Trantek MST passenger information systems

AMT-5 is the designation for the Trantek MST on-board passenger information system that includes public address, passenger emergency intercom and next destination display that is connected by a 2-wire CAN network that can be duplicated for redundancy.

The public address system, unlike traditional designs, does not have a main and backup amplifier with a string of speakers providing the audio output. Instead each speaker has its own built-in amplifier, communications and audio processing unit and a background noise sensing microphone that doubles to become a continuous closed loop check on the speaker's performance during announcements.

The passenger emergency intercoms connect to the same two-wire CAN bus network as the public address and the destination displays and can also form part of the public address speaker complement.

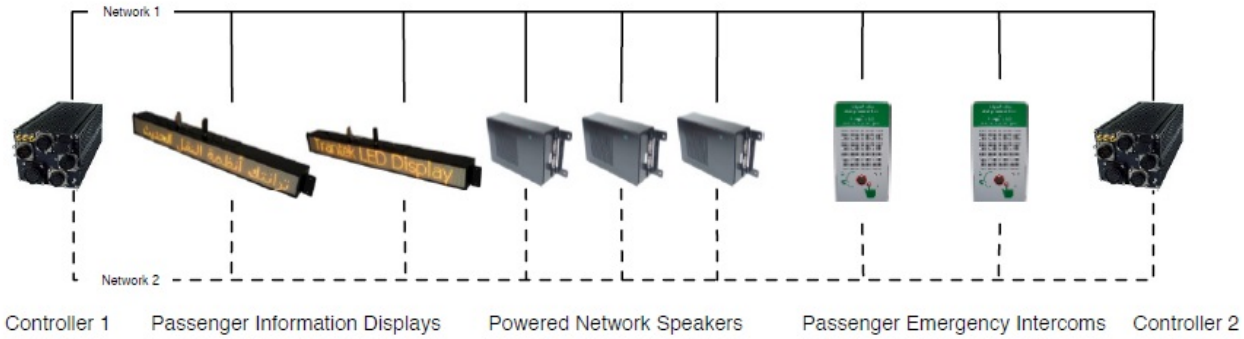
The system boasts a high level of fault tolerance and dynamic checking of its functionality. The functional performance of every speaker and emergency intercom is checked during every announcement or on-demand by operator action. Typically this functionality is managed by two controlling nodes, one at each end of a train, that connect to the devices over two independent CAN buses.

The CAN network duplication is for redundancy and only one is required for normal operation. The controlling nodes route audio from operator microphones, themselves a node on the CAN network, digital audio or data from a central operations network or digital voice announcements from the on-board computers.

The operation of the redundancy and fault tolerant features is performed on the network and does not require the addition of special arbitration or switching devices. Audio can seamlessly arrive over a wireless network, driver microphone or recorded digital voice announcement to either of the control nodes and be delivered using the best available path.

The AMT-5 passenger information family provides a high degree of fault tolerance, flexible and continuous fault checking and a high level of flexibility for system design and configuration. It provides system integrators, constructors and operators the following features:

- **Multiple path redundant independent audio and data communications**
- **Dynamic health monitoring of operation**
- **Network speakers with built-in amplifier, audio processor and background noise monitoring**
- **Software configurable audio zoning**
- **Simple wiring**



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