mar4win automation system.

## **RADIO BALEAR**

2 studios with AEQ BC-500 analogue console mixers and Mar4win automation system.

#### **UNIVERSIDAD SAN PABLO CEU**

2 studios with AEQ BC-2000 D digital consoles and Mar4win automation system.

#### 2004



## **COM RADIO, BARCELONA**

Installed in a four-wheel-drive vehicle, the Mobile Unit can transmit live with four people and their luggage on board. When the unit is stationary, it can provide multiple links with the station and independent reporters who are covering live events.

## RADIO MANLLEU, BARCELONA

Includes the new AEQ BC 2000 D Digital Console that was installed for the first time in 24x7 operation in this Barcelona station.

## SCHOOL OF JOURNALISM AT THE 'UNIVERSITAT DE VIC', BARCELONA

Includes the new AEQ BC 2000 D Digital Console.

## SCHOOL OF JOURNALISM AT THE 'UNIVERSITAT DE ABAT OLIVA, VALENCIA

A new studio

## **COM RADIO, BARCELONA**

Complete installation of the new studio 3 for COM Radio, in Barcelona. Includes the new AEQ BC 2000 D Digital Console in a 25-fader composition.

# RADIO NACIONAL DE ESPAÑA (RNE), MADRID

Installation of the new Multi-codec System for RNE (Radio Nacional de España, Spain's State Radio Network) in Madrid. 24 audio stations with more than 15 studios share 40 ISDN lines through an Impact Matrix and the SYSTEL 6000 software.

## RADIO BREMEN, CANARY ISLANDS

Complete installation of the new Radio Bremen studios on the island of Gomera, Canary Islands. Two studios equipped with Consoles, Automation System and AEQ Codecs, as well as a Control Centre with an Impact digital switching matrix.

## MUNICIPAL RADIO IN SANT ESTEVE SESROVIRES, BARCELONA

Complete installation of the new studios for the Municipal Radio in Sant Esteve Sesrovires, Barcelona.

## RADIO SEVILLA CLUB DE FUTBOL

Installation of a new Program Production Centre for Radio Sevilla Club de Futbol. **RADIO EL CANCIONERO, CORDOBA** 



Installation of a new Program Production Centre for Radio El Cancionero in Cordoba.

## MUNICIPAL RADIO IN EL ESPINAR, SEGOVIA

Complete installation of new studios for the Municipal Radio in El Espinar, Segovia.

#### ONDA REGIONAL DE MURCIA

Remodelling of the Control Centre for Onda Regional de Murcia using an Impact digital matrix and a BC 2500 Console.

## 2003

## **COM RADIO, BARCELONA**

Remodelling of the Control Centre for COM Radio using a 72x72 circuits Impact digital matrix and a rack of Course Multi-codecs managed by Impact RTC and SYSTEL 6000 software. This configuration enables users to handle switching and codec control asks from each studio.

## **TELEMADRID RADIO, MADRID**

Remodelling of the Control Centre for Madrid's Telemadrid Radio. Installation of a 72x72-circuit Impact Matrix and a rack of Course Multi-codecs managed by Impact RTC and SYSTEL 6000 software. This configuration enables users to handle switching and codec control asks

from each studio. The old analogue multiplex Consoles and switching matrix were eliminated.

# RADIO DEL GRUPO CORREO, PAÍS VASCO

Installation of Program Production Centres for Grupo Correo Radio in San Sebastian, Logroño and Vitoria, and remodelling of the Bilbao Centre.

## **COM RADIO, GERONA**

In COM Radio Gerona, installation of a studio with remote control from Barcelona, where the operator is located who receives and sends programming and return by ISDN.

## COPE, MADRID



Installation of a new multi-codec system for COPE in Madrid, providing service to four audio stations that share 16 ISDN channels through an Impact matrix and the SYSTEL 6000 Software.

## RADIO ELDA, ALICANTE

Installation of a new Program Production Centre for Radio Elda in Alicante.

## TVE, MADRID

Remodelling of the Communications Set for Televisión Española in Madrid, including a Course multi-codec system.

## **CANAL SUR RADIO, HUELVA**

Moving and upgrading the new studios of Canal Sur Radio in Huelva

## **TELECINCO, MADRID**

Remodelling of the Communications Set for Tele5 in Madrid, including a Course multicodecs system.

