AMPETRONIC

Datasheet

CLD1 / CLD1-AC Compact Loop Driver

The CLD1 Compact Loop Driver is designed for counter systems and small area perimeter loop systems. Measuring only 128 x 74 x 35mm and with an output current of 2.4A RMS, the CLD1 is the smallest and highest performance amplifier in it's class. Designed and built to Ampetronic's high standards of reliability, backed with a 5 year warranty and Ampetronic support, the CLD1 offers certainty of performance and the lowest lifetime cost available.

Audio quality is ensured with metal loss correction (MLC) combined with Ampetronic's usual high standards of design. The CLD1 is designed for flexibility and convenience, featuring 2 separate microphone inputs with independent level controls, one of which can be configured as a line input. All cable connections are made on a single face of the unit, adding flexibility and further simplifying installation.

Features

- **Low lifetime cost**
- **5 Year warranty**
- **Very compact**
- **Choice of microphone and pre-formed loop in counter kit**
- **2 independent inputs featuring 1 mic input and 1 switchable mic/line input**
- **Metal loss compensation**
- **All connections to a single face for installation convenience**
- **12V DC or external AC power pack supplied as standard. CLD1-AC has integral power supply**
- **Free technical support**

Applications include

- **Ticket and service counters**
- **Retail counters**
- **Information kiosks**
- **Reception desks**
- **Interview rooms**
- **Small meeting rooms**
- **Taxis and private cars**

Boundary Microphone Q400

Tie Clip Microphone EM-1.2

Desktop Microphone EM195A

Counter Loops

When supplied as a counter loop kit, the CLD1 comes with choice of microphone, a multi-turn preformed loop, power supply and simple installation instructions.

The loop should be mounted vertically in accordance with the installation instructions. Other installation methods are also available.

The CLD1 in this application will project a field to the requirements of IEC60118-4 approximately 1m from the preformed loop.

Perimeter Loops – Area Coverage (maximum)

The CLD1 is designed for small perimeter loop applications in rooms or in vehicles. Coverage with a single turn loop:

Room aspect ratio	1:1	2:1	3:1
Maximum area coverage m^2	20	30	35

- The loop is 1-2m above or below the receiver height
- There are no metal structures in the plane of the loop
- There is sufficient voltage to drive the cable length – check table below.

The CLD1 is DC powered making it ideal for use in small vehicles such as taxis, private cars and small boats. We recommend a multi-turn loop in the headlining of the vehicle cabin – contact Ampetronic for an application guide.

Maximum Cable Length

With maximum current output the CLD1 can drive:
- Loops with DC resistance from 0.3 to 1.0Ω
- Impedance up to a maximum of 1.3Ω

When operating below maximum output, the CLD1 can drive longer cable lengths – contact Ampetronic for more details.

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

Cable type	Maximum Cable Length (m)
0.75mm^2 copper	44
1.0mm^2 copper	57
1.5mm^2 copper	71
1.8mm^2 flat copper tape	101

CLD1 Product Information

Ordering Information

The CLD1 compact loop driver can be ordered as a stand alone loop driver or as part of a kit for a specific application.

Counter loop kits comprise 1 x CLD1, 1 x preformed loop, 1 x microphone (choice), 1 x loop present sign, 1 x installation guide and 1 x power supply (region specific). The CLD1 is also available with an integral 100-240V power supply, part number CLD1-AC.

Product Description	Product Code External PSU	Product Code Internal PSU
Compact loop driver	CLD1	CLD/AC
Counter loop kit + boundary microphone	CLD1/CB	CLD1/AC/CB
Counter loop kit + tie clip microphone	CLD1/CT	CLD1/AC/CT
Counter loop kit + desktop microphone	CLD1/CD	CLD1/AC/CD

Input adaptors and preamplifiers

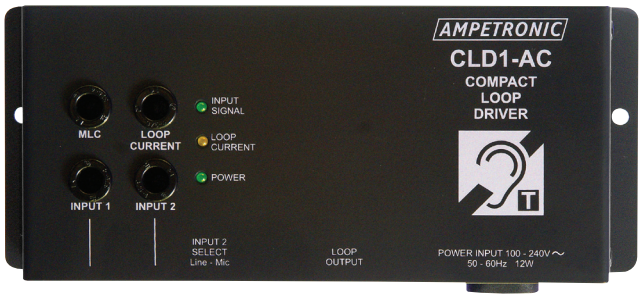
By using the appropriate adaptor or preamplifier, the CLD1 can be used with inputs from other sources:

Input type	Adaptor required
Balanced dynamic mic (XLR)	MAT60
Balanced capacitor phantom Power mic (XLR)	MAT60DC + PSU
100V line input Low impedance speaker line Line Level	ATT-UJ & ATT-UX transformer isolated attenuators

Standards compliance

The CLD1 is CE marked to all relevant safety and EMC standards

The CLD1 will meet the requirements of IEC60118-4 and the relevant recommendations of BS7594 if specified and installed according to Ampetronic's instructions



CLD1-AC with integral power supply

INPUTS

Power	12V DC @ 1.0A max. Fuse fitted to PCB, type T 1.6A L Green LED Power indicator.
AC Power adapter	All integral 100-240v AC (CLD1/AC) 18W max. Regional plug also available
Input 1	Microphone input Suitable for unbalanced electret microphone 3.5mm mono jack socket Input impedance 8kΩ. 6v bias via 10kΩ source Sensitivity -60 dBu for max output Overload level -14 dBu. Recessed control on front panel
Input 2	Switchable line / microphone Recessed switch on connector panel Microphone as for input 1 Line input: Input impedance 820kΩ Sensitivity -20dBu for max output Overload: >+20dBu.

OUTPUTS

Drive voltage	>3.2V_{rms} >4.5V_{pk} at maximum output current
Drive current	2.4A_{rms} 3.4A_{pk} continuous 1kHz sine wave Short term peak >4.8A_{pk} LED indicator on front panel
Loop resistance	0.3Ω to 1.0Ω resistive or <1.3Ω maximum reactive impedance
Loop connector	Vibration proof clamps, accept 0.5 to 1.3mm^2

AUDIO SYSTEM

Frequency response	80Hz to 6.3kHz ±1.5dB
Automatic gain control	AGC optimised for speech Dynamic range >36dB Green LED indicator on front panel
Metal loss correction	0 to 4.5dB/octave Recessed control on front panel

PHYSICAL

Cooling	Natural convection
Dimensions	128mm, 74mm, 35mm
Weight	280g (CLD1), 400g (CLD1 AC)
Environment	IP20 : 20 to 90% relative humidity, -20°C to 50°C
Mounting	Horizontal or vertical panel or wall mount, with 2 screw fixings

AMPETRONIC

www.ampetronic.com
sales@ampetronic.com
support@ampetronic.com
phone +44 (0)1636 610062
fax +44 (0)1636 610063

Northern Road, Newark NG24 2ET. United Kingdom

Issue no 35601-6