

SLS-400XF

Univox® Super Loop System®
Loop driver's for balanced loop configurations

Installation Guide

SLS-400XF, Part No 215400



Univox® SLS – Super Loop System® is target designed for professional installations in venues where high sound quality for the hearing aid user, very high reproducibility together with extremely low overspill in all directions are important requirements. Through correct calculations, installation and adjustment you will get 3-D controlled overspill, smooth field strength even at high frequencies, little interference problem with reinforcement and other metallic structures as well as increased efficiency compared to traditional loop systems. The result for all hearing aid users is a loop of HiFi quality!

SLS-400XF Free field coverage area up to 170m²/300m² according to IEC 60118-4:2006

For areas up to 650m² use Univox® SLS-700 (two separate units).

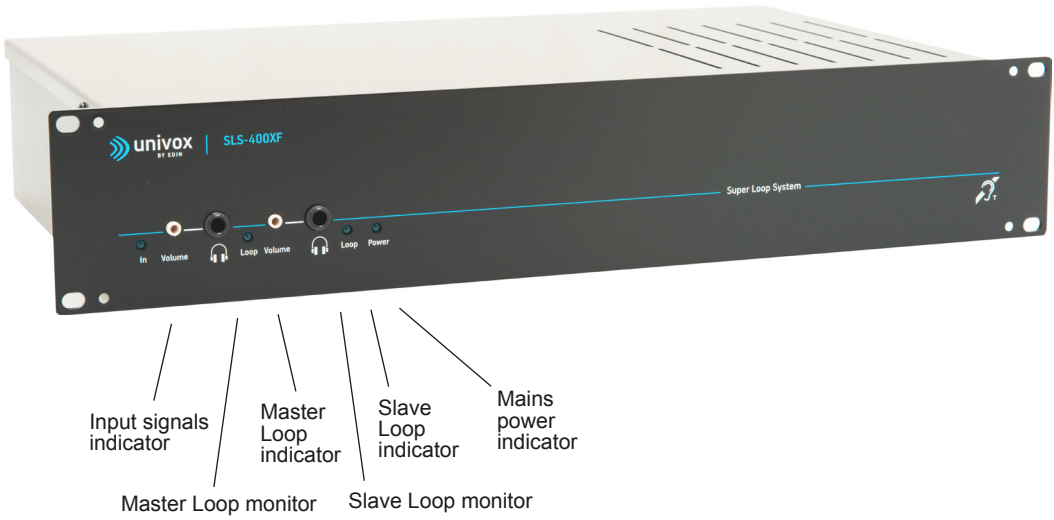
Univox® SLS fulfils IEC 60118-4:2006 when installed and adjusted correctly.

Note!

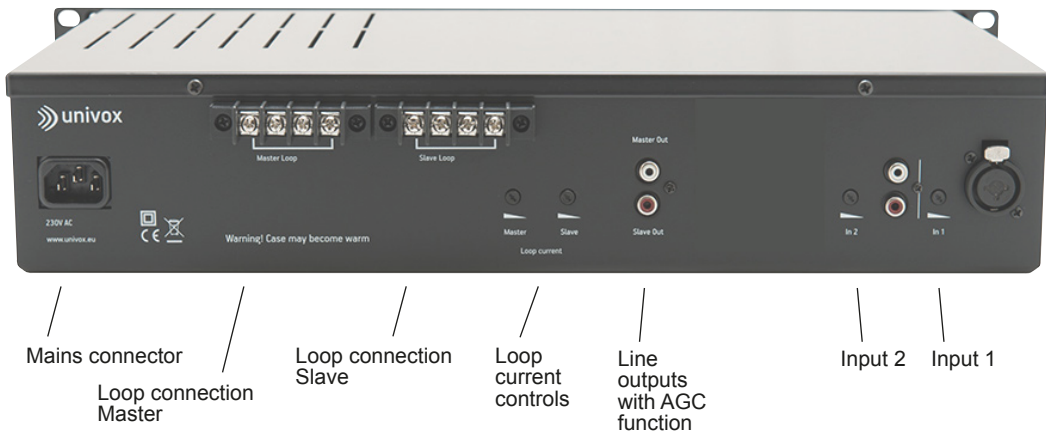
Please study the complete installation guide before planning, connecting and adjusting the loop system.

