

AUDIO DECODER

Type: DAD-2



Voice announcements are an indispensable element of passenger information at railway stations, stops, and airports. A system selected in terms of the number and arrangement of elements adequate to the size of the facility is responsible for the broadcast of verbal announcements. Announcements should be precise and understandable.

Product description

The decoder is a specialized device for decoding digital streams sent from TrainECHO, TrainINFO systems or other announcement servers that are used in Passenger Information Systems. Cooperation with the servers of other manufacturers requires adaptation of the decoder's internal software.

The decoder, together with the class D digital amplifiers and the loudspeaker installation, creates a megaphone broadcast network on the facility.

The decoder supports the processing of data obtained from several sources (announcement desktops, announcement servers, etc.). The device handles broadcast requests in the order of priority given to the sound sources. The device has support for the SIP telecommunications protocol, which allows cooperation with VoIP telephony systems.

Thanks to full integration with amplifiers, through the data exchange protocol, the decoder has the ability to monitor the condition of amplifiers, their audio and logic inputs and outputs, the condition of power amplifiers or loudspeaker lines (short circuit, open circuit, short to ground) as well as the Ambient Noise background volume level.

Information about the condition of the decoder and amplifiers can be sent to the controlling master system, e.g. TrainINFO, by using a dedicated communication protocol or available standard network protocols, e.g. protocols from SNMP group.



Basic decoder functionalities:

- Working with LAN / WAN 100 / 1000Base-TX (TCP / IP) connection enabling:
 - connection to CASDIP servers or other announcement servers (e.g. TrainECHO)
 - support for VoIP telephony connections (using the SIP protocol)
 - remote configuration and monitoring (e.g. SNMP)
 - time synchronization with NTP / SNTP servers
- Configuration of the built-in DSP signal processor (graphic equalizer, sound control) and DSP amplifier: each amplifier speaker line can be configured (signal delay, timbre)
- Amplifier volume control adjusted to background volume and time of day (e.g. day / night)
- Configuration of signal source priorities: CASDIP, VoIP, microphone desktop. Interrupting the announcement when a higher priority signal appears.
- Possibility of recording regular or signals (e.g. gong)
- Monitoring the external condition of the UPS and other devices using programmable inputs and outputs (voltage, temperature, humidity, cabinet opening)
- Cooperation with the VX-3004 amplifier with full control of its condition. Possibility to switch automatically to a spare amplifier in the event of failure of one of the amplifiers.

Technical parameters

- **Audio output:** line (0,707 V), (stereo or 2x mono)
- **Mic / line input:** 2 pcs. (additional support for 4 audio inputs of the amplifier - LINE / MIC)
- **Audio output frequency response:** 20Hz-20kHz
- **Signal / noise ratio:** ≥80dB
- **Streams / audio files support:** MP3, AAC, WAV, WMA, PCM G.711, Ogg, Vorbis, Opus
- **Network interface:** 10/100/1000Base-T- 2x RJ-45 (one socket dedicated for communication with the VX-3004 digital amplifier)
- **Network protocols:** TCP/IP, UDP, SNMP, NTP, SNTP, SIP (VoIP)
- **External outputs/inputs:** 2x USB 2.0, 2x RJ-45, 2x RS232 (COM)
- **Audio output/input:** 2x HD Audio
- **Programmable inputs/outputs I/O:** 8 optoisolated inputs, 4 relay outputs
- **Cooling system:** Passive
- **Dimensions (width/depth/height):** 483 x 344 x 90 mm (Rack 19" 2U)
- **Power:** 230V AC (optionally 24V DC)
- **Operating temperature:** -5°C ÷ +55°C (at 20-90% humidity without condensation)

Cooperation with Passenger Information Systems

TrainECHO, TrainINFO, operating according to the Ipi-6 PKP Polskie Linie Kolejowe (Polish Railway) standard, optionally other systems after the appropriate adaptation of the internal software.

Service and Maintenance

The decoder has many self-monitoring functions that allow signalling of any incorrect operation and enable automatic restart. Remote access enables diagnosis and servicing over the LAN network. If any irregularities are found, follow the instructions described in the user's manual. The decoder requires no maintenance.

