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Solutions to improve the quality of life



ILD500 Professional Audio Induction Loop Driver

The ILD500 is a new addition to our professional audio induction loop range capable of driving loop areas in excess of 500m² with an unsurpassed clarity of sound for both music and speech for superior intelligibility. Based on proven and highly reliable technology it is backed by an unrivalled 5 year warranty and free technical support. Improved power output provides outstanding value without compromise. It boasts all the usual features found on Ampetronic equipment such as metal loss correction and is compatible with our unique Ultra-low Spill™ and Parallel Drive™ technologies. The ILD500 is a compact and elegant unit suitable for freestanding, wall mounting or rack mounting.



Features

- **Area coverage to > 700 m²**
- **Low lifetime cost**
 - Excellent proven reliability
 - 5 year warranty
- **Unparalleled sound quality**
 - Excellent intelligibility
 - Speech optimised gain control
 - High voltage headroom avoids high frequency clipping
- **Metal loss corrector** corrects frequency dependent loss from metal structures
- **Rack mount brackets included**
- **Microphone (XLR) and line inputs**
- Extensive **input adaptors** available for any audio input requirements
- **Free technical support line** for advice, design and install

Applications include:

- Conference facilities
- Stadia
- Theatres
- Sports halls
- Confidential rooms
- Courts
- Lecture halls
- Cinemas

Perimeter Loops – Area Coverage (maximum)

Room aspect ratio	1:1	2:1	3:1
Maximum area m ²	420	525	700

For any Induction Loop System, area coverage is dependent on several factors. Please check these assumptions and contact Ampetronic for advice if required:

- loop must be 1-2m above or below the receiver height
- there should be no metal structures in the plane of the loop
- sufficient voltage to drive the loop – check the cable table below

Low Overspill or Low Loss Systems

ILD500 amplifiers are designed for use in combination with Ampetronic Ultra-Low Spill™ technology. This will require an SP5 phase shifter and an array design – Ampetronic can provide designs or guidance for any application. Used to drive an array, two ILD500s can:

- minimise ‘spill’ – confines signal to within 1.5m of room, suitable for adjacent rooms e.g. cinemas, classrooms, or confidential rooms
- compensate for high losses due to metal structures – the only effective solution for high loss environments to meet IEC 118-4

Maximum Cable Length

The ILD500 is designed for SINGLE TURN loops for optimum audio quality:

- Loops with DC resistance from 0.3 to 2.0 Ω
- Impedance up to a maximum of 2.2 Ω

Maximum cable length is dependent on cable type and on the application:

Cable type	Maximum Total Cable Length (m)	
	Normal use*	Transient speech*
1.0mm ² copper	83	96
2.5mm ² copper	114	145
4.0mm ² copper	118	154
1.8mm ² flat copper tape	147	170

* Short term speech (e.g. service counter, airport PA system) can cope with limited clipping at high frequencies – Ampetronic recommends delivery of full current up to 1.2kHz for these applications. Longer term usage or signals with music or high quality audio must deliver full current to at least 1.6kHz to prevent fatigue and give acceptable intelligibility. Many commercially available systems do not deliver sufficient voltage to reproduce critical high frequencies – ask Ampetronic for more details.

ILD500 Product Information

Equipment supplied as standard with the ILD500

- Handbook and installation instructions
- 197 x 252mm loop system present sign (deaf logo)
- Region specific mains cable
- Loop connector

ILD500 optional accessories

Ampetronic can supply a range of accessories to meet the specific needs of your installation:

Microphones	A range of microphones can be supplied or specified for most applications on request
Input adaptors	A range of input adaptors and interface cables to accept most audio source inputs, see table below
Installation accessories	<ul style="list-style-type: none"> • 18mm x 0.25mm copper tape • PVC extrusion to protect copper tape • Installation / warning tape to fix cable or tape to a floor
Wall mount brackets	WMF1-U
Phase shifter	SP5 for an array system – use of and SP5 requires a design which can be provided by Ampetronic

Input adaptors and preamplifiers

By using the appropriate input adaptor or preamplifier the ILD500 will accept multiple additional inputs or audio inputs from other sources:

Input type	Adaptor
Additional microphone and / or line inputs	MP101 / MP221 / MP522 mixers and preamps can drive up to 5 mics + 2 line inputs
70V / 100V line input	ATT100 adaptor
40V / 70V / 100V line inputs, with transformer isolation	ATT T series adaptors
Low impedance speaker line	ATT30 adaptor
Unbalanced microphones	MAT1 adaptor

Standards compliance

The ILD500 is CE marked to all relevant safety and EMC standards.

All Ampetronic amplifiers can be used to create a system that meets the requirements of IEC118-4 and the relevant recommendation of BS7594, however the design and installation of the system is equally important to meet these Induction Loop standards.

Some Ampetronic products are CSA registered for sale in the USA and Canada – contact Ampetronic for details.

INPUTS

Power	85W 230V AC nominal, 45-65Hz [120V option available]. Power switch and LED indicator on front panel.
Microphone input	XLR balanced microphone input for 200-600Ω microphones; 15dB user selectable gain boost; + 15V DC phantom power (selectable); sensitivity – 70dBu; front panel recessed gain control.
Line input	6.4mm jack socket balanced line input; sensitivity – 30dBu; overload protected; front panel recessed gain control.
Slave I/O	6.4mm jack insert point for connection of SP5 phase shifter. 0dBu signal can be used for recording.

OUTPUTS

Drive voltage	>20V at maximum current output.
Drive current	<ul style="list-style-type: none"> • 1kHz sine wave peak: 9A • Short term peaks: >13A • Front panel recessed control; drive current indicated on 6-LED • display in 2dB increments
Loop connector	Wieland ST17/2 (supplied).
Loop Monitor	Provides access to actual audio signal in loop. 35mm stereo headphone connector on front panel.

AUDIO SYSTEM

Freq. response	80Hz to 6.5kHz
Automatic Gain Control	The AGC is optimised for speech. Dynamic range >36dBu.
Metal loss correction	<p>Corrects system frequency response due to metal structures in a building. Gain constant at 1kHz, adjustable gain slope from 0 to 3dB per octave.</p> <p>This <i>does not</i> compensate for signal loss from metal structures which can be significant.</p>

ADDITIONAL FUNCTIONS

Fault Monitoring	<p>Three LED fault indicators on the front panel;</p> <ul style="list-style-type: none"> • Overload – delivering over the rated current • Overheat – unit is too hot (mutes output signal) • Loop error – short circuit / open circuit error
Ancillary	To supply Ampetronic ancillary units. ±15V DC 0.15A power outlet on rear panel.
Cooling	Forced ventilation. Air intake on left panel, air ejection at rear.

PHYSICAL

Size	Full width 1U 19" rack mount. Width 430mm Depth 220mm Height 44mm.
Mounting options	<ul style="list-style-type: none"> • Freestanding • 1U 19" rack mount (brackets included) • Wall mounting (requires additional brackets)
Weight	3.75kg
Environment	IP20 protection; 20 to 90% relative humidity; 0 to 35°C.



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