

Installation Manual HMD/HDC Range



Installation Manual HMD & HDC

– 2026 –

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I. Safety Instructions

Intended Use

The HMD1.0 / HMD1.2 and HDC20 are Class D magnetic induction loop amplifier designed to be installed in public venues to improve accessibility for hearing-impaired individuals. The device is exclusively intended for professional use, installed by qualified personnel.

Important Instructions

- Read and retain this manual. Pass it on whenever the product is transferred.
- Installation must be carried out by a qualified technician.
- Never open the enclosure: risk of electric shock. No user-serviceable parts inside.
- Do not expose the device to rain, humidity, or extreme temperatures (operating range: 0 to 45 °C).
- Do not block ventilation openings. Leave at least 44 mm of clearance above the device.
- Use only the recommended external power supply (PS-HMD24V).
- Do not place liquids on or near the device.
- Connecting to a 100 V system may present a risk of electric shock. This operation must be entrusted to a qualified technician.

⚠ WARNING — Do not remove the cover or attempt to repair the device yourself. Only contact Opus Technologies authorised service personnel.

Electronic Waste Recycling

In accordance with the WEEE Directive (2012/19/EU), this product must not be disposed of with ordinary household waste. Drop it off at an approved collection point or contact your dealer for take-back arrangements.

Meaning of logos found on products and packaging:



The mandatory Triman logo means the packaging meets a specific sorting requirement.



The crossed-out bin logo means the relevant product (not the packaging itself) must not be disposed of in ordinary household waste bins.



This logo with the blue pictogram is intended for Spain; **paper and cardboard** packaging must be placed in blue bins for proper recycling.



This logo means the installation manual and packaging can be placed in recycling bins.

II. Product Overview

General Description

The H series is a new generation of compact magnetic loop amplifiers, combining the power of a Class D amplifier with the flexibility of Auracast™ wireless broadcast technologies.

The HMD can cover rooms up to 150 m² while the HDC can cover up to 70m2 depending on configuration. It is designed to be wall-mounted or installed in a dedicated technical cabinet.

Range and Associated Products

Reference	Description
HMD1.0	1-channel amplifier — without Auracast™
HMD1.0A	1-channel amplifier with built-in Auracast™
HMD1.2	2-channel amplifier — without Auracast™
HMD1.2A	2-channel amplifier with built-in Auracast™
HDC20	Counter loop system 3.5 Arms (Aura-CA option)
HDC20A	Hybrid loop + Auracast™ driver for counters

Available in several versions:

- HMD1.0 : Single-channel magnetic loop amplifier (1 loop output). Auracast™ module available as an external option (Aura-CA).
- HMD1.0A : Version with built-in Auracast™ (1 channel).



- HMD1.2 : 2-channel magnetic loop amplifier. Auracast™ module available as an option.
- HMD1.2A : Version with built-in Auracast™ (2 channels)



- HDC20 : Counter loop system 3.5 Arms (Aura-CA option)
- HDC20A : Hybrid loop + Auracast™ driver for counters



Kit Contents

Upon receipt, please verify that the package contains:

	HMD 1.0 / HMD1.0A	HMD 1.2 / HMD1.2A	HDC 20 / HDC 20A
Enclosure	X	X	X
Power supply 24V 3A	X	X	X
Phoenix connectors	2*2 points, 2*3points & 1*4 points	2*2 points, 2*3points & 1*4 points	1*2 points, 1*3points & 1*4 points
Small screwdriver	X	X	X
Compliance sticker	X	X	X

i *If any item is missing or damaged, please contact your dealer or Opus Technologies immediately.*

III. Connectors and Controls Description

Front Panel



No.	Element	Description
1	Power LED	Lights up blue when the device is powered on.
2	Auracast™ LED	Indicates the status of the Auracast™ module (HMD1.0A / HMD1.2A only): Broadcasting: steady blue / Broadcast paused: blinking blue / Configuration mode: rapidly blinking blue / Error mode: LED off
3	Fault LED (Protect)	Steady red: overload, incorrect loop impedance, or amplifier fault.
4	Clip LED	Steady red: clipping of input or output signal.
5	Loop 1 LED	Green: loop 1 correctly connected and functional.
6	Loop 2 LED	Green: loop 2 correctly connected (HMD1.2 only).
7	Output Potentiometer	Adjusts the output current in the loop.
8	Output Potentiometer 2	Adjusts the output current in the loop.
9	Input 1 Potentiometer	Adjusts the level of input 1 (balanced / unbalanced line).
10	Input 2 Potentiometer	Adjusts the level of input 2 (line, 70 V/100 V, or high-voltage audio).
11	MLC Potentiometer	Metal loss compensation
12	Auracast	Configuration button
13	Signal Generator	Signal generator config button for loop commissioning to IEC standard
14	DIP switches	Function configuration (Phantom Mic, input mode...).
15	Phase Shifter	1: Line at 0°; 2: Out at 0°; 3: Line at 90°; 4: Out at 90° Recommended topology: 1 and 2 on; 3 and 4 on; 1 and 4 on with 2 and 3 on Non-working topology: 1, 2, 3 and 4 all off; 1, 2, 3 and 4 all on

Rear Panel / Connectors



No.	Connectors	Description
1	Jack 3.5mm input	Jack 3.5mm input for mics
2	Phantom Mic 1 (DIP) Input 1 (Line)	12 V phantom power for microphone — activated by DIP switch. Differential or non-differential line — Phoenix 2-pin terminal block.
3	Input 2 (Versatile)	Line / 70 V / 100 V / high-voltage audio — Phoenix 2-pin terminal block.
4	Auracast™ Connector	PCBA connector or 4-pin terminal block for Aura-CA Auracast™ module (option / built-in on A versions).
5	Loop Output 1	Buchanan 2-pin terminal block (3.5 mm pitch). Max current: 3.5 Arms (PS-HMD24V).
6	Loop Output 2	Same as Loop 1 — HMD1.2 only.
7	Power Supply	DC input — 24 V / 3 A — external power supply PS-HMD24V.

