

Considerations in Hearing Loop System Design



What Kind of Loop System Do I Need?

A hearing loop system requires many considerations such as; input audio, loop driver, a loop design, the physical loop, installation accessories and test equipment for commissioning and subsequent maintenance.

Jands has partnered with Ampetronic, a global loop technology leader to ensure that from quotation to design to installation, a whole system view is taken. This approach ensures the best possible solution for your assistive listening needs.

Providing us with as much information as possible on these seven subjects will help us to prepare an accurate quotation or design in a timely manner. A writable PDF Form follows this page.

1. Site Details

We need a site name for your project. We will then allocate a unique project reference number – e.g. DP1203, which you can quote for any further inquiries about the project. It is also very useful for us to actually know what the project is, so we fully understand the way the loop system might be used.

2. Application / System Use

What type of system is needed? Is a local system required to assist communication across a desk or counter (e.g. in a bank), or will the loop need to cover a defined area? What inputs are needed; line level input (say from an audio mixer desk), microphone input and how many of each?

3. Australian Standards Compliance

Are there requirements to meet a particular Australian Standard? There are two relevant Australian Standards, AS 1428.5 and AS 60118.4. Each standard has slightly different performance parameters which will affect the outcome of the loop design. For more information on the differences between the two standards please visit:

<http://www.jands.com.au/support/assistive-listening-systems>

4. Controlling Spill and Interference

A simple loop system will be audible for a considerable distance (up to 3 times the width of the loop in both the horizontal and vertical directions) outside the loop. Is this likely to be a problem? For example, are there any other loop systems nearby, next to, above or below (existing, planned or possible in the future)? Also, are there any issues of confidentiality? For example, two classrooms next to each other will need a low spill design to minimise overhearing from one to the other. A courtroom or council chamber used for confidential meetings may also require a low spill design. Please state in which directions the spill control is required.

5. Site Drawings

For a design to be created, Jands will need scaled plans of the room(s) showing basic outline and the area to be covered. Electronic drawings are acceptable in dwg format. If low spill designs are required, the drawings should show the proximity of the rooms. If vertical spill is an issue or the loop is intended to be installed at ceiling level, a scaled section drawing will also be required.

6. Metal Structures

An appreciation of the amount and type of metalwork contained within or close to the loop area is very important in designing a loop system. If metal structures are not properly assessed, your loop system may not work at all. Please provide any details that you have regarding floor or ceiling metalwork, for example reinforcing mesh, metal system floors and suspended ceiling grids will all have an effect. For counters, we need to know if the counter is all metal or does it have a metal front panel?

7. Installation Method

How and where are the loops going to be installed? Can single insulated cable be used, or will the loop be installed under a floor covering using flat copper tape?

Note that rooms with metal loss or issues of low spill / confidentiality will need special design and the loop wires will cross the room at a number of points.

Flat copper tape is usually the easiest to install under the carpet in this case, but alternatively, ordinary wire enclosed within plastic conduit may be installed either in the screed or above the suspended ceiling (depending on the height).

More information on the key issues that are considered in designing or quoting for a loop system can be found in our detailed guide. Contact Jands for full details at sales@jands.com.au.

Hearing Loop System Clarification Form



Providing us with as much information as possible on these subjects will help us to prepare an accurate quotation or design in a timely manner.

Your Details:

Title: _____ Name: _____

Company: _____

Phone: _____ Email: _____

Jands Sales Rep (if known): _____

Project Information:

Project/Site Name: _____

Approximate Date of Installation: _____/_____/_____

New Building

Background noise survey completed

Existing Building

Site metal loss survey completed

Multi Level Building

Choose Best Fit Description:

Room/Auditorium

One-to-One Speech (Counter, information desk, etc.)

Portable/Non-Permanent System

Vehicle

Elevator/Lift

Other

Australian Standards Compliance:

AS1428.5 (Communication for people who are deaf or hearing impaired)

AS 60118.4 (Hearing aids – Magnetic field strength in audio-frequency induction loops for hearing aid purposes)

Intended Application User Listening Height:

Seated Height (Approx. 1.2)

Standing Height (Approx. 1.7)

Seated and Standing Height (Dual Use)

Loop Driver:

Type of mounting required:

Rack Mount

Under Counter

Wall Mount

Vehicle Enclosure

Lead Cable length required: (close approximation is required):

Hearing Loop System Clarification Form



Additional Description:

Please describe the application as accurately as possible. Remember to include **the number of systems required**, width and length of each coverage area, **intended position of the loop** (e.g. floor level, loop in ceiling at 3.6m. etc.)

Installation Method:

If known, please describe the preferred or possible locations for loop cable to be located. For example let us know if it is possible to install cables under floor coverings, in ceiling voids, or by burial in concrete.

Input Audio Requirement:

Please describe any audio systems that must be used as an input to the loop system (e.g. existing PA, 70V line, dedicated microphones required). Please note if your venue has a performance stage that will include any electric guitars with single coil pickups.

Spill Interference:

Will there be any other loop systems within 2 to 3 times the loop width from the edge of this system? Are there any existing or planned loops vertically above or below this system? Please give details. Is confidentiality important? If so, how far from the edge of the area can the signal be allowed to 'spill'?

Metal:

Metal structures in the plane of the loop or near to the loop can affect the loop performance. Select any of the following that may be present in or near to your loop system:

- | | |
|---|-----------------------------|
| Computer Floor (metal clad floor tiles) | Steel Deck Reinforced Floor |
| Mesh Reinforced Concrete Floor | Metal Frame Building |
| Metal Grid in Ceiling | Metal Ceiling Tiles |
| Metal Beams or Panels Close to Cable Location | |

Please give details of any metal structures if you have them:

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Drawings Available:

What drawings are available? Dimensioned layout drawings with marked loop coverage areas are preferred for a quote and essential for a design. If drawings are available please send as an attachment with this completed form. **(Please list attached files and PDF/DWG of Significance).**

Other Information:

Please make note of anything else that you think we should know.