



## Large Area Vehicle Hearing Loop Driver

VLD1

The Large Area Vehicle Hearing Loop Driver is a durable unit designed to enhance communication throughout transport vehicles such as buses and coaches.

This dual-output driver powers phased array and perimeter hearing loops with an Class-D amplifier output stage and an audio subsystem built around an advanced DSP core.

Automatic gain control and high-frequency compensation provide control in environments with metal loss.

### Features

- 2 x Independent loop outputs (selectable 0° and 90° phase shift)
- Voltage: >12V<sub>RMS</sub> | Current: >4A<sub>RMS</sub>
- Line level Input (balanced and transformer isolated)
- Line high voltage level input (balanced and transformer isolated)
- Universal line or microphone input (microphone bias: optimised for Contacta microphones)
- DSP controlled automatic gain control and high-frequency compensation for metal loss
- Integrated protection circuits with temperature, voltage, short-circuit and DC detection
- Compact chassis with mounting brackets
- Flexible signal routing:
  - Line/mic input can feed one loop output whilst other inputs feed the second output, **or**,
  - All inputs can feed both outputs – outputs can then be selected as 0° and 90° phase shift
- Connector: WAGO 769 series
- Digital audio input [optional extra]

### Applications

For use in vehicles requiring coverage across large areas, such as:

- Buses
- Coaches

### Standards

- 2012/19-EU - The Waste Electrical & Electronic Equipment Directive
- 2015/863/EU - The Restriction of Hazardous Substances Directive
- EMC: EN/ECE R10 (EMC for vehicle components)



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## Physical Data



Dimensions	Height – 143mm (5.62") Width – 294mm (11.57") [361mm (142") inc. brackets] Depth – 41mm (1.6")
Construction	Zintec / Mixed
Finish	Powder Coated

## Technical Data

Audio Inputs	1 x Line level Input (balanced and transformer isolated)	Voltage	-45dBV – 0dBV (optimized for -10dBV – 0dBV)
		Frequency Range	100Hz-6000Hz
		Topology	Balanced and transformer isolated
	1 x Line High Voltage Level Input (balanced and transformer Isolated)	Voltage	+5dBV – +45dBV (0.562Vrms -100Vrms)
		Frequency Range	100Hz-6000Hz
		Topology	Balanced and transformer isolated
	1 x Universal Line or Microphone Input (microphone bias: optimized for Contacta microphones)	Voltage	-45dBV – 0dBV (optimized for -10dBV – 0dBV)
		Frequency Range	100Hz-9kHz
		Topology	Electronically Balanced
		Microphone Bias	Optimised for Contacta microphones
[Optional extra feature, not fitted on standard units] 1 x Digital Audio Input	Connection	SPDIF	
	Encoding	PCM 16 bit	
	Sample Rate	44.1KHz, 48KHz, 96KHz	
Outputs	2 x Independent Loop Outputs (selectable 0° and 90° phase shift)	Voltage	>12Vrms
		Current	>4Arms
	Selectable 0° and 90° phase shift		
	1 x Line Level Output	The line outputs should have the following characteristics:	
		Format	Audio mix of all drivers
Phase shift		0°	
Gain	0dB		
System Connections	1 x Power Connection	Voltage	Nominal 24V (9V-24V)
		Current	Maximum 6.6Arms @ 9VDC
		Connector	WAGO 769 series detachable 2-way block
	1 x USB Connection [for factory configuration and system setup, adjustments and updates]	The input should have the following characteristics:	
		Connector	USB Type A
		Use	Firmware/Config/Update
	2 x Enable/Disable (Mute) Connections	The input should have the following characteristics	
		Trigger	Configurable (High-Low or Low-High)
		Threshold	Production Configurable (Resistor change)
	Connector Type	WAGO 769 series	