Overview

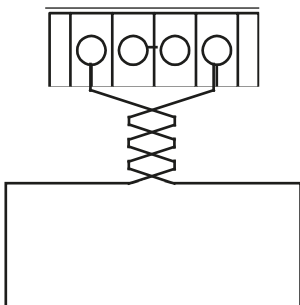
SLS-400XF Front panel



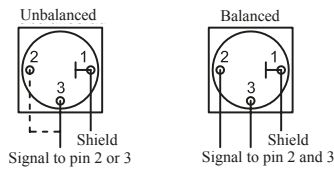
SLS-400XF Rear panel



Loop connections



XLR input



Univox® FSM 2.0



Field Strength Meter
Part No 401040

Univox® Listener



Loop testing device
Part No 401010

Loop wire layout and other preparations

- Each Univox® SLS system has to be planned carefully to work correctly. A complete system always consists of two separate loop configurations - Master and Slave. The Master and Slave loop work as one single system and has to be planned together. For further information or assistance, please contact us through www.edin.se or contact your local distributor.
- We highly recommend the special designed copper foil (25 x 0.1 mm) giving an increased high frequency response of approximately 5 dB compared to a conventional round wire. The copper foil can be used with any loop size and will fit easily under plastic or textile carpets, wooden floor or tiles. Always check with the material experts/suppliers for detailed advice.
- When using round standard wire we recommend 4 mm² for most applications. For smaller loops a thinner wire can be used. Please contact us or your local distributor by any uncertainties.
- Field strength and high frequency response can be limited due to reinforcement and metal constructions in walls, ceiling and floor. Therefore it is important NOT to place the wire near/parallel to or on metal constructions or reinforcement (crossings are allowed). If there is strong metallic influence it might be necessary to choose a more powerful driver, even if the listening area normally should be covered by the driver you have chosen.
- Use general installation technique for audio/video installations. Pay extra attention to avoid interference problems with sensitive analogue signals from microphones, mixers, video projectors etc. Avoid parallel wires close to the loop wire.
- Plan other electronic controlled equipment avoiding or creating any disturbing magnetic fields.

Connection and function control

Mount the driver in a 19" rack, place it on a flat surface or mount it on a wall using the keyholes underneath. Minimum clearance of 1U above and below the unit must be left for ventilation.

Important!

The driver needs free airflow above and beneath the driver. It is important NOT to place the driver close to any inflammable material sensitive to heating or any material running the risk of getting discoloured. If placed on flat surface or wall mounted, use the rubber feet included in the box. The keyholes only admit horizontal mounting of the driver.

1. Inputs
Set all inputs to min. settings. Connect the input signal to corresponding input connector at the rear panel. The combined XLR/6.35mm input is factory set for line input levels but could be set for microphone use (see "jumper settings" section below).
2. Mains power
Power the driver with the included power cord (power indicator lights up). Univox® driver's are equipped with a reset able built-in automatic mains fuse, type PTC. If it is triggered by any reason remove the power cord and let the amplifier cool off. Investigate the possible fault reason before reconnecting the power cord.
3. Adjust inputs
Slowly adjust the inputs making the LED input indicator on the front side lights up at program peaks.
4. Connect the loop wire
Connect the loop wires to the corresponding loop output, Master or Slave. Note the wire between loop figuration and driver must be twinned or very tight together to avoid interference with other electrical systems.

5. Adjust loop current

Adjust the loop current for correct field strength on both Master and Slave loop according to the certificate protocol (the loop LED only indicates that current flows in the loop wire). Use the adjustable loop monitor outputs on the front panel for direct listening of the output current (magnetic field).

Attention!

The loop LED indicates that current flows in the loop, not that system fulfils the standard, IEC 60118-4:2006. See "Measurement and certification" below.

Line outputs

There are two line outputs with RCA connectors giving 0 dBu with AGC-controlled level.

Jumper settings for sensitivity, phantom voltage and AGC-function

Attention!

Make sure that the driver is disconnected from the mains power before removing the cover.

Jumper settings related to XLR-input

Phantom power off: S3 open (Default). Phantom power on: S3 closed.

Microphone sensitivity: S1 and S2 open. Line sensitivity: S1 and S2 closed (Default).

Input AGC

AGC on (Default): S4 closed. AGC off: S4 open.

Measurement and certification

A complete and correct measurement, adjustment and certification of the Univox® SLS system is achieved using the True RMS Field strength meter FSM together with the certificate/measuring protocol (included). For detailed measurement procedures please study the certificate. A complete certificate shall always be included in the documentation.

It is important that the staff responsible for the loop system has the necessary knowledge how the loop system works. Otherwise there is a risk that the system doesn't work as planned.

The loop receiver/testing device Univox® Listener is a useful device for listening tests and basic level checks.

The SLS system – a summary

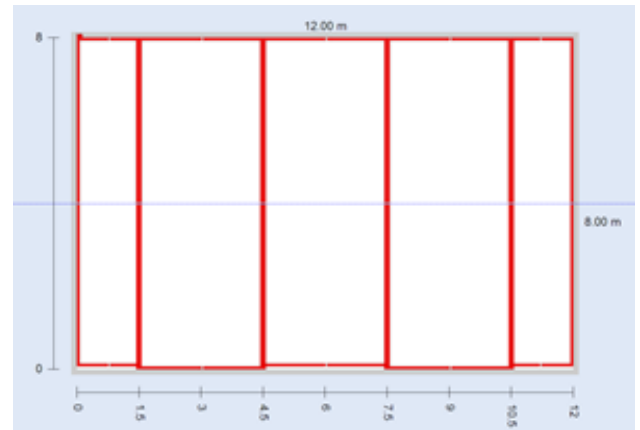
Univox® Super Loop System® SLS is a balanced uncorrelated induction loop system. It consists of two separate loop systems (Master and Slave) with a separate current controlled driver's connected to each loop. Univox® SLS systems have several advantages compared to old conventional loop systems:

- Almost no vertical and horizontal overspill
- Smoother field strength level
- Highly increased frequency response
- Less impact on field strength and high frequency range by reinforcements or other metal construction parts
- Less directional sensitivity (no level drops when tilting the head)
- Increased efficiency due to controlled field strength
- Highly reduced risk for interference with other electronic equipment, guitars, microphones, etc.