IV. Principle of the Magnetic Induction Loop

3. Technology presentation

The audio source can come from various origins. In a cinema, for example, the sound of the film will be transmitted. In a conference room, the sound of the speaker's microphone will be transmitted. In a subway station, the voice of the agent will be transmitted...

The loop can be installed on the floor or ceiling. The loop is integrated into the building, just like the electrical installation.

The presence of a hearing loop is often indicated by a blue logo representing a barred ear and the letter "T".

3.1 What is an AFILS (Audio Frequency Induction Loop System)?

An induction loop system is intended to help hard of hearing people to receive a clear audio signal into their hearing aid without being disturbed by background noises. Thanks to this system, the sound coming from an audio source (speaker microphone, sound system, television) is transmitted by induction to hearing aid user who can thus enjoy clear sound without being disturbed by any ambient noise. This system is mainly used in public places (conference rooms, cinemas, courts, churches, ticket offices, etc.) but can also be installed at home. Many conventional hearing aids have a "T" loop function.

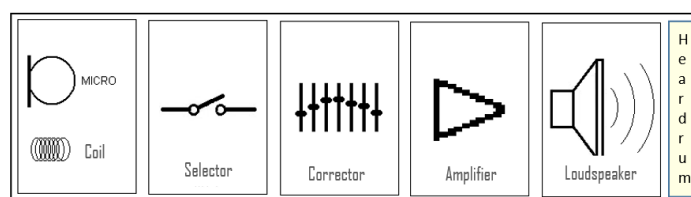


Pictogram used to indicate a loop system – Figure 2

3.2 Working principle

A magnetic loop system consists of an electric wire laid down around a room forming a loop. The cable is connected to a loop amplifier, connected itself to an audio source. The loop amplifier converts the audio signal into electric pulses transmitted through the cable, creating a magnetic field. Hearing aids equipped with a coil (often called a "T" or "T-coil") will capture this signal and transmit it to hearing impaired.

By induction, the electrical signal present in the loop will be reflected in the coil of the hearing aid. The coil transmits the signal of the loop to the internal amplifier of the prosthesis, which then brings it to the ear of the hearing impaired person, free of background noise and environmental disturbances.



Hearing aid operating diagram with the T-position – Figure

5. Setup

5.1 Setting up a simple perimeter loop

1. Turn on your amplifier and check that all potentiometers are at 0 level
2. Connect your loops to the Loop 1 (and Loop 2 on HMD1.2) terminal block
3. Connect a 1kHz sinusoidal source to one of the inputs or use the inbuilt signal generator.
4. Increase the input signal via the potentiometer on the front of the amplifier until you reach between -6 and 0 dB.
5. Increase the output current via the Loop 1 and Loop 2 potentiometers on the front panel of the amplifier until you reach between 75% and 85% of potentiometer capacity.
6. Take a magnetic field meter such as OP-FSM* and take a first measurement at the center of your room.
7. Then readjust the settings until you reach -3dB at the center of the zone
8. Then follow the test procedure described in the OP-FSM manual for an installation that meets the IEC60118-4 standard.

5.2 Setting up a dual Master and Slave amplifier

To know the different types of installation of a low spill loop system or single phase loops, refer to paragraphs 6.3.2 and 6.3.3.

Depending on the type of HMD series amplifier, the settings will be made differently:

HMD1.2 incorporate two amplifiers in one unit allowing you to use only one device for low spill systems. A second device will be required whenever a 3rd loop is installed.

- HMD1.0 units incorporate one amplifier per unit so you'll need two devices to process a phase shift

The Master amplifier is the unit to which the audio signal at input 1, 2 or 3 is connected. This will be the basic signal. The phase shift module integrated in the units will then shift this signal by 90° or 0° by turning on the dip switch to slave position (spot 15 on product description)

There is no special setting to determine the Slave amplifier, only the connection arrangement will define the Slave amplifier (Loop 2) and the Master amplifier (Loop 1).

9. Power up your amplifier and check that all potentiometers are at 0
10. Connect your loops to the Loop 1 and Loop 2 terminals block
11. Connect a 1kHz sinusoidal source to one of the inputs
12. Increase the input signal via the potentiometer on the front of the amplifier until you reach between -6 and 0 dB of the input meter
13. Increase the output current via the Loop 1 and Loop 2 potentiometers on the front panel of the amplifier until you reach between 75% and 85%.
14. Take a magnetic field measurer such as OP-FSM and make a first measurement at the center of your room
15. Then adjust the settings according to the measurements made with your magnetic field measurer in order to achieve homogeneous coverage in accordance with the IEC60118-4 standard.

6. Functioning and planning of a loop system

6.1 Preamble

A study revealed that more than 60% of the Magnetic Induction Loop installations do not work or work poorly, far from the requirements of the standard (IEC-60118-4). Indeed, the main difficulty lies in the implementation of the loop path. This observation led us to seek and provide effective solutions to meet this standard.