## <u>2002</u>

## SCHOOL OF JOURNALISM AT THE UNIVERSIDAD FRANCISCO DE VITORIA, MADRID

Expansion of the radio instruction studios for the School of Journalism at the Universidad Francisco de Vitoria in Madrid to a total of six.

## RADIO EL PRAT DE LLOBREGAT

Programs Production Centre Radio el Prat de Llobregat.

## **RADIO ENAMORADOS**

Programs Production Centre Radio Enamorados

## **RADIO LA BAÑEZA**

Programs Production Centre Radio La Bañeza. Recording Studio and On Air Studio.



## <u>2001</u>

## **ONA MALLORCA**

Programs Production Centre Onda Mallorca.

## **CIRCULO DE BELLAS ARTES, MADRID**

Programs Production Centre Círculo de Bellas Artes de Madrid.

#### **RADIO BADALONA**

Programs Production Centre Radio Badalona.

#### **RADIO SABADELL**

Programs Production Centre Radio Sabadell. With two studios, booth, On Air Centre, OB Vans and web casting.

## COPE, BILBAO

Programs Production Centre Cope Bilbao, including studios and central control with digital audio matrix.

## RADIO DAB GRUPO CORREO, BILBAO

Digital Programs Production Centre Radio DAB Grupo Correo, Bilbao.

## **SOMOS RADIO**

Programs Production Centre Somos Radio.

## **RADIO TELEVISION OF JAEN**

Programs Production Centre Radio Televisión de Jaén.

## **RNE**

Studios for Programs Production Centre for Nuclear Emergencies RNE at the influence area of the 5 Nuclear Power Stations.

#### RADIO MARCA DIGITAL, MADRID

Digital Program Production Centre in Madrid for Radio Marca Digital's Radio DAB, owned by the Grupo Recoletos.



## **TELEMADRID RADIO, MADRID**

Amplification and refurbishment of the studios at TeleMadrid Radio.

#### **EUROMAZARRON RADIO**

Programs Production Centre Euromazarrón Radio.

## **CEU SAN PABLO, VALENCIA**

Programs Production Centre CEU SAN PABLO Valencia. Two studios.

## SCHOOL OF JOURNALISM AT THE UNIVERSITAT DEL CEU ABAT OLIVA, ALICANTE

Complete installation of a new studio for the School of Journalism at the Universitat del CEU Abat Oliva, in the province of Alicante.

## RADIO EL DIA, TENERIFE

Programs Production Centre Radio el Día, Tenerife. 2 Studios Talent 1 studio room, main control and press room.

## GRUPO Z RADIO, RADIO CORAZON, ALCOY, AVILÉS AND CASTELLON

Programs Production Centre Grupo Z Radio, Radio Corazón (now belong to Flaix FM) (2000-2001) at: Alcoy, Avilés and Castellón

### 2000

## RADIO AT THE UNIVERSIDAD DE CASTILLA LA MANCHA, TOLEDO

Supply of equipment, engineering and wiring for the installation of the new Radio studios at Universidad de Castilla la Mancha, Toledo.

## RADIO AT THE INSTITUTO ALFONSO X EL SABIO, CUENCA

Supply of equipment, engineering and wiring for the installation of the new Radio studios at Instituto Alfonso X el Sabio de Cuenca.

## LA VOZ DE LA PLANICIE, PORTUGAL

Supply of equipment, engineering and wiring for the installation of studios at La Voz de la Planicie (Portugal).



# RADIO PREMIÁ DE MAR, BARCELONA

Moving, engineering and wiring of the installations at Radio Premiá de Mar (Barcelona)

## RADIO LA FARGA, HOSPITALET DE LLOBREGAT

Supply of equipment, engineering and execution of the installations at Radio La Farga en Hospitalet de Llobregat, with, 4 studios, Control central and News room.

## RADIO MARCA, MADRID

Supply of equipment, engineering and execution of the installations of Radio MARCA, Investment Group Recoletos, license DAB (Digital Audio Broadcasting) with: 2 Digital Studios, 2 production studios, 1 central control room and News Room.

## ULTIMA HORA RADIO, PALMA DE MALLORCA

Supply of equipment, engineering and execution of the new installations at Ultima Hora Radio, Palma de Mallorca, with 5 Studios, booths and central control room.

