

DEPARTMENT OF DEVELOPMENT & DESIGN



CREATE AND DELIVER THE MOST RELIABLE TRANSMITTER

IN THE WORLD



E10000 ELENOS

THE RESULT OF 10 YEARS OF RESEARCH IN ENERGY SAVING

The new E10000 amplifier is the latest of a series of Elenos devices, from the Italian manufacturer that proudly boasts a world record: being the first, ever, 12 years ago, to concern itself with energy conservation in the context of broadcasting.

Attention is paid to the environmental impact of transmitting stations, and has now also become very important for energy conservation of radio broadcasters. Antonello Giovannelli, Director of Research and Development at Elenos, told us that as early as 2003, with the project in the "IceFet" series (amplifiers and E3000 and ETG3000 transmitters integrated in 4 UR), the highest possible energy efficiency was being targeted with the available technology at the time.

The market trend for limiting consumption and costs was in the air, which is why the planning staff have prioritised this opportunity. In 2007 the economic crisis arrived, but at that time Elenos had already improved its products and had a complete catalogue with a very high energy efficiency range at its disposal, which was ideal for adopting energy saving policies on consumption. The possibility of programming power, already present in the original projects, was then further improved, allowing for an even more significant saving on electricity.



REVOLUTIONARY

It has been over 10 years since the launch of this product line, and the revolutionary E10000 is soon to arrive! It is a highly powerful FM amplifier that can boast an unbeatable range of characteristics of compactness, electrical efficiency and weight.

The apparatus can be contained in just 4 rack units, but can provide 10kW of RF power in the 87.5-108 MHz range with a total electrical efficiency of 70%!

E10000 is a highly versatile and effective solution, and can be installed in stand-alone mode, or used as a reserve for more powerful systems, but can also be used as a base module for very powerful amplifiers.

"The project started around 4 years ago", Giovannelli explains, "and was already in the prototype stage, but we have only recently decided to market it, for two reasons. The first is technical: we wanted to work on it until it reached a maximum efficiency state-of-the-art and the best in aesthetic design. Once again we want to break the boundaries of déjà vu. The second reason is commercial: Elenos is at the very top of the energy savings and high-quality market, so much so that bringing out this model too soon would have created too much competition with our other products, on the same power band".



Crisis breeds opportunity

Elenos is an Italian company based in the city of Ferrara and the leader of a group that includes brands such as ITELCO and Electrosys.

For Elenos, being an Italian company means knowing how to combine excellence and flexibility and knowing how to transfer these qualities to its products.

Elenos's care for the environment, that from the start of the 2000's attracted the interested of broadcasters more sensitive to these issues, with the arrival of the economic crisis from 2007 onwards became successful as a response to the growing need to manage budgets, but without compromising on the quality of the equipment and their efficiency of coverage.

E10000 today is the heir to this business philosophy that has two concepts at its roots: responsibility and innovation. This equipment looks to the future of international broadcasting, it represents a real and convenient solution, both to the problems of business management, and to the challenges that the world imposes on us.







AVATAR

is the big brother of your radio network

Elenos has launched a new remote control system for networks of transmitters. It is quite clear what it is used for, but still little is understood of how innovative, powerful and valuable this novelty offered by the Italian company is.

Elenos, an Italian company with headquarters in the city of Ferrara and as leader of the group that include the Itelco and Electrosys brands, has decided to assert a new Network Management System concept.

For this purpose it has developed **AVATAR**, which is capable of managing not just a certain number of individual transmitters, but networks of transmitters in layers, defining the traits for each group in terms of coverage, the type of audience, and the type of population density (this is relevant also for seasonal broadcasters, which are typical of tourist resorts). The data, which is organised and analysed by the system, allows you to better manage your network, from the energy cost to the output powers, so as to monitor the history of failures in each station and to attain, thanks to the system, accurate failure prevention.

AVATAR assigns a priority to each situation: in doing so you avoid wasting money and guarantee an objective test of performance of the network. The ease of use is also in having developed a **drag & drop interface**, through which it is possible to create a series of personalised functions and situations and to organise and manage them by simply dragging the blocks that are needed on the screen. The blocks then easily join together in a very intuitive fashion.

Sleep peacefully, predict the future

Thanks to AVATAR the problem of transmitter network management is resolved through a centralised interface that analyses current and past data, allowing you to discover or even predict problems and to intervene in a timely fashion.

The suite includes **Avatar Interface**, the device within the station that communicates with the AVATAR system. This collects the data and sends it to the headquarters through a **private cloud**.

The device promptly notifies of significant events and can include a variety of tools, including a quality analyser of the **mains** (capable of measuring and storing events such as network failures, fluctuations in voltage and frequency, service downtime and other abnormalities), an FM receiver-demodulator with ultra-high performance (capable of providing information on the quality of the signal emitted), and other tools equipped with a USB or Ethernet interface.

The **Main Data Module** controls the parameters of each transmitter and the entire network, analysing performance, variations, and trends and then takes action to change them, either remotely or locally.

The **Energy Managing Module** provides the energy cost of the entire network and operates in a manner aimed at optimising consumption: it also calculates energy costs for different time periods and for different energy suppliers.

The **Maintenance Module** manages prompt interventions for troubleshooting and organises management of route maintenance intervals for the benefit of savings management.

The **Quality & Measurements Module** detects the quality of the in/out audio, analyses the signal transmission and audio band quality of the L & R channels up to 16kHz, displaying the stereo separation of the transmitted signal. It also carries out statistical and temporal analyses on the progress of frequency deviation and controls the quality of the RDS signal.

Finally, the **Network Managing Module** examines the entire network of transmitters, highlighting different types of data on several layers, so as to analyse and precisely intervene in groups of transmitters with common characteristics or problems.