It is therefore important to carefully read the following instructions to ensure proper operation of the system and compliance with the IEC-60118-4 standard. Do not hesitate to contact your local distributor, we can help you with the study phase before the installation of the system.

6.2 Working principle

6.2.1 The magnetic field

When an alternating current flows through a copper cable, it generates a magnetic field. The intensity of the magnetic field is directly related to the intensity of the electric current flowing in the cable.

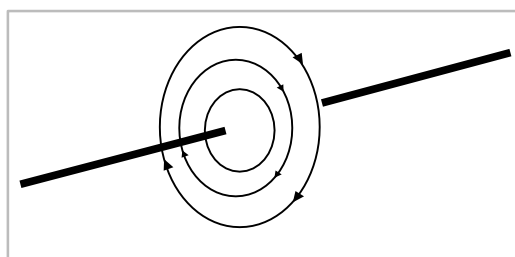
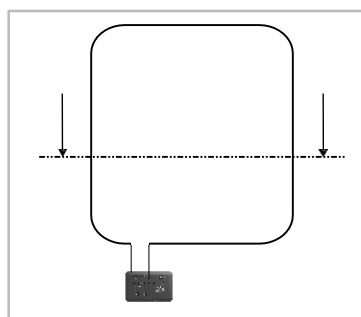


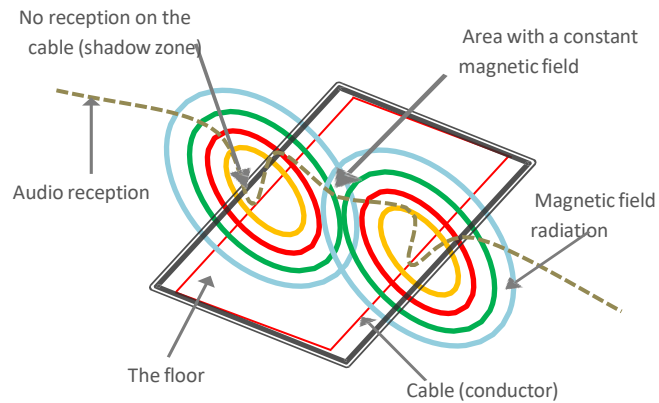
Illustration of an electromagnetic wave around a conductor

6.2.2 Magnetic field diffusion in a loop

When the intensity of the current flowing in a loop is adapted to the width of the room to be equipped, the radiation of this one makes it possible to cover the whole room.



Top view of a loop installation in a room



Sectional view of a loop installation in a room

6.2.3 System composition

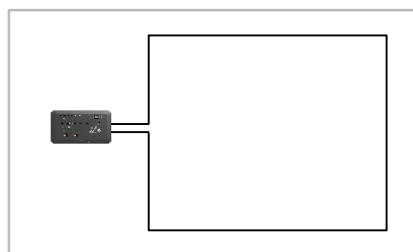
A magnetic induction loop system is composed of:

- An amplifier
- One or more loops created with a conductor
- An audio signal (microphone or line)
- In some configurations a twisted pair cable (Opus references: OP-LI5/10 or 15).

6.3 The different types of installation

6.3.1 Simple loop

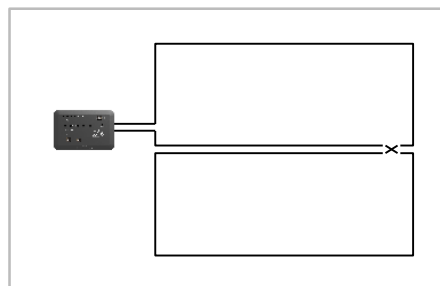
A simple magnetic loop is composed of an amplifier and one or more induction loops.



Installation of a simple perimeter loop

6.3.2 The simple 8 loop or phased array

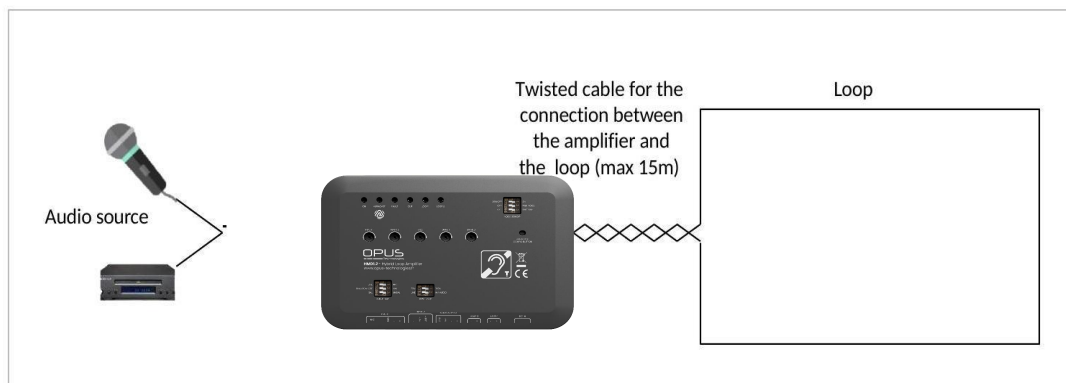
In some configurations, it will be preferable to use an 8 loop rather than a single loop to generate a more intense magnetic field on the surface to be covered. This type of installation improves the coverage area.



