



On-board Train Communication System



- Passenger Announcement
- Crew Communications
- Driver/Control Centre Radio Communications
- Emergency Driver/Passenger Communications
- Disabled Persons Communications
- On-Train Entertainment
- Audible Warning
- Pre-recorded Digitised Special Messages
- Other features can be accommodated to suit particular requirements

GAI-Tronics are able to provide conceptual engineering facilities for the design and manufacture of on-train communications systems.

With considerable experience of telephony, audio and radio transmission technology, we are equipped to supply sophisticated answers to the problems of modern integrated communications systems, particularly when associated with the transport industry.

We provide 'on-train' communication systems to meet the needs of modern rail transportation by using standard products or by providing bespoke solutions to meet individual customers needs. The systems described are typical of those currently being produced and developed for applications in the UK and throughout the rest of the world.



Further information is also available describing the communications hardware suitable for rail trackside use as well as at station concourse and underground locations.

GAI-Tronics Systems

On-board Train Communication System

Systems generally comprise a series of driver control units and amplifiers feeding strategically located ceiling mounted speakers and passenger interfaces.

Facilities provided include:

- Handset communications between the driver and crew members
- PA announcements over the entire train by the driver using a handset or stalk microphone
- PA announcements to selected unit by the driver using a handset or stalk microphone
- Passenger Emergency communications with the driver using hands-free intercom
- Disable passenger communication with the driver using hands-free intercom
- Automatic speech announcements over the PA initiated by the driver or the Train Management System (TMS)
- Emergency train-radio announcements over the PA
- Self-diagnostics and fault reporting facility
- Integration with visual displays for synchronised information
- Military type connectors for ease of maintenance
- Ambient noises monitoring system and automatic adjustment of audio output levels



**TRANSMITTER WITH
AUTO MESSAGING FACILITY**



AMPLIFIER UNIT



HANDSET



**DRIVER CONTROL PANEL &
TRANSMITTER UNIT**



HANDSET



**STALK
MICROPHONE**

All systems are compliant with relevant Group Standards, (low smoke no halogen materials are used where possible)
Standards met include:

- EMC – RIA, EN50121-3-2
- Ingress Protection IP54 and IP65 for passenger communications units
- Operating Temperatures – typically -25°C to $+55^{\circ}\text{C}$. RIA specifications – compliant with RIA 12, 13, 18 and 20 (transient and surges, transient burst, vibration, environmental, EMC)