## **1999**

#### RADIO BENAVENTE

Supply of equipment, engineering and execution of the installations at Radio Benavente.

## RADIO AT THE INSTITUCION PROFESIONAL SALESIANA, MADRID

Supply of equipment, engineering and execution of the installations at the radio studio of Institución Profesional Salesiana en Carabanchel, Madrid.

#### RADIO BALEAR

Supply of equipment, wiring and execution of the installations of the installations at Radio Balear.

#### **ULTIMA HORA RADIO**

Supply of equipment, wiring and execution of the installations at Ultima Hora Radio.

## RADIO EUROMAZARRON, MADRID

Supply of equipment, wiring and execution of the installations at Radio Euromazarrón, West Madrid.

### UNIVERSIDAD EUROPEA CEES, MADRID



Supply of equipment, engineering and execution of the installations of the new studios at Universidad europea CEES, Madrid

## **GRUPO Z RADIO, ZARAGOZA**

Supply of equipment, engineering and execution of the installations of the new studios at radio station in Zaragoza, Grupo Z Radio.

## **GRUPO Z RADIO, MADRID**

Supply of equipment, engineering and execution of the installations of the new studios at the radio station in Madrid de Grupo Z Radio.

#### RADIO AT THE UNIVERSITY OF SANTIAGO DE COMPOSTELA

Supply of equipment, engineering and wiring at the installations of the new radio studios at Universidad de Santiago de Compostela.

#### 1998

## **COM RADIO, BARCELONA**

- 2ª Refurbishment and moving of the installations of COM Radio in Barcelona, composed by:
- -4 Analogue Studios.
- -2 Digital Studio.
- -1 Central Control.
- -1 Editing Room.

## **ONDA IMEFE, MADRID**

Supply of equipment, engineering and execution of the installations at Onda IMEFE del Instituto Municipal de Formación para el Empleo de Madrid (IMEFE): 4 Studios and Central Control Room

## **RADIO LANZAROTE**

Supply of equipment, engineering and execution of the installations at Radio Lanzarote

## RADIO FORCOM, JOURNALISM SCHOOL, VALLADOLID

Supply of equipment, engineering and execution of the installations at radio studio of FORCOM, Escuela de Periodismo de Valladolid.

## SPANISH GOVERNMENT, MADRID



Supply of equipment, engineering and execution of the installations of audio for press conference at Moncloa, for Presidencia del Gobierno.

## RADIO BAJO ARAGÓN, ALCAÑIZ

Supply of equipment, engineering and execution of the installations at Radio Bajo Aragón (Alcañiz).

### RADIO MONZÓN

Supply of equipment, engineering and execution of the installations at Radio Monzón.

#### 1997

## RADIO MOSTOLES, MADRID

Design and installation of the studios at Radio Móstoles en Móstoles (Madrid)

## RADIO RIVAS, MADRID

Design and installation of the studios at Radio Rivas for the Local Government of Rivas-Vaciamadrid (Madrid).

## **ONDA MINI, MADRID**

Refurbishment and moving of the installations at Onda-Mini, Madrid, with: 3 Studios, Central Control, News Room, On Air and edition system by hard drive with 3 workstations and 1 server.

## **COM RADIO, BARCELONA**

First refurbishment of the installations at COM Radio, Barcelona, with: 4 Analogue studios,1 Digital Studio, Central control, Editing Room.

## RADIO DENIA, VALENCIA

Installation of the studios at Radio Denia, Denia (Valencia)

RNE, MADRID, BILBAO, TERUEL, LA CORUÑA, SORIA, LOGROÑO, SAN SEBASTIAN AND BARCELONA

Supply of the technical furniture for the stations of R.N.E. Madrid, Bilbao, Teruel, La Coruña, Soria, Logroño, San Sebastián, Barcelona.

## **COM RADIO, LERIDA**



Installation of 2 studios of COM Radio, Lérida.

# **ONDA MADRID, MADRID**

Moving and enlargement of the installations of Onda Madrid to Nuevo Centro de la Ciudad de la Imagen composed by: Central control with matrix 96x96, 4 Studios,3 News room, System for Manual and Automatic Emission through HD and juke-box.