Installation of a simple 8 loop

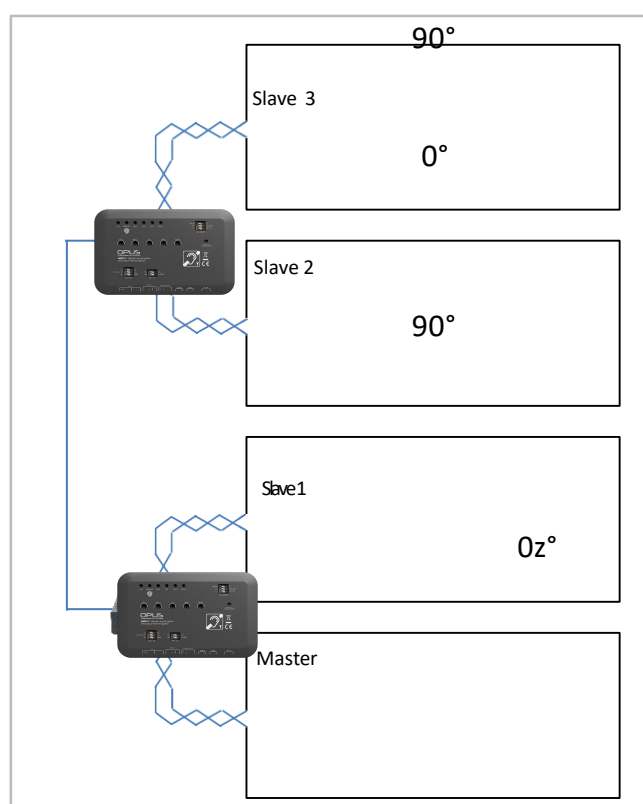
Why the “8” loop?

- A magnetic loop in the shape of a number 8 allows to reduce the crosstalk of the magnetic field.
- It allows to cover a larger surface and to have a better homogeneity of coverage.
- The current required is less important, so the power consumption is also reduced.



6.3.3 Simple phased loops

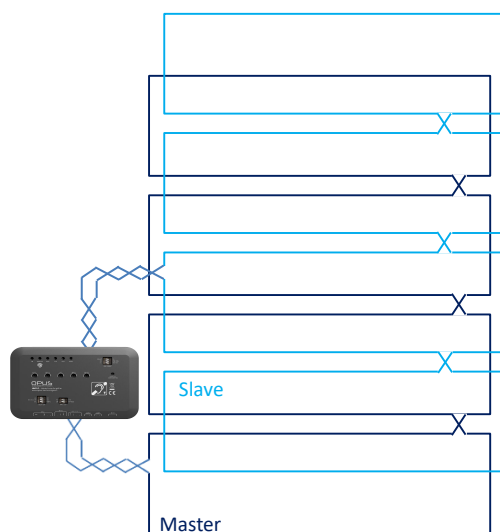
In order to allow a more extensive coverage in large spaces such as in an exhibition park, a sports hall or a zenith, it is possible to install several simple loops by using the input and the slave outputs.



6.3.4 Phased loops with low overflow

When several rooms are adjacent to each other (one next to each other or one on top of each other), it is important to take into account the external radiation of the magnetic field. Indeed, if the amplifier is adapted, a magnetic induction loop radiates perfectly in the desired zone but also outside this zone. Generally, the external coverage is equal to 4 times the width of the room. It is necessary to count 4 times the width to have a total isolation zone.

In order to respond appropriately to this type of problem, there is a type of installation that allows to contain the overspill to the strict dimension of the room. This type of installation also provides other advantages (see below).



Installation of a phased loop system

Why install low overflow multi-loops?

- Suppression of magnetic field directivity (vertical and horizontal fields are transmitted).
- No attenuation in coverage.
- Reduced power consumption.
- Better signal reproduction.
- Reduced influence of metals.
- Reduced risk of feedback.
- Virtually no external radiation.

7. The magnetic induction loop

The installation of a magnetic induction loop is a complex exercise. To ensure that it works perfectly, it is important to take into account several essential parameters and to adapt its installation to the specificities of the room to be equipped.

The following points will help you maximizing the audio quality and minimize the variation of the magnetic field strength.

7.1 Installing your loop

To locate the best place for the loop it is important to determine the listening height (height of the human ear) in the area to be equipped. For example, in a conference room, people are seated, so the listening height is between 1.10 m and 1.40 m.

This position is very important to determine the power required and therefore the type of amplifier to be used to comply with the IEC-60118-4 installation standard. It is important to note that the coverage data of our amplifiers are announced with a loop installed on the ground and without disturbance.

Each project is different and must be studied before purchasing an amplifier. Opus Technologies has developed Smartloop, a simulation software, which allows to study each project according to the constraints.

7.2 Cable section

The direct current resistance depends on the diameter of the cable and its length. It should be between 0.5 and 3 Ω for optimal operation of the amplifiers. This result depends on the length of the cable and its section, you can use our simulation software Opus Smartloop or call your specialized distributor to know the usable sections according to the size for your project.

There are 2 types of cable for loop installation:

1. The copper foil to be installed under a lino, parquet, carpet, etc. Opus references: RC50/100/150
2. The classic flexible cable type H07RNF. However, in order to avoid wire impedance problems, Opus Technologies has developed a variable resistance cable which allows to ensure 90% of the loop installation needs and avoids cross section errors.

