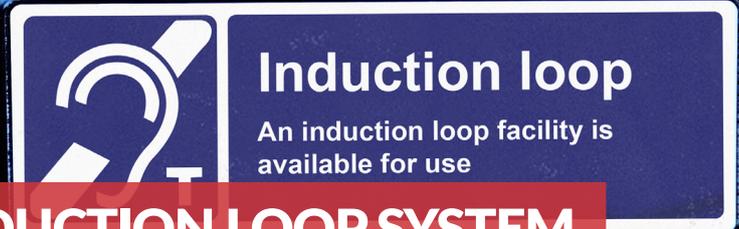


V-ILS



AUDIO-FREQUENCY INDUCTION LOOP SYSTEM

Ambient noise and physical barriers in buses, such as the sound of the engine, greater distance between the source of a sound and the security screen between driver and passenger, can make it difficult for hearing impaired passengers to discern relevant information.

The Forman V-ILS is designed to enable users of hearing aids to communicate more clearly with the driver and receive on-board information directly into their hearing aid device.

The system conforms to the BS 7594 code of practice for AFILS and the Public Service Vehicle Accessibility Regulations (PSVAR), which requires that all public service vehicles have adequate provisions for the hearing impaired. It can drive two separate induction loops, allowing one loop to be used for passenger/driver communication and one loop for the delivery of vehicle information system announcements.



Driver/passenger communication aid

The entrance platform induction loop allows the driver to communicate directly with passengers using hearing aids, regardless of physical barriers and ambient noise.



Direct delivery of vehicle information system messages

The induction loop system located in the saloon allows for the delivery of vehicle information system announcements directly into the hearing aid.



Compliant with disability and safety regulations

The system has been specifically designed to conform to the BS 7594 code of practice for AFILS and the PSVAR, which takes full effect in 2020.

How Does V-ILS Work?

The Forman Audio-Frequency Induction Loop System works by using a source sound, either the voice of the bus driver transmitted via a microphone (1), or a speaker input from the vehicle information system. The source sound is transmitted via an amplifier to the induction loop pad (2) (3) by electric current, which creates a magnetic field. This magnetic field can be picked up by hearing aids equipped with a telecoil (t-coil), when switched to the correct setting.

The system drives two separate induction loop systems. This means two separate sound sources can be used on the same system, which provide localised hearing loop areas.

Induction Loop System for Driver/Passenger Communication

The first induction loop (2) is located at the front of the bus at the driver's cab. The driver can speak to the passenger using a microphone located in the cab, which is amplified via the platform pad in the ceiling above and received through the hearing aid.

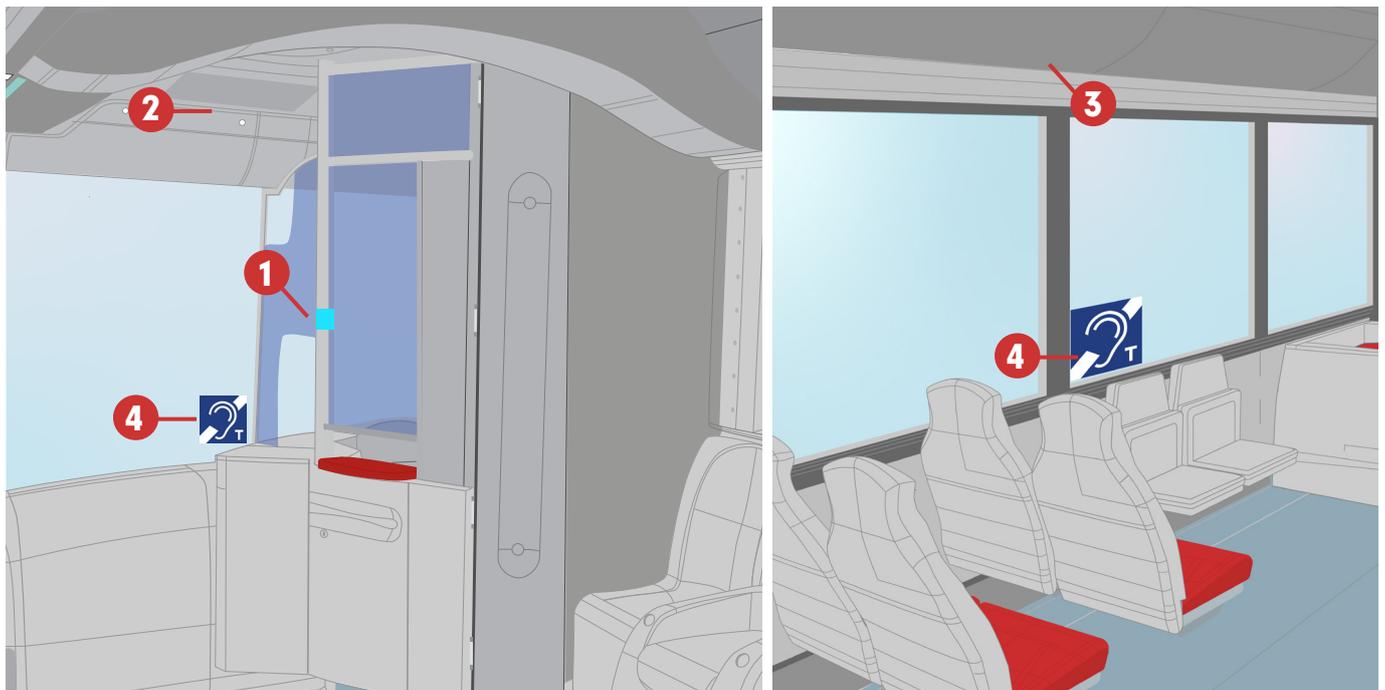
Induction Loop System for Vehicle Information System Announcements

