MegaSig

AH 268双轴动态声学仿真测试系统

产品规格书

AH 268 Dual-Axis Dynamic Acoustic Simulation Test System

Product Specification

产品简介

AH 268双轴动态声学仿真测试系统在继承AH 265高精度仿真人头模型核心功能的基础上，创新融合双轴转动系统与人机交互控制模块，支持通过触控界面操控模型横向±90°、纵向±90°动态偏转，或接收外部程序指令实现自动化测试，突破传统静态仿真局限。

产品参数

仿真耳	
压力场麦克风频响	20Hz – 8KHz：± 0.5dB 8KHz – 16kHz：± 1dB
底噪	<16dBA
灵敏度范围	50mV/Pa (-26.0dB±2dB) re 1V/Pa
动态范围	16dBA-135dBA
供电要求	IEPE 4mA
基本特点: 1. 仿真耳廓参考 ITU-T P.57 的解剖学形状的耳廓 3.3 型。 2. 符合 IEC 60318-4:2010 Ed.1.0 （原 IEC 60711）电声学-人耳及头部的模拟器，第 4 部分：测量插入式耳机用堵塞耳模拟器。 3. 符合 ITU-T 建议 P.57(08/96)P 系列：电话传输质量，测量目标的设备：仿真耳。 4. 符合 SJ/T 10659-1995 测量插入式耳机用堵塞耳模拟器。	

仿真嘴	
频响范围	100Hz – 10KHz
最大功率	10W
阻抗	4 ohm

频率响应（均衡后）	满足ETSI TS 102 924
谐波失真	优于ITU-T P.58 标准
基本特点: 1. 符合 IEEE269,661 国际标准和 ITU-T P.51 建议的“嘴基准点”发送声信号的要求 2. 声学测量标准声源 3. 低失真，高稳定性	

使用&放置环境	
使用温度范围	0°C – 50 °C, 32°F – 122°F
存储温度范围	-20°C – 70°C, -4°F – 158°F
湿度	20% – 80% 相对湿度

人头和躯干	
整体尺寸(长*宽*高)	400X200X680 mm
重量	约23Kg
横向/纵向偏转角度	±90°
偏转精度	±0.1
最大横向转速	20rpm
最大纵向转速	10rpm
配置： 1. 符合 ITU-T P.58 的外形几何尺寸要求 2. 耳机取放一致性 3. 满足耳机、智能眼镜、汽车智能座舱等多种场景的测试需求	