The Loop Cable (LC-50/100/150) offers a variation of sections from 0.5 to 2.5 mm². See image below:



Loop Cable (ref: LC-50/100/150)

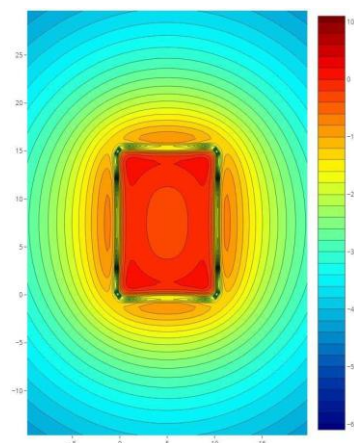
7.3 Connection

To connect the loop cable(s) to the amplifier, use a twisted cable to avoid unwanted inductions. We recommend not to move the amplifier more than 15 m from the loop.

7.4 The magnetic field

The strength of the magnetic field depends on the electric current impelled in the loop.

To meet the IEC-60118-4 standard, depending on the configuration of the room, 1.2 m (for a seated person) or 1.70 m (for a standing person) above the floor in the listening area equipped with a magnetic loop, the vertical fields must be 100 mA/m $\pm$ 3 dB.

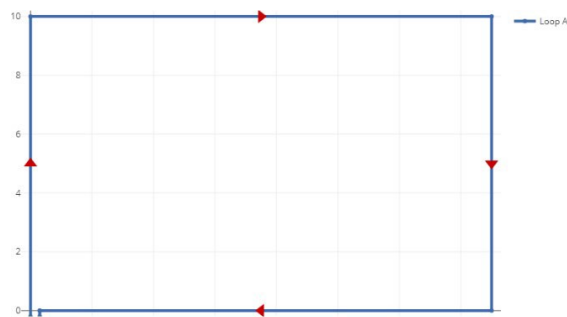


Magnetic field coverage simulation with Opus Smartloop software

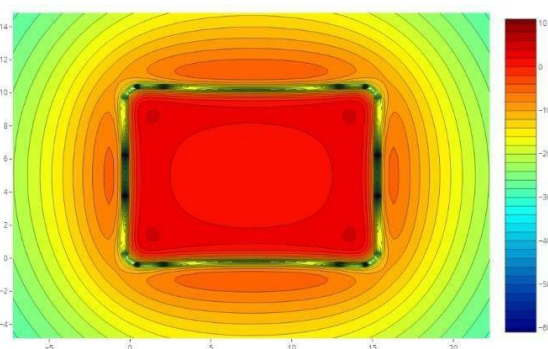
7.5 Technical study

Presentation of magnetic field data for a 15x10m room. Data from our simulation tool Opus Smartloop.

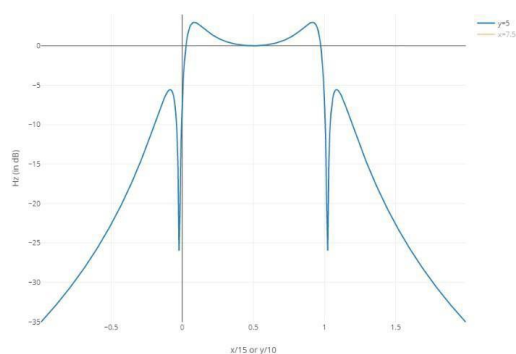
7.5.1 Perimeter loop



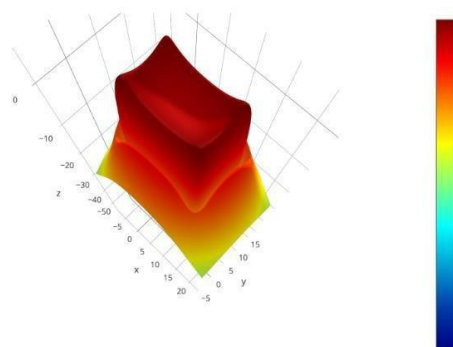
Simple loop installation



Simple loop 2D simulation



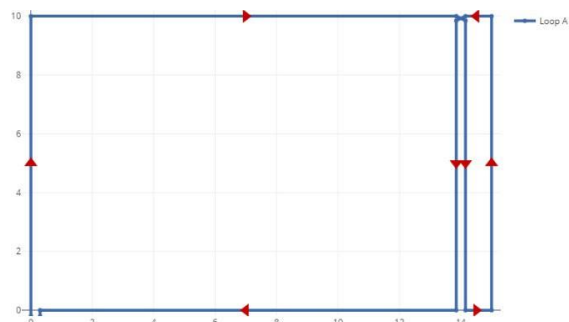
Simple loop median



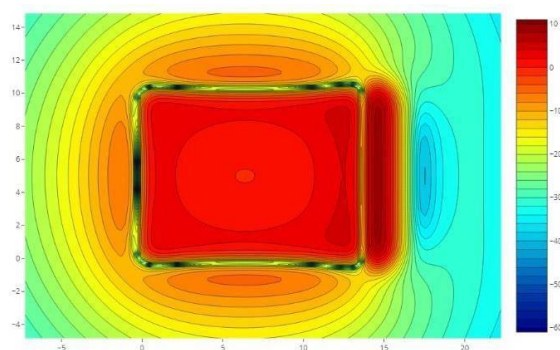
Simple loop 3D simulation

7.5.2 Cancellation loop

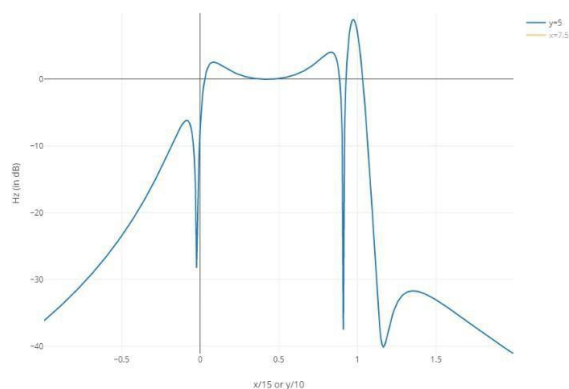
Presentation of magnetic field data for a 15x10m room. Data from our simulation tool Opus Smartloop.



