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# ILD20DC

## Induction Loop Amplifier

### Installation & Commissioning Handbook

#### Automotive installations

#### 1. Installation

The ILD20DC is designed for installation in motor vehicles, where it will connect to the 12V battery system, the installed stereo sound system (extracting compatible mono), and with provision for a microphone to be mounted in the appropriate location.

***Please note that the Loud Speaker Adaptor module should have been ordered as a separate item.***

#### 2. Preliminary Installation data and checks.

Check that the equipment is not damaged when unpacking, and that all the relevant parts are available.

Ensure a fused supply from the 12V battery system which is switched, so that the equipment is only activated when the ignition is on - possibly use a switched power feed from the sound system.

#### 3. Physical installation.

The unit must be installed in a location where the equipment is restrained from moving, while still permitting ventilation. When seen from the top, normal way up, the lefthand side is used as a heat radiator, and must not be blocked. Actual position is not important, but the equipment is not protected against dirt and liquids. The ILD20DC has fixing slots on the rear face permitting secure mounting.

The Loudspeaker adaptor box similarly must be installed in a secure place, but no heat is produced by this unit. Adhesive patches may make a satisfactory mounting.

#### 4. Fitting the Loop Cable.

The loop is positioned behind the roof lining, as far out as is normally practical. The cable position MUST be OUTSIDE the area where signal reception is important.

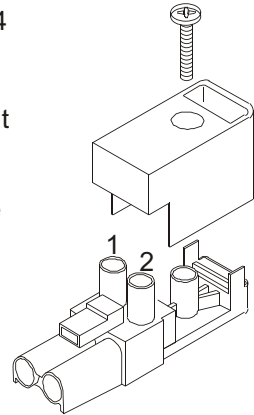
At present, the optimum loop configuration for most USA automobiles will be a three-turn loop, using either 18SWG (preferred) or 20SWG wire. The cable can be a 3-core cable, but the interconnections of the cores must be made at the loop / roof level, with a twisted pair coming from there to the

ILD20DC. At this unit, it connects to the LOOP terminals. The Loop cable must be fully insulated from the vehicle.

### 5. Connecting the DC supply.

A suitable 12 Volt DC supply must be available, which will be switched automatically with the vehicle ignition system or similar. This should be fused remotely at between 4 and 8 Amp. Note that the unit also has internal protective fusing.

The cable carrying this supply is wired into the input power connector, a drawing for which is shown alongside. The “ground” lead (negative of supply) should be connected to terminal 1, and the positive lead is wired to terminal 2. Reversal of these connections will prevent operation of the equipment.



### 6. Connecting a Microphone.

The unit has two microphone inputs, with bias power for electret capsules. Either or both inputs can be used. To satisfy EMC regulations, no microphone input cable, which is single-ended, should be longer than 3 metre / 10 feet.

However, in many circumstances a longer cable can be used, though motor vehicles are often very noisy electrically. Use a good quality screened cable terminated with 3.5 mm MONO plug and socket as an extension cable for the supplied microphone.

### 7. Connecting to vehicle sound system.

Normally, the signal will be taken directly from the loudspeaker terminals. If separate “Bass” speakers are used, then these are normally ignored, as hearing aids are not capable of reproducing the low frequency sound from these speakers. The signal is then taken from the midband-high speakers in the system.

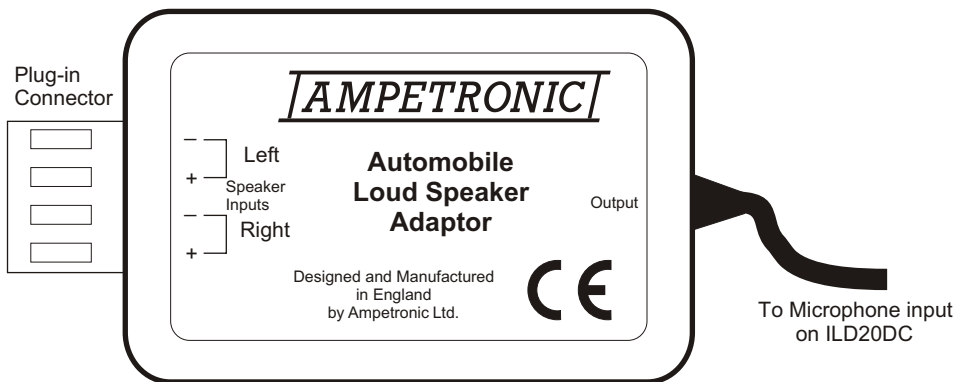
The adaptor module supplied has provision for two inputs, one from the left and one from the right channel. It is essential that identical connections are used on both speaker sets to ensure that the equivalent compatible “mono” signal is obtained. Any reversal of one set will seriously degrade the sound quality obtained.

Take a twisted pair from each set of speaker terminals, and connect this cable to the relevant screw terminals on the adaptor unit. Ensure that all screws are done up tightly, and that no stray wire ends protrude from the connector bushes.

The adaptor module is designed to take signals from any speaker configuration, and will never cause overloads, earthloops, etc. The output cable from this adaptor box is connected to the second microphone input on the ILD20DC

### 8. Setting up the ILD20DC amplifier.

- Adjust the “DRIVE” control to about  $\frac{3}{4}$  full. Set the “TONE” control fully anticlockwise. Note that this control is actually a metal-loss frequency



corrector.

- Assuming that the microphone is connected to Microphone input 1, increase the gain until the green Compression LED begins to flash while speaking normally in the usual position, with the microphone positioned in the desired place. Note this position, and return control to zero. It will be moved back to this position later on.

- Operate the sound system at a level which is comfortable for normal passengers. Increase the “Microphone 2” gain (if this is the chosen input from the adaptor module) until the Compression LED begins to flash. The red Current LED should flash at the peaks of the signal.

Listen carefully to the sound obtained, and adjust the “TONE” control until the frequency response is satisfactory. Adjust Drive to obtain the correct magnetic field strength.

- Restore the microphone 1 setting, and check for compatibility of the sound level from this microphone, and the level from the sound system. Adjust as necessary to obtain a satisfactory mix.

## 9. GENERAL INFORMATION

Dimensions	ILD20DC	Speaker Adaptor
Length:	194 mm	80mm
Width:	101 mm	60mm
Height:	40 mm	40mm
<b>Weight:</b>	908g	88g
<b>Power consumption</b>	15 Watt max.	Nil

### Warranty Information

This product carries a 5 year parts and labour warranty which could be invalidated if these instructions are not followed correctly, or if the unit is tampered with in any way.

The 5 year warranty is dated from the time the equipment leaves Ampetronic and NOT when it is installed.

The ILD20DC is designed and manufactured in England by Ampetronic Ltd.

## DECLARATION OF CONFORMITY

Manufacturer: Ampetronic Ltd.  
Address: Northern Road Newark,  
Nottinghamshire, NG24 2ET  
United Kingdom.

Declares that the product:

Description: Induction Loop Driver  
Type Name: ILD20DC

Conforms to the following Directive(s) and Norm(s):

Directive 89/336/EEC  
EMC: EN55103-1 (1997)  
EN55103-1 (1997)  
Directive 73/23/EEC  
Safety: EN60065 (1998)

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