操作说明

硬件接线	
上位机程控线	RS232-DB9
供电电源接线	220V

串口通信参数	
Baud rate	115200
Data bits	8

Parity	None
Stop bits	1.0
Flow control	None
Termination char	\n

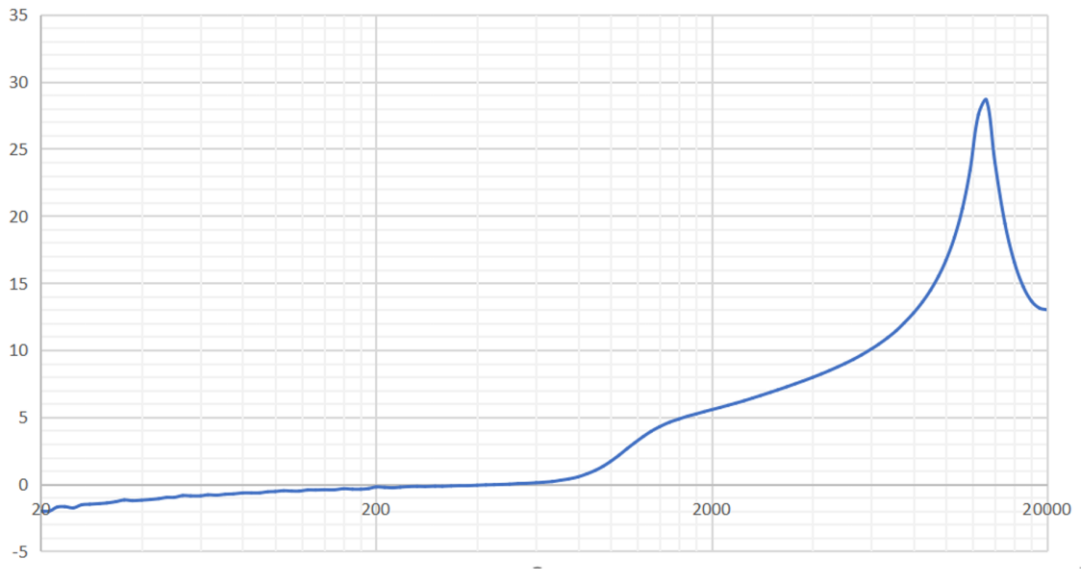
程控指令

注：下表中‘\s’代表空格，Hex为20，‘\r\n’代表回车换行，Hex为0D0A

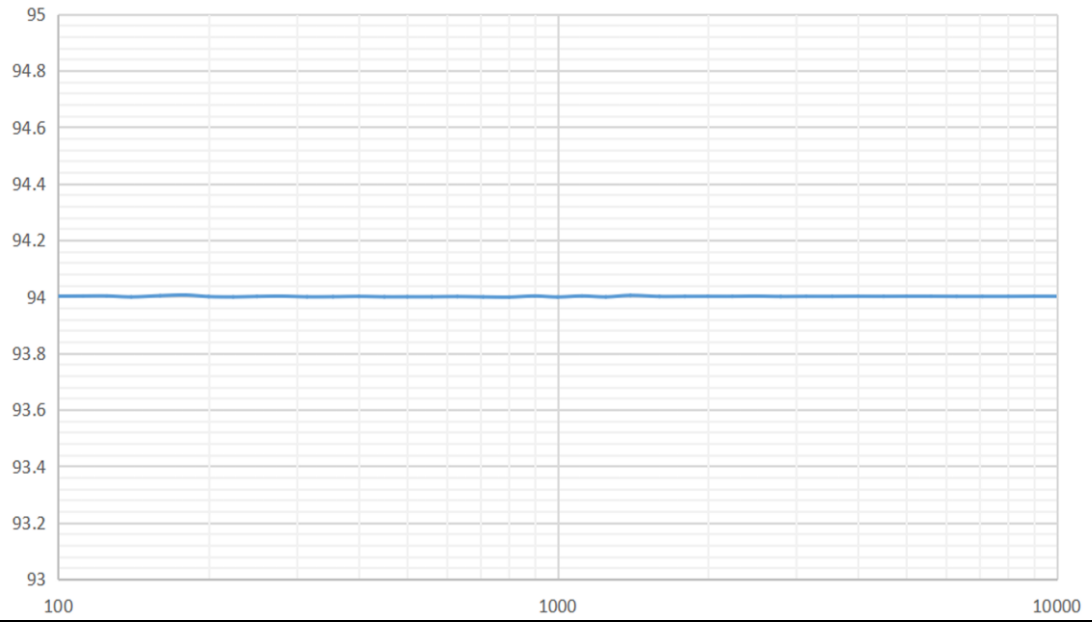
名称	发送	反馈	备注
获取产品版本号	“>Get_Version\r\n”	“OK\r\nMegaSig AH268V**x.x**\r\n”	x.x为当前版本号，第一版为1.0以此类推.
纵轴转动指令	">Nod_head=**a,s,d**\r\n"	"OK\r\n"	a参数:输入旋转角度绝对值(1-180°) s参数:输入旋转转速(1-10) d参数:输入旋转方向(0:俯视方向1:仰视方向)
横轴转动指令	">Shake_head=**a,s,d**\r\n"	"OK\r\n"	a参数:输入旋转角度绝对值(1-180°) s参数:输入旋转转速(1-20) d参数:输入旋转方向(0:人头视角向右转动1:人头视角向左转动)
获取当前角度指令	">GET_CUR_ANGLE\r\n"	"Xangle=x\r\n" "Yangle=x\r\n"	反馈X轴和Y轴的当前角度
回零指令	">ZERO\r\n"	"OK\r\n"	将X轴与Y轴的角度回归到0位

相关曲线指标

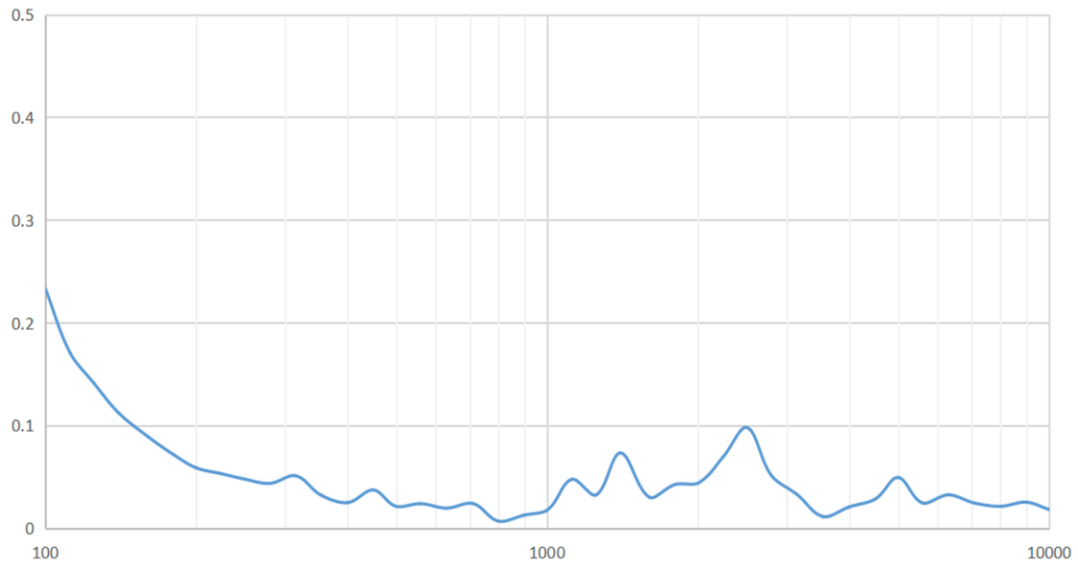
仿真耳的频率相应



EQ后仿真嘴的频率响应



EQ后仿真嘴的谐波表现



www.megasig.com

深圳市美格信测控技术有限公司

电话：0755-8950.8393
传真：0755-8950.8392
销售邮箱：sale@megasig.com
技术支持：support@megasig.com
地址：中国.深圳.光明.光明数字智造产业园1栋2单元4楼5楼

版本号：V1.1_20260427_CN

Product introduction

AH 268 dual-axis dynamic acoustic simulation test system builds upon the core functionalities of the AH 265 high-precision head simulator model while innovatively integrating a dual-axis rotation system and a human-machine interaction control module. It supports manual control of the model's horizontal ±90° and vertical ±90°dynamic deflection via a touch interface, or can receive external program commands to achieve automated testing, breaking through the limitations of traditional static simulation.

Product parameter

Ear simulator	
Pressure-field microphone frequency response	20Hz to 8KHz：± 0.5