

RNE Achieves Consistent “Signature Sound” with Audemat’s Digiplexer

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As the prestigious flagship station of RTVE, Spain’s national public broadcaster, it is essential that the audio quality offered by Radio Nacional (Radio 1) is of consistently high quality throughout the country. Until recently, this was not the case; Radio Nacional lacked a unique, personalised sound that enabled it to stand out from the competition and that sounded the same in every region of Spain.

The main cause of our problem was the wide variety of audio processors of varying levels of quality that were typically used in each of the different Spanish regions. Radio Nacional did not have a “Signature Sound” and instead, sounded differently depending on your location and whether you were listening to national or regional content. In order to resolve this issue, RNE management decided it was necessary to provide Radio Nacional with its own personalised sound that would be identical throughout all regions in Spain and would enable listeners to differentiate it from other radio stations. To achieve this, we purchased several Digiplexer 2/4 audio processors from Audemat.

A large part of Radio Nacional’s programming is, as the name suggests, national in nature and is produced in the Main Broadcast Centre in Prado del Rey, Madrid. An audio processor in Madrid will conduct the first shaping of the audio signal to ensure sufficient levels for onward distribution to satellite or radio links. The audio is then distributed to each of the regional headends where the signal is transparently forwarded on to the transmitter sites of each region.

However, a key objective of Radio Nacional is to provide its listeners with local news updates and live, interactive reports from their area. Therefore, at certain times of the day, the national content is replaced by local programming relevant to each of the 16 regions. In this instance, a digital matrix located at each regional headend will replace the national signal with the local content. The regional signal needs to be processed in an identical fashion to ensure that the listener cannot detect any difference in volume or sound quality when the local content is inserted.

In order to discover the best audio processor for this task, we issued a public tender outlining our key criteria for the units to be installed throughout our network. We essentially required a reliable, professional, broadcast-grade audio processing platform that would be flexible enough to meet our extremely exacting technical requirements. We needed something that would enable us to shape our audio inputs and outputs, deliver multi-band processing, several configuration options and overall, enable us to create a sound that would “wow” our listeners throughout Spain.

After an exhaustive technical evaluation of all the applicants, Audemat’s Digiplexer 2/4 was one of only two units that complied 100% with all the technical requirements of RNE. From the final two products, the Digiplexer was chosen for its highly powerful processing, exceptional quality and intuitive user interface enabling simple configuration. The unit’s sampling frequency of 192kHz for the main processor and 1.5MHz for the final limiter are double the levels of their nearest competitor.

This precision processing together with the modular flexibility and scalability (a user can upgrade from 2 to 4 bands via software), ease-of-use and DSP-based reliability ensured that the Digiplexer 2/4 was chosen over all other leading industry brands in terms of technical performance, functionality and competitive pricing.

Although our requirement at Radio Nacional was purely for audio processing, I was also impressed by the range and quality of the additional capabilities offered by the Digiplexer 2/4. The unit provides an exceptional stereo encoder, RDS encoder, embedded audio back-up, telemetry remote control and a native IP interface in addition to the audio processor. I can see how this could be a benefit to broadcasters, enabling them to consolidate several key functions in just 1RU of rackspace.

We purchased 28 Digiplexer 2/4’s in total, for deployment in all key regions and Audemat provided product training in Madrid to the chief broadcast engineers from each territory. In the course of this training, several tests were conducted and Audemat assisted us in creating the optimum configuration to deliver the unique, personalised sound that we were aiming for. These settings were programmed into all units deployed throughout the network ensuring that all Radio Nacional listeners throughout Spain have the opportunity to experience our newfound Signature Sound.

From an installation and configuration point of view, everything has been simple and painless with no technical difficulties arising. Both front panel and software changes are easy to make when necessary but, as we have not amended our agreed configuration, a minimum of user interaction has been required.



Overall I can say that, since the installation of Audemat’s Digiplexers throughout our network, there has been a significant improvement in the quality and consistency of our radio programming throughout the Radio Nacional network. We are extremely happy with the reliability and performance of the units and delighted to finally have our own “Signature Sound”.

About RNE:

RTVE (Radio Televisión Española) is the national public TV and Radio Broadcaster in Spain comprising TVE (Televisión Española) and RNE (Radio Nacional de España). RNE offers a wide range of stations and programmes aimed at different sectors of the population:



Radio Nacional (Radio 1)

Radio 1 is a general interest station which seeks to interact with listeners, deliver original, informational content backed up with analysis and ensure that public radio reports on all events, large and small that are of interest to its listeners.

All news updates and programmes deliver up-to-the minute coverage. The station's overriding aim is to report live from the action, allowing all listeners to keep abreast of events in real time and contribute their own thoughts and opinions to explore the topic in depth.

To achieve these aims, RNE relies on its network of regional stations, correspondents and editorial teams, together with a large population of listeners offering information and opinion from the field.

Radio Clásica

This station offers classical music programming which is unique in Spanish broadcasting. It broadcasts concerts on both a national and international (EBU / Euroradio) level as well as programmes featuring original classical pieces.

Radio 3

Radio 3 offers a wide variety of musical programmes covering many tastes. These include pop, rock, jazz, blues, hip-hop, funk etc...

Radio 4

This is a general interest station in the Catalan language and broadcast solely in Catalunya.

Radio 5

Radio 5 delivers continual news and informational programming with the aim of keeping the listener up to date at all times throughout the day. Content is of a local, regional, national and international nature.

Radio Exterior de España (REE)

REE is entrusted with the delivery of programming to Spaniards abroad and foreigners interested in Spanish culture by broadcasting on shortwave, satellite and the internet.

News services in Spanish enable listeners throughout the world to keep informed of the latest social, cultural and political developments in Spain and the wider world. Sections dedicated to language, tourism, music, sport, seaside, charity, science and medicine are just some of the wide range of Spanish programmes on offer from REE.

REE offers listeners of other languages (English, French, Arabic, Russian and Hebrew) details on current affairs in Spain and worldwide and offers them an overview of Spanish life and culture.