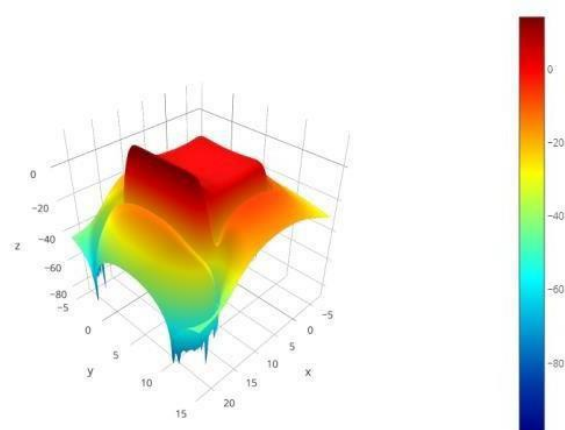
Cancellation loop installation



Cancellation loop 2D simulation



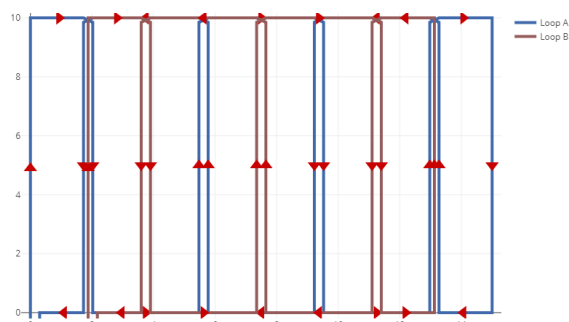
Cancellation loop median



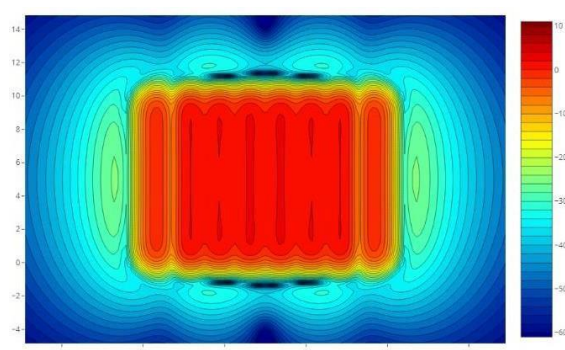
Cancellation loop 3D simulation

7.5.3 Ultra low overflow system

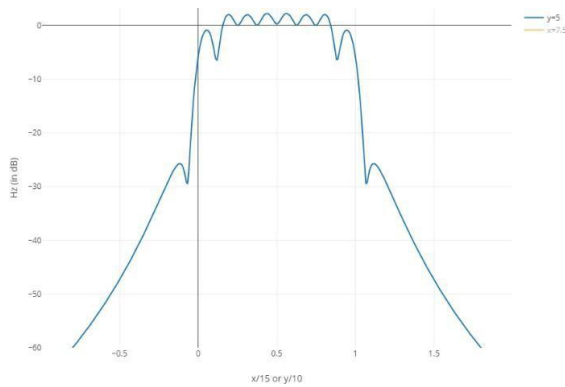
Presentation of magnetic field data for a 15x10m room. Data from our simulation tool Opus Smartloop.



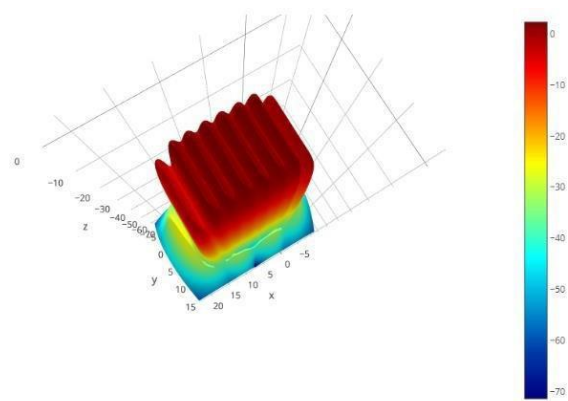
Ultra low overflow system installation



Ultra low overflow system 2D simulation



Ultra low overflow system median



Ultra low overflow system 3D simulation

i In order to guarantee the compliance with the IEC-60018-4 standard during the installation of your magnetic induction loop, Opus Technologies and its local distributors will guide you in the study and installation of your project. Visit <http://opus-technologies.fr/contact-us/> to find your local distributor or write to us.

8. Installation constraints

Some environments can create interference with the magnetic induction loops, here are the main causes.

8.1 Magnetic overspill

The installation of a perimeter loop system is perfectly suitable to cover a room if the amplifier is correctly sized, however it is important to note that the magnetic field of a loop will cover the inside of the room but also the outside. The larger the loop will be, the more radiation it will have (note: in principle, 4 times the width of a loop is needed to have a total isolation zone). This phenomenon of external radiation can be problematic when it is necessary to equip several contiguous rooms or for reasons of confidentiality.

To remedy this problem, it is possible to create low overflow installations that will avoid the radiation of the magnetic field (see paragraphs 6.3.3 and 6.3.4 above).

