

## DID YOU KNOW THAT...?

### TP 8000 USER PANELS FEATURE AN INTERNAL DSP FOR SOUND PROCESSING AND PROVIDING INCREASED OPERATIONAL EFFICIENCY



Apart from other advantages such as AoIP connectivity based on **Dante™** technology, expansion panels to increase to 64 the number of physical keys, and thoroughly engineered acoustics providing the highest possible level of sound intelligibility and clarity, state-of-the-art technology has enabled us to make these intercom panels “smart”; improving intelligibility and operational convenience.

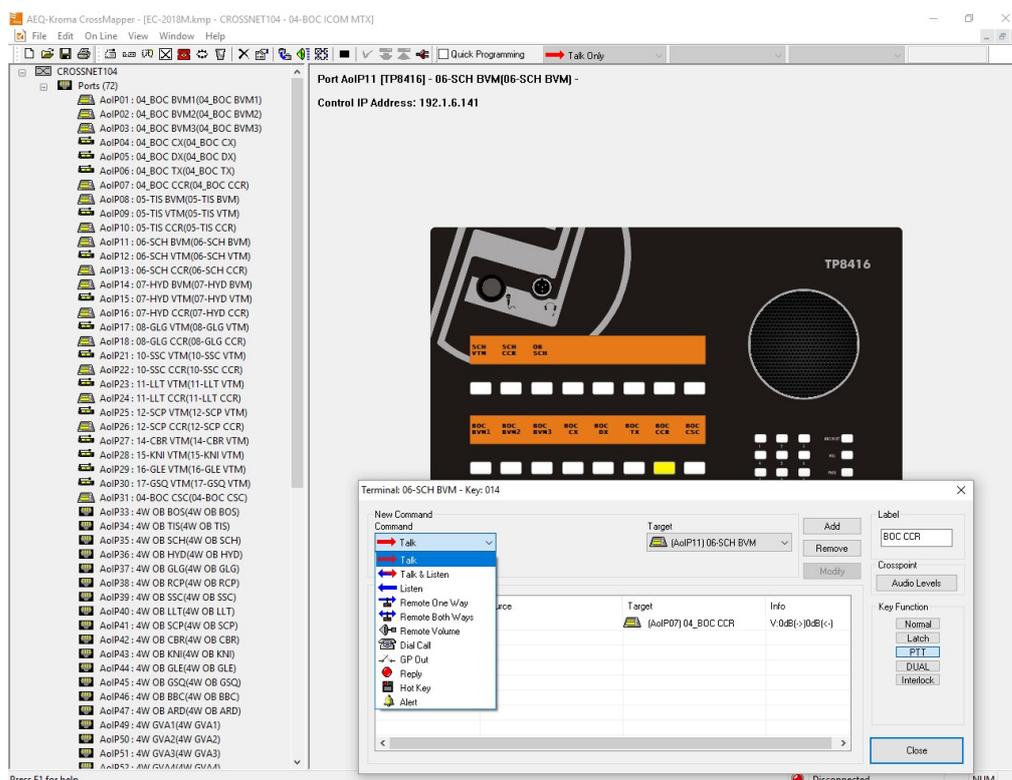
This way, the main feature that makes these panels stand out when compared to our competitors and our own previous models is the presence of an internal DSP with powerful processing capabilities. The DSP allows the panel to digitally process audio to provide acoustic echo cancellation and automatically balance voice level and tone to perfectly adapt to the vocal personality of each operator. This both simplifies speech and improves comprehension. The following audio processing functions have been implemented:

- Echo cancellation, with adaptive filtering based on LMS algorithms with more than 3000 coefficients, in order to avoid local feedback and potential audio return.
- 3-band parametric equalizer, low-pass, high-pass and band-pass filters, in order to adjust the audio “brightness” and choose the perfect balance between voice clarity and intelligibility.

- Dynamics processing:
  - Compressor, to make a wide range of microphone distances and angles possible.
  - Expansion and noise gate, to remove or minimize room’s ambient noise.
- Configurable Noise gate, that mutes the user panel when required, creating the best possible listening ambient for our communications.
- Internal TEST audio signal generators (1 kHz tone and pink noise).
- Includes a replay function allowing the user to play again the last 16 seconds of audio received in the speaker / headphone output.

Audio processing can be set up using “Crossmapper” software. Default profiles are provided, but they can be modified or new, custom ones can be created and applied for different working environments.

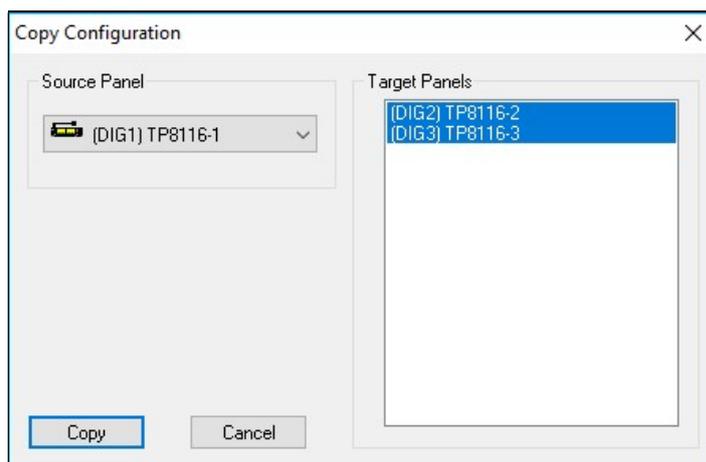
### CROSSMAPPER SOFTWARE VERSION ALLOWING FOR THE CONFIGURATION OF TP8000 SERIES INTERCOM PANELS



The arrival of the new TP8000 panel series to Kroma by AEQ family of Intercom systems (Conexia, CrossNet and TH5000), allowed the development of a new version of this configuration software, enabling us to take advantage of all the features included in these new panels.

DSP operational parameters are also configured in this application, allowing them to be customized for each different scenario:

A configuration replication function has been included, so once the DSP in a particular panel has been adjusted, a copy of the processing adjustments can be made from that panel to others operating in similar environments.



Besides, if you don't want to use the matrix centralized storage of these audio processing settings they can also be individually stored into each panel using the "Intercom Manager" software. This may be useful to make the different audio ports available in the panel to perform other tasks different to intercom operation, such as audio format conversion, signal mixing, etc., allowing for independent audio processing of each input.

This way, Crossmapper allows for individual configuration of each Intercom Panel connection port. Using the default configuration, TP8000 panels can be connected to the matrix using different port types: digital, two AoIP ports (Dante TM), compressed VoIP and analog.

The availability of such a wide range of connection options for the User panel effectively turns it into a local matrix with format conversion to different formats. This becomes really handy during the installation phase of the system. Further, Crossmapper configuration software does not only give us individual access to input and output gain control for each of these connection ports, but also to the individual microphone and micro-headphone configuration options.

When we put all these features together with the broadcast-grade audio of the user panel, we find that TP8000 is one of the most advanced and innovative user panels available on the market. They also represent a great leap forward in terms of intelligibility, flexibility and operational convenience.