The second induction loop (3) can be positioned in the ceiling above priority seating and wheelchair areas or above the entire saloon. This induction loop allows for the transmission of the vehicle information system announcements such as information on stops and delays.

AFIL labels (4) fitted below each of the induction loop pads clearly identify the induction loop areas.

Example V-ILS Equipment Location

- 1 Microphone in driver's cabin
- 2 Induction loop pad for direct communication between driver and passenger
- 3 Induction loop pad for priority seating
- 4 AFIL labels



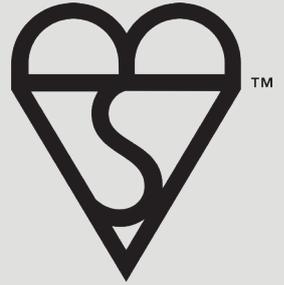
Requirements and Standards for Induction Loop Systems

There are several acts, regulations and standards that address the difficulties faced by the hearing impaired. In the United Kingdom, the **Equality Act (2010)** aims to protect people from discrimination or unfair treatment on the basis of certain personal characteristics, such as disabilities. The act requires service providers to make reasonable changes where required to improve accessibility for people with disabilities, including the hearing impaired. This includes the provision of auxiliary aids, such as induction loops for customers with hearing aids.

BS 7594:2011 is the code of practice for audio-frequency induction loop systems (AFILS) which aims to ensure that induction loops are fit for purpose, functioning correctly and of real benefit to the user.

The code of practice gives recommendations for and recommendations on the design, planning, installation, testing, operation and maintenance of an audio-frequency induction loop system intended for communicating speech, music and/or other signals.

To comply with BS 7594:2011 it must be demonstrated that the induction loop systems meet certain criteria, including being fit for purpose, in working order and having a field strength of 400 mA/m.



Features

- 24VDC dual amplifier
- Multiple loop pad outputs
- Driver's microphone
- AFIL labels fitted directly below each pad, adjacent to the designated areas
- Saloon passenger announcement interface
- LED indicators for power and auto gain for cab and saloon outputs
- Volume, tone and gain controls for platform and saloon systems
- Robust housing with fixing plate
- EMC approval to UN Reg 10-E11 10R-059260

Key Technical Specification

V-ILS Audio-Frequency Induction Loop System

Power Supply	24 V to 30 V (32V tolerated for 1 hour) Optimised for use with 27 V supply Standby current: 0.2 A (max) Operating current is typically 1 A (mean) while normal speech is playing on both channels simultaneously. It can momentarily peak at 4 A for very short durations
Connectors	TE Connectivity MULTILOCK 070 Series 12-Way (plug P/N: 1783851-1) Power; saloon audio input (iBus speaker tap); cabin loop and saloon loop outputs 3.5 mm audio jack Microphone input Headphone output Line output
Hearing Loop Output (x2)	Current is adjustable; nominal setting is 0.4 A rms (peak average)
Microphone Input	Monophonic electret condenser Impedance: 2.2 k Ω
Line Output	The saloon signal is passed via the left channel (tip) and the cab signal via the right channel (ring)
Headphone Output	Provided for monitoring purposes during installation. Connects to a stereo headphone. Presents a monophonic mix of the cab and saloon signals to the listener. Nominal headphone impedance: 32 Ω (per side)
Indicators	Power Lights when unit is powered AGC (Automatic Gain Control) Lights when AGC is active Cab loop output Lights when cab-loop current is greater than 400 mA rms Saloon loop output Lights when saloon-loop current is greater than 400 mA rms
Approvals	E11 10R-059260

For the complete technical specification and operating instructions, please contact Forman Vehicle Services.

**To find out how we can help you enhance
the safety of your vehicles, call us on
+44 (0)1642 713530**

Forman Vehicle Services
a division of Ardent Limited
Unit 3 Becklands Close,
Bar Lane, Roecliffe
North Yorkshire, YO51 9NR
United Kingdom

Telephone +44 (0)1642 713530
Email enquiries@formanvehicleservices.com
Website www.formanvehicleservices.com

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FVS-PF-0601