

Distributor:



UniVox® AC/DC-100

Loop system for lifts and buses with AC and support for DC backup power supply

Installation guide/Document of use

UniVox AC/DC-100 Loop amplifier (Part No 212020)

UniVox® AC/DC-100 is an highly efficient and compact loop amplifier with professional quality designed for areas such as lifts or buses with exceptionally high output current and power to overcome high degree of metal absorption.

This intelligent and easy to use amplifier can be connected simultaneously to 230-240V AC and 12-36V DC. It switches automatically between AC and DC sources in case of power failure. UniVox® AC/DC-100 is a reliable amplifier with a large safety margin.

The built-in Dual Action AGC input control and self regulating AGC output provides a stable sound with high speech perception even in hard hearing environments.

We thank you for having chosen a UniVox product and hope that you will be satisfied. All UniVox amplifiers have a very high output current capability resulting in powerful and secure products fulfilling existing standards.



Loop system UniVox AC/DC-100



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Bo EDIN AB, founded in 1965, develops, produces and sells wireless loop systems and assistive listening devices under the brand name UniVox. To ensure a high quality all products undergo careful tests and to fulfil our customers' needs the wide range also includes products from other companies. Approximately 50% of our sales are exported.

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Planning

A. Placement of loop wire and amplifier in lifts

The loop itself can be made out of any ordinary wire AWG 16/1.5mm² or larger surrounding the loop area by 6-8 turns.

It is recommended to place the loop wire at the inner ceiling for best signal strength, approximately 10cm from the outer edge. Leave some space between loop wire and the metal frame.

As an option the loop wire can be placed on top of the car but the metallic will decrease the field strength and increase the power demands from the amplifier. In most cases this is not a problem as the output current from the amplifier is very high.

The loop amplifier is normally best placed on top of the car where power outlets are available.

B. Placement of loop wire and amplifier in buses

Use a twin wire (any ordinary 2 x AWG 16/1.5mm² or larger) starting with a 2-turn loop (the wire surrounds electrically the area twice). Place the loop wire at a suitable place surrounding the listening area, like on top of the shelf or on the floor. Use a 1-turn loop if the result is not sufficient (too weak or distorted sound).

Place the amplifier at a suitable place (not covered to avoid overheating) and connect the loop wire to the amplifier using a twisted cable (or keep the loop wires tightly paralleled) to avoid interference with other signal cables.

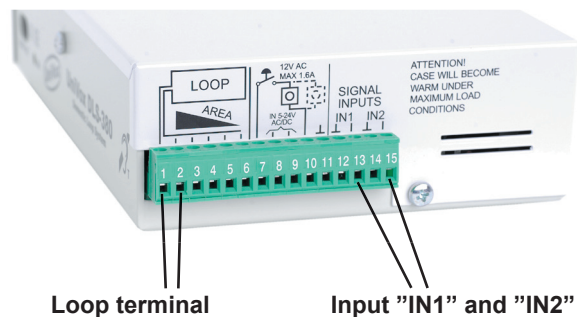
Notes

Installation

Install the loop amplifier

1. Connect the loop wire to the loop terminal 1 and 2 according to Fig. 1.

Fig. 1



Measuring devices



UniVox FSM

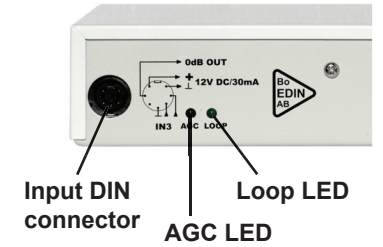
Instrument for professional measurement and control of loop systems according to IEC 60118-4:2006.



UniVox Listener

Loop receiver for fast and simple check of the sound quality and basic level control of the loop.

Fig. 2



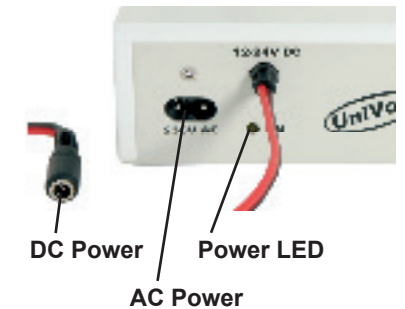
2. Connect the signal wire from the signal source, see amplifier data, using "IN1" or "IN2" (Fig. 1) or DIN connector (Fig 2). Make sure that the signal wire is not closely parallel to the loop wire to avoid interference.
3. Connect the loop amplifier to mains and/or DC power source (positive in the middle) as indicated on the amplifier. Yellow LED "ON" lights up if connected correctly.

