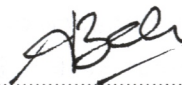


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Guidance Note

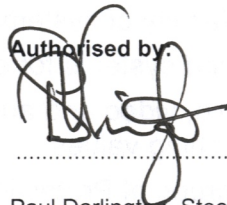
Loudspeaker Selection for PA and VA systems

Endorsed by:



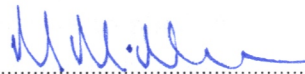
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Issue record

Issue	Date	Comments
1	Dec 2009	First Issue

Reference documentation

NR/L2/TEL/30134	Design and Installation Requirements for Public Announcement, Voice Alarm and Long Line Public Announcement Systems
RIS-7700-INS	Rail Industry Standard for Station Infrastructure
BS 5839-8: 2008	Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of voice alarm systems
BS 60268:16 2003	Sound System Equipment - Objective rating of speech intelligibility by speech transmission index
BS EN 54-24	Fire Detection and Fire Alarm Systems
BS 5760	Reliability of systems, equipment and components
BS EN 60849: 1998	Sound systems for emergency purposes
BS 61938: 1997	Audio, video and audiovisual systems Interconnections and matching values
BS EN 60529:1992	Degrees of Protection provided by enclosures (IP code)
TD GEN096	Telecoms Requirements for General and Emergency Use at Sub Surface Stations
Code of Practice	Accessible Train and Station Design for Disabled People: A Code of Practice July 2008. (Joint publication by the DfT and Transport Scotland)

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1 Purpose

This document provides guidance for the selection of loudspeakers for PA and VA. It supports NR/L2/TEL/30134 which mandates the Design and Installation requirements.

2 Scope

The scope of this guidance document is the key considerations and typical product specifications for loudspeakers installed on Railway Stations.

3 Definitions

Ambient Noise

The surrounding noise associated with any given environment; also called background noise

dB

Decibel

dBA

A-weighted decibel, abbreviated dBA, is an expression of the relative loudness of sounds in air as perceived by the human ear

Dispersion Angle

The coverage angle at which sound is emitted over a given area

Effective frequency range

The minimum range over which the loudspeaker must operate

IP

Ingress Protection

Loudspeaker

An electro-acoustic transducer that converts electrical signals into sounds loud enough to be heard at a distance

MTBF

Mean Time between Failures

PA

Public Address

Product Acceptance

Agreement by Network Rail that the equipment or system may be installed on Network Rail infrastructure