8.2 Metal distortion

Metal distorts the magnetic field at high frequencies. Many buildings contain metal, especially in their structures.

To limit the influence of metal we have created a tone compensation with the MLC (Metal Loss Compensation) setting on the front panel of the amplifiers.

V. Installation

CHOSING THE RIGHT SPOT

The H serie is designed to be wall-mounted or integrated into a technical cabinet. Before installation, observe the following:

- Place the device close to the intended coverage area (or use an OP-LI link cable to make the connection between the driver in its rack, and loop .
- Ensure sufficient ventilation: leave at least 44 mm of clearance above the device.
- Do not install near heat sources (radiators, steam pipes...).
- Ambient temperature 0 to 45 °C.
- Protect the device from humidity.

Wall Mounting

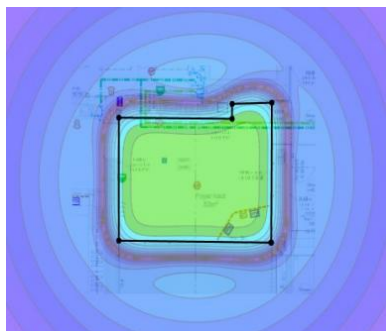
The H serie can be fixed directly to the wall. Use fixings appropriate for the surface type (concrete, plaster, wood...). Ensure easy access to the rear connectors for wiring.

Magnetic Loop Connection

The loop is connected to the Buchanan 2-pin terminal block located on the rear panel. Use a twisted cable between the amplifier and the loop if you're using flat copper type (ref RC/RC01/RC02/RC025) or direction while using LC cable (if driver located in same room as the loop itself)

i *The distance between the amplifier and the loop must not exceed 15 m. The twisted cable cancels the parasitic magnetic field between the amplifier and the loop.*

The loop impedance must be between 0.5 Ω and 3 Ω for optimal operation. Use the Opus Smartloop simulation software or consult your distributor to calculate the appropriate cable cross-section for your project.



Audio Source Connections

The HMD has two independent inputs:

- Input 1 : Balanced or unbalanced line (microphone, mixing desk, preamplifier...). Enable 12 V Phantom power via the DIP switch if a powered microphone is connected.
- Input 2 : Line / 70 V / 100 V / high-voltage audio (100 V amplifier output from an existing PA system).

⚠ WARNING — Connecting to a 100 V system may present a risk of electric shock. This operation must be entrusted to a qualified technician.

Power supply connection

Connect the external power supply (PS-HMD24V) to the DC socket on the rear panel.

i *The HMD has no mains switch. The device is powered as soon as the external supply is connected. For a complete power-off, disconnect the external power supply.*

VI. Commissioning and Settings

Power-On

After checking all connections, connect the external power supply. The Power LED lights up blue. The Loop LED lights up green if the loop is correctly connected (impedance between 0.5 and 3 Ω).

Adjustment Procedure (Single Loop)

16. Verify that all potentiometers are at minimum position (0).
17. Connect the loop to the Loop 1 terminal block.
18. Inject a 1 kHz sine signal on one of the inputs (or use the built-in 1 kHz signal generator on HMD1 & HMD 1.2).
19. Increase the corresponding input potentiometer until the level is between -3 dB to +3 dB.

20. Increase the output potentiometer (Loop 1) until reaching 75% to 85% of the maximum current.
21. Measure the magnetic field at the centre of the zone using the OP-FSM-02 field meter.
22. Adjust settings until your signal remain, within the whole listening are, between -33dB to +3dB.
23. Carry out all measurements according to the procedure described in the OP-FSM manual for an installation compliant with IEC 60118-4.

i The Opus Smartloop simulation software is available at www.opus-technologies.fr. It allows you to model your installation before implementation.

Metal loss compensation (MLC)

In the presence of metallic structures (slabs, frames...), these can attenuate the high frequencies of the magnetic field. The MLC (Metal Loss Compensation) adjustment on the front panel compensates for this effect.

- Inject a 1 kHz signal and measure the field at several points (via the internal generator for HMD1.0 & HMD1.2, (via an external signal for HDC units).
- Turn the MLC potentiometer clockwise until measurements comply with IEC 60118-4.

Automatic Gain Control (AGC)

The HMD features an AGC optimised for voice with peak detection. This function automatically limits excessive input levels to prevent clipping. No user adjustment is required.

Built-in signal generator

The HMD has an internal signal generator capable of producing:

- Pink noise for overall frequency response verification.
- 1 kHz for output level adjustment.

VII. Auracast™ Configuration (HMD1.0A / HDM1.2A / HDC 20A)

This section applies only to versions HMD1.0A, HDC20A & HMD1.2A equipped with built-in Auracast™..

Overview

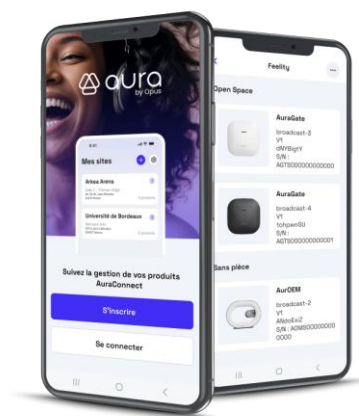
The "A" versions incorporate an Auracast™ module (Bluetooth® LE Audio technology developed by Bluetooth SIG). This module wirelessly broadcasts the audio signal to Auracast™-compatible hearing devices and smartphones, complementing the magnetic loop.