Warning!

When using the DC input: The negative power DC (power ground) is **not** the same as the signal earth in the amplifier. However, external systems might have power and signal earth connected and could cause heavy current flow in the signal ground path resulting in cable fire!

Therefore connect first *only* the signal wire (not the signal earth) and adjust magnetic field as below. If the signal transmission doesn't work the earth on the amplifier and signal earth at the connected unit must be connected. Before such a connection make certain to verify that there are no voltage difference between the two!

Fig. 3

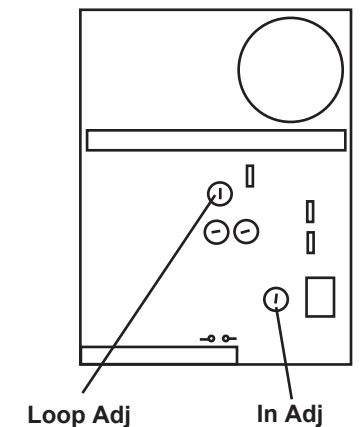


Commissioning

Check the loop system

1. Verify that the input signal activates the "AGC" LED (Fig. 2), otherwise adjust the "In Adj" trimmer inside AC/DC-100 until it is activated.
2. Slowly turn the "Loop Adj" (Fig. 4) trimmer inside AC/DC-100 until the highest peaks will reach 400mA/m ±3dB. Use the UniVox FSM or any other true RMS field strength meter, following the instructions for that instrument. The green "Loop" LED (Fig. 2) indicates that current floats in the loop wire.
3. Verify that the system complies with the existing standard IEC 60118-4:2006.

Fig. 4



Technical data

Power supply:		230-240V AC 50Hz, 3.5-100W 12-36V DC, 3.5-100W
Area of coverage:		170m², IEC 60118-4:2006, incl. the full strength of 400mA/m
Loop output:	Max current	60App/1ms/1kHz, short circuit safe output 17A RMS/10ms/1kHz 12A RMS/125ms/1kHz
	Max voltage	10V RMS
	Output AGC	Power controlled by voltage and current. The output voltage is reduced by 10dB after 0.6-1sec. Normal signals like speech are not regulated.
	Frequency response	80-6000Hz (±3dB)
	Distorsion	<1%
	Wire connection	Screw terminal
Inputs:	Input 1 and 2	7mV-10V (330Ω/150kΩ, screw terminal)
	Input 3	7mV-10V (10kΩ, 7 pin DIN-connector) preset for Euro Scart connector. Also equipped with voltage output (12V DC/30mA) for example for use with a preamplifier.
Dual Action AGC:	Dynamic range	>70dB
	Attack time	2-500ms
	Decay time	0.5-20dB/s
Trimmers:	Bass control	0 - +12dB, trimmer inside unit
	Treble control	0 - +9dB, trimmer inside unit
Optical indication:	Mains connection	Yellow LED on the front panel
	Input level	Red LED on the rear panel
	Loop current	Green LED on the rear panel
Part No:		212020

For additional information, please refer to product brochure and CE certificate which can be downloaded from "Product databank" at www.edin.se. If required, spare part lists or other technical documents can be ordered through support@edin.se.

Maintenance

Under normal circumstances UniVox loop amplifiers do not need any special maintenance. Should the unit become dirty, swiipe the unit with a slightly damp cloth. Do not use solvent or heavy cleaning agents.

Troubleshooting

Verify the control LEDs following the instructions in this installation guide. Use UniVox Listener to check the sound quality and basic level of the loop.

Service

Should the system not work after having made the product test as described above, please contact the local distributor of the product for further instructions. If the product should be sent to Bo EDIN AB, please enclose a filled Service Form, see www.edin.se, Support.

Recycling directives

When this product is finished with, please follow existing disposal regulations. Thus if you respect these instructions you ensure human health and environmental protection.