

Induction Loop Certification

LOOP AMPLIFIER CALIBRATION AND IEC SPEC 60118-4

This document certifies that the loop amplifier has been calibrated to the loop, the system meets the IEC Specification 60118-4, the facilities manager has been informed about system calibration, and the facilities manager is satisfied with the audio performance.

Perform these steps and sign off at the bottom of page 2 when complete. If any part of the test fails, review and correct the installation (if necessary) or notify the installer to do so.

Step 1. Ensure that all electrical equipment is running, and lights turned on as normal for the venue while testing is being performed. **Make sure the Loop Amplifier is OFF.**

Step 2. Background Noise Check

With the FSM set at -20dBA (A-weighted), walk around the seating area and observe the background noise level.

Was the maximum reading greater than -32dB (reference 400 mA/m)? Yes/No _____

If “no”, test passes. If the level is between -32dB and -20dB, have the sources of EMI (Electromagnetic Interference) investigated and inform the facilities manager of the devices causing the noise. This noise level may be acceptable as is, or it may be corrected by turning off the devices causing the noise. If the background noise is above -20dB, it is highly recommended to fix the source of the problem before beginning the commissioning process, as background noise in this range will begin to defeat the purpose of the loop system.

Step 3. Turn the loop amplifier On. Set the FSM to 0dB.

Step 4. Initial Field Strength @ 1kHz

Use the calibration window in the PC Mixer App to set the test tone to 1kHz. Does the Field Strength = 400mA/m ±3dB @1kHz, at the center and 6 typical listening positions within the looped area?

On a floor plan, clearly mark the center of the listening area and six measurement positions, and keep the copy of the floor plan with this document. Measure at the hearing plane (seated vs standing) with the FSM at these positions and record the readings:

	Center of Loop Area	Position 1	Position 2	Position 3	Position 4	Position 5	Position 6
Field Strength (dB)							

Largest reading _____ minus smallest reading _____ = _____ Is the result 6dB or less? _____

If yes, test passes. If not, adjust the amplifier until this spec is met.

Step 5. Frequency Response

Does the Frequency Response = ±3dB at 100Hz, 1kHz and 5kHz?

Use the same positions as were used in step 4. Using the calibration window in the PC Mixer App, set the frequency to the first frequency (100 Hz) and measure the field strength at the hearing plane (at 5 feet) with the FSM at the first position in the listening area. Repeat this process for each position, then change to the next frequency and record the FSM readings:

Test Tone Frequency	Center of Loop Area	Position 1	Position 2	Position 3	Position 4	Position 5	Position 6
100 Hz							
500 Hz							
1 kHz							
2.5 kHz							
5 kHz							

Largest reading _____ minus smallest reading _____ = _____ Is the result 6dB or less? _____
 If yes, test passes. If not, adjust the equalization in the amplifier at these frequencies, until this spec is met.

Step 6. Final Sign-Off

Have the Facility Manager verify the audio quality for themselves with a loop receiver. Facility Manager Initial _____.

Instruct the Facility Manager on what the output faders do in the PC Mixer App, that they are directly tied to calibration, and that moving these faders takes the loop amplifier out of calibration. Facility Manager Initial _____.

I certify that the amplifier has been calibrated to the loop, the system meets IEC Specification 60118-4, and the audio performance is satisfactory.

Field Technician Name (print): _____

Facility Manager Name (print): _____

Company (print): _____

Facility Name (print): _____

Field Technician Signature: _____

Facility Manager Signature: _____

Date: _____

Date: _____