From the factory, each HMDxA is delivered with a predefined broadcast name in the format "HMD_XXXX". Auracast™ parameters are configurable via the AuraConnect app:

- Broadcast name
- Stream access password
- Transmission power
- Sampling frequency

1. Download AuraConnect app

Download the AuraConnect app from the App Store (iOS) or Google Play Store (Android) by searching for "AuraConnect" (no space).



2. Create a user account

Open the app and create your account by following the on-screen instructions. Two types of accounts are available:

- Installer : responsible for configuration and installation of products. Also creates the client owner account.
- Owner : responsible for the product fleet. Can change installer at any time.

i Preferably use an email address accessible from your smartphone: account validation and password recovery are done via an email link that opens directly in the app.

3. Installation Organisation (Sites & Rooms)

Once logged in, create an installation site, then add rooms (e.g. "Main Reception", "Conference Room A"). This organisation allows easy retrieval of products during maintenance visits.

4. Adding the product in the app

From the desired room, add your product using one of two methods:

- Scan the QR Code on the product or packaging.
- Manually enter the serial number (alphanumeric code shown on the product).

Once recognised, the app displays the product reference, its firmware version and the last saved settings. If an update is available, the message "Update available" appears.

5. Activating Configuration Mode on the Product

To perform adjustments or a firmware update, the product must be placed in Configuration mode:

1. Power on the product
2. Press the Auracast config button for 3 seconds; the LED will perform the following sequence: 2 rapid blinks followed by a pause, repeated periodically.
3. Your product is now in Config mode

i If the operation is successful, the LED lights up steady blue. The product is then visible and configurable from the AuraConnect app.



6. Configurable Parameters

Parameter	Description
Broadcast name	Auracast™ stream identifier visible to users.
Password	Stream security (recommended for confidential spaces).
Transmission power	Adjustable to limit range to the strictly necessary perimeter.
Sampling frequency	Audio quality of the Bluetooth LE Audio stream.
Firmware update	OTA (Over The Air) update via the app.

7. Sharing Connection Information

Once configuration is complete, the app offers three options to communicate Auracast™ connection information to end users:

- Display the QR Code directly in the app.
- Share the QR Code by email for printing and on-site display.
- Generate and share a multilingual label file (FR / EN / ES / DE) to be placed at the entrance of equipped rooms.

i A signage sticker is included in the packaging. Affix it at the entrance of the covered area to indicate the presence of the Auracast™ system and magnetic loop.

8. Privacy and Cybersecurity

For environments requiring confidentiality of exchanges (bank counter, medical office...), it is strongly recommended to:

- Set a custom password different from the default password.
- Reduce the transmission power to the strict minimum required.

The system incorporates cybersecurity mechanisms to guarantee the authenticity of firmware updates and the integrity of the audio stream. If a vulnerability is detected, contact:

support@opus-technologies.fr

VIII. Technical Specifications

POWER SUPPLY	
Input voltage	24 V DC
Current	3 A
Type	External power supply PS-HMD24V
AUDIO INPUTS	
Input 1	Differential or non-differential line
Input 2	Line / 70 V / 100 V / high-voltage audio
Phantom Mic 1 power	12 V (activated via DIP switch)
LOOP OUTPUT	
Number of outputs	1 (HMD1.0 & HDC20) - 2 (HMD1.2)
Loop connector	Buchanan 2-pin terminal block — 3.5 mm pitch
Output signal	Voltage — biased at $V_{in}/2$
Output current (PS-HMD24V)	3,5 Arms
Output voltage (PS-HMD24V)	48 Vpp / 4.5 Arms max.
AURACAST™ OUTPUT (A versions)	
Auracast™ module	Built-in (HMD1.0A / HDC20 A / HMD1.2A)
Connector	PCBA connector or 4pin terminal block
AUDIO CHARACTERISTICS	
Frequency response	80 Hz – 8 kHz
Metal loss compensation (MLC)	Adjustable
Automatic gain control (AGC)	Voice-optimised peak detection

Built-in signal generator	Pink noise and 1 kHz (HDC version excluded)
USER INTERFACE	
Configuration	DIP switches
Input / output adjustments	Potentiometers
LEDs	Power, Auracast™, Fault, Clip, Loop 1, Loop 2
DIMENSIONS	
Width	100 mm
Height	150 mm
Depth	23,7 mm

IX. Legal Information, Warranty and After-Sales Service

CE Certification

The H Serie complies with the following European directives:

- Radio Equipment Directive (RED) (2014/53/EU)
- Low Voltage Directive (2014/35/EU)
- RoHS Directive (2011/65/EU)

The CE declaration of conformity is available at www.opus-technologies.fr.

Warranty

Opus Technologies products are covered by a 5-year manufacturer warranty (3 years + 2 years upon product registration). The warranty covers repair and return of the product at no cost. It does not apply in case of damage resulting from misuse, non-compliant installation, or repair attempts by unauthorised persons.

 *Keep the delivery note and original packaging for the entire warranty period.*

Maintenance

HMD and HDC series amplifiers require no special maintenance. If the device is dirty, clean only with a dry cloth. Never use solvents, alcohol, or cleaning fluids. Store in a dry, dust-free location..

After-Sales Service and Returns

In case of malfunction, contact your authorised dealer first. If necessary, contact Opus Technologies directly:

Email	contact@opus-technologies.fr
Support	support@opus-technologies.fr
Phone	+33 (0)9 81 24 00 06
Address	Opus Technologies — 2 ZA du Bédât — 33650 Saint-Médard-d'Eyrans, France
Website	www.opus-technologies.fr

Comments :
