

# MAC One Beam Acoustic Test Report



**Martin**

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## Title

MARTIN MAC One Beam Acoustic Test Report

## Test conditions.

Test carried out according to ISO 3744:2010(E)

## Device tested.

Make: HARMAN Professional Denmark ApS

Model: MAC One Beam

Serial no: 15082337297

Software version: V0.9.6.D0

## Results

An image of the test setup can be found on Page 3. Test results are listed in Table 1 on Page 5. Tables for the equipment list are shown on Page 6.

HARMAN Professional Denmark ApS, R&D QA are responsible for the test results given in this report.

## Environment

Temperature:  $22 \pm 2^\circ\text{C}$  Ta

Humidity: 62 %RH

AC mains power: 230 V, 50 Hz

Background noise level: 8.9 dBA

Warm-up time: 30 minutes at each test scenario till fixture heat stable.

Fixture placement: Fixture was placed at least one meter from walls and ceiling, as described in the Standard ISO 3744:2010(E)

## Remarks

Test results apply only to the tested specimen.

Rev: (last five)	Made by:	Description:	Approved by:	Date approved:
A	Guo, Kevin	MAC One Beam noise level measurement	Michael, Andreasen	2026-02-02

## Setup

The product was placed indoors in a semi-anechoic room in the internal Lab of Harman Technology in Shenzhen, China (See Figure 1). The main dimensions of the room were 5.9m \* 4.9m \* 3.3m (length \* width \* height).



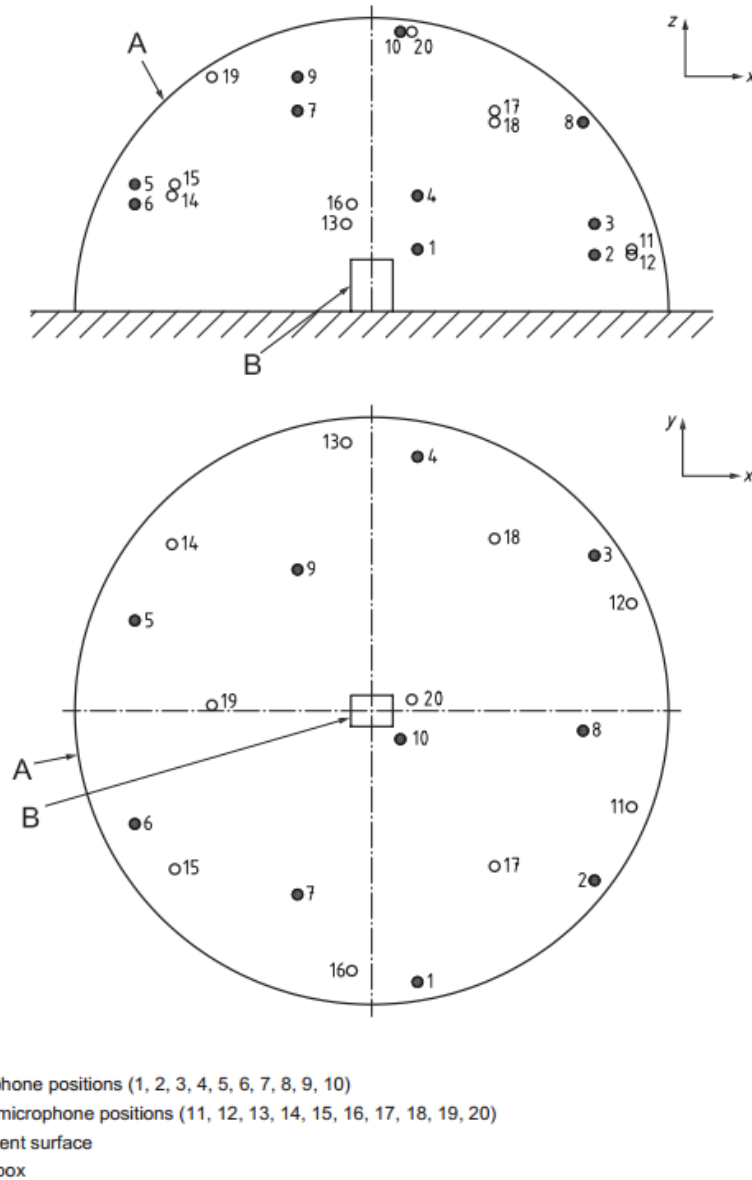
**Figure 1: Test setup**

The product was allowed a minimum 30 minutes of warm-up time before measurements were performed.

## Measurement method

Measurements were carried out using a setup with 1 microphone. The microphone was in turn moved to the measurement positions described below.

Measurement setup at hemispherical measurement model, as figure 2



**Figure 2: Microphone Positions**

Note:

1.  $R=1.5\text{m}$ .
2.  $S=2\pi R^2$ , Measurement surface area:  $14.14\text{ m}^2$ .
3. 10 key microphones were taken measurement, as the range of A-weighted sound pressure levels measured at position 1 to 10 does not exceed 10 dB, additional 11 to 20 can be not considered.
4. The dimensions of the reference box (L: W: H):  $25.5\text{ cm} \times 21.5\text{ cm} \times 31.0\text{ cm}$ .

## Results

The MAC One Beam was measured in below 5 different Modes:

1. Light source ON, 100% white light output with head horizontal, others use default – Fan Mode: Constant fan Full.
2. Light source ON, 100% white light output with head horizontal, others use default – Fan Mode: Regulated fans.
3. Light source ON, 100% white light output with head horizontal, others use default – Fan Mode: Constant fan Medium.
4. Light source ON, 100% white light output with head horizontal, others use default – Fan Mode: Constant fan Low.
5. Light source ON, 100% white light output with head horizontal, others use default – Fan Mode: Constant fan ULow.

With position as “Figure 1” show.

Measured sound pressure levels results are shown in Table 1.

Distance from fixture	Constant fan Full [dBA]	Regulated fans [dBA]	Constant fan Medium [dBA]	Constant fan Low [dBA]	Constant fan ULow [dBA]
LpA at 0m	40.2	27.6	33.8	27.3	27.2
LpA at 1m	<b>32.2</b>	<b>19.6</b>	<b>25.8</b>	<b>19.3</b>	<b>19.2</b>
LpA at 4m	20.2	7.6	13.8	7.3	7.2
LpA at 7m	15.3	2.7	8.9	2.4	2.3

**Table 1: Sound Pressure Levels**

The duration of the acoustical measurement for each position is 10s.

Sound Pressure Levels have been converted from Sound Power Levels using the formula:  $LpA = (LWA - \text{reduction distance})$

Reductions used: 8dB(A)@1m, 20dB(A)@4m, 24.9dB(A)@7m.

## Instrumentation

Test equipment list:

Equipment	Maker	Type
Harman	NTi Audio	NTi XL2 A2A-14709-E0
Harman	NTi Audio	MIC MA220 No.7587
Harman		Semi-anechoic room
Harman		Digital Barometer
Harman		Data logger for atmosphere & environment

**Table 3: Instruments Used**