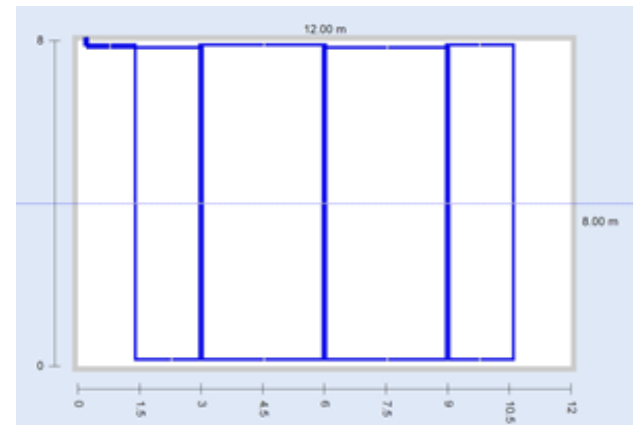
There are many possibilities for the layout of the loop wire, but the basic Univox® SLS system for most installations is the same: A Master loop which covers the whole listening area and a Slave loop, slightly smaller compared to the Master loop. The size of the segments controls the overspill, both horizontal (sideways) and vertical (sitting vs. standing). In theatres or cinemas the segment size is simply the same as the distance between the seating rows for ease of installation (with Univox® SLS there is no field strength drop above the crossing of the wires). 1 meter segment size is normally fine but other segment sizes could be recommended depending on the installation.

After the installation of wire and loop driver, the whole system has to be certified. Both installation and adjustment has to be performed by trained staff equipped with a field strength meter and basic knowledge of how the system works and how loops are measured and adjusted. Contact your distributor for all questions regarding projection, installation and adjustment of the system. You can find more information at www.edin.se where also a drawing tool for planning is available on-line (contact your distributor for log-in data).

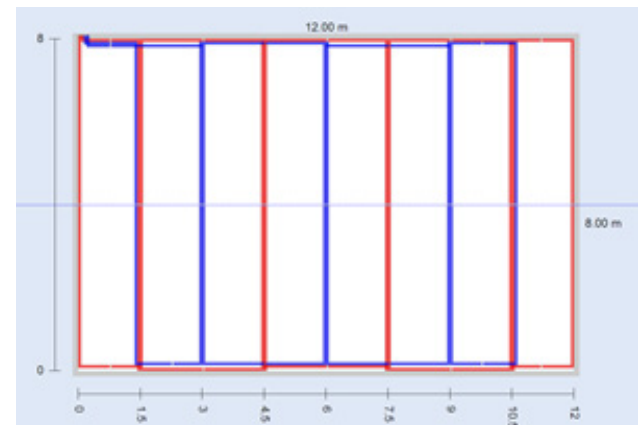
The Univox® SLS example on the right is created with the above mentioned on-line planning tool on our web site. It is recommended that the direction of attention or “looking direction” should preferably be across the segments. The size is 12 by 8 metres with 8 segments and thus a segment size of 1,5 m. The amount of wire needed for the Master and Slave loops is indicated at the bottom of each drawing.



Layout of the Master loop



Layout of the Slave loop



Final result with both Master and Slave loops

Warranty

Basic knowledge in audio and video installation techniques is required to achieve existing regulations. The installer/planner is responsible for the installation hereby avoiding any risk or cause of fire.

Please note that the warranty is not valid for any damage or defects on the product due to incorrect or incautious installation (or usage) or maintenance. Bo Edin AB is not responsible for interference from radio or TV equipment, or damage caused by the product to any property or liable for the consequences of such damages.

Maintenance and care

Under normal circumstances Univox® loop amplifiers (the product) do not need any special maintenance. Should the unit become dirty, wipe it with a clean damp cloth. Do not use solvent or strong detergents.

Trouble shooting

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 product/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, www.univox.eu/Support.

Technical data

For additional information, please refer to product data sheet/brochure and CE certificate which can be downloaded from www.univox.eu/Downloads. If required other technical documents can be ordered from support@edin.se.

Environment/Correct Disposal

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



Distributor

Univox by edin, the world's leading expert and producer of high quality hearing loop systems, created the very first true loop amplifier 1969. Ever since our mission is to serve the hearing community with the highest degree of service and performance with strong focus on Research and Development for new technical solutions.

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