Example: Civic Center - Hearing Loop Designer Induction Design Report

PROJECT: Example: Civic Center | AREA: Council Chamber - Main floor
DESIGNER: Maya Lindqvist (Example AV Services)

1. LOOP DESIGN

Loop size	66' 0" x 44' 0"
Loop Area:	2904 sq ft
Topology:	Uniformity-Optimized Phased Array
Wall boundary	70' 0" x 56' 0" · F 10' 0" / R 2' 0" / B 2' 0" / L 2' 0"
Listening Height:	3' 11"
Effective Field Height:	3' 11"
Audience Margin:	2' 0" X / 2' 0" Y

2. SELECTED LOOP DRIVER

Contacta

V12a

SUITABLE — AUTO - RATINGS PER OUTPUT

REQUIRED V / MAX VOLTAGE **9.5 / 12 V (79%)**	REQUIRED A / MAX CURRENT **4.8 / 5 A (97%)**
CHANNELS **2 / 2**	RESISTANCE **1 Ohm / 0.3-2.4 Ohm**

3. INSTALLATION & WIRING

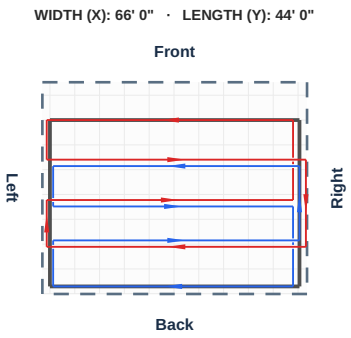
WIRE ORIENTATION **Y - Long runs: Left <-> Right**	LOOP WIRE: **14 AWG · 1 Turns**	LOOP HEIGHT: **0' 0"**
FEEDER CABLE: **14/4 AWG Quad Core**	FEEDER LENGTH: **85' 0"**	PHASE SHIFT: **90 deg**

4. ELECTRICAL LOAD BY DRIVER CHANNEL

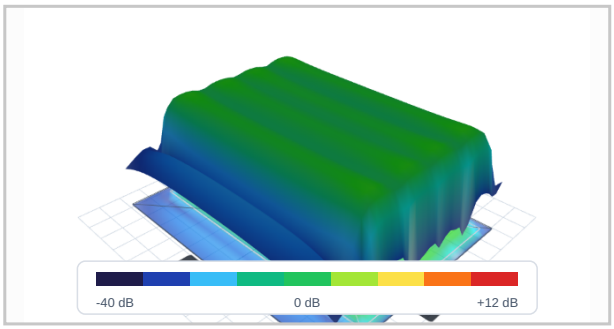
Metal Loss Source: Test Results (3 test points)

PARAMETER	CHANNEL A (PHASE A)	CHANNEL B (PHASE B)
Total Loop Wire Length	312 ft	312 ft
DC Resistance (R_dc)	1 Ohm	1 Ohm
Inductance	166.8 uH	166.8 uH
Impedance at 1.6 kHz (Z)	1.97 Ohm	1.94 Ohm
Required A @ 1.6 kHz	4.84 A RMS	4.84 A RMS
Maximum Voltage at 1.0 kHz	6.5 V RMS	6.3 V RMS
Maximum Voltage at 1.6 kHz	9.5 V RMS	9.4 V RMS
Required V @ 1.6 kHz	9.5 V RMS	9.5 V RMS
Maximum Voltage at 5.0 kHz	35.5 V RMS	35.3 V RMS

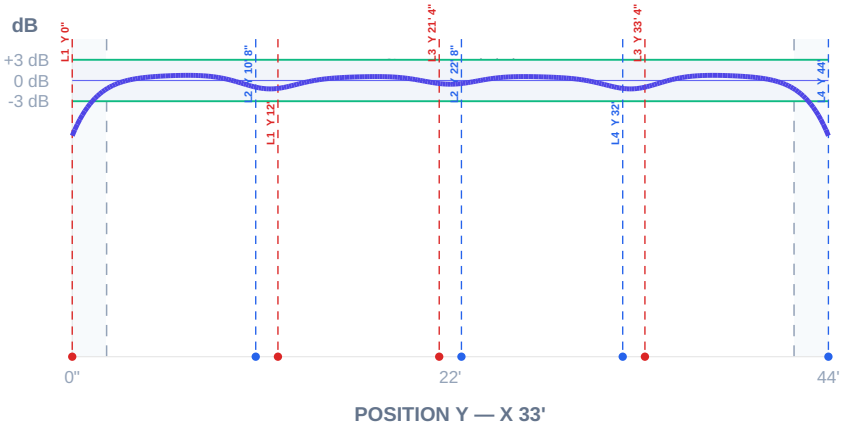
LAYOUT SIMULATION PREVIEW



3D FIELD SURFACE MAP



CROSS-SECTION PERFORMANCE (Y-Axis)



Simulated Performance:

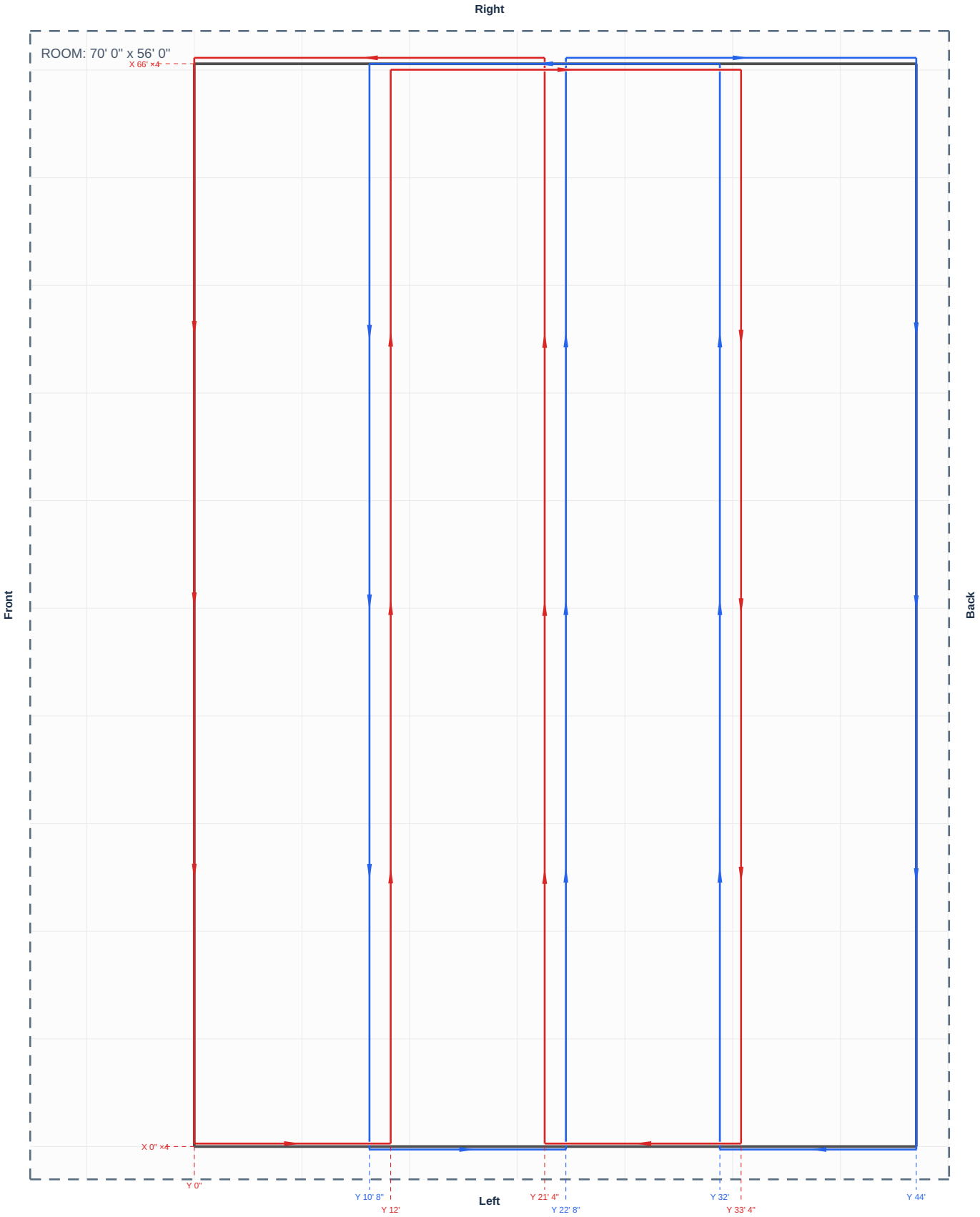
- Field Variance: 2 dB
- Min Field Strength: -1.2 dB
- Max Field Strength: 0.7 dB

Evenness, interior / whole area
2.4 / 9.1 dB (p2-98)

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Hearing Loop Designer Installation Wiring Layout

WIDTH (X): 66' 0" · LENGTH (Y): 44' 0"



Orientation: Landscape Rotation Applied (+90°)

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Materials to buy

Example: Civic Center / Council Chamber - Main floor | EX-2026-031 / A

Material	Specified product / part number	Required quantity
Loop driver	Contacta V12a	**1 unit**
Loop wire Total for all active phases, turns and cancellation loops.	14 AWG	**623.8 ft**
Feeder cable 2 cable run(s), each 85 ft.	14/4 AWG Quad Core	**170 ft**

Lengths are modeled minimums, rounded up to 0.1 m or ft. No allowance for extra site routing, slack or waste is included. Confirm those allowances and whole-roll purchasing quantities before approval.

Review exact products, part numbers and quantities before approval. Other installation accessories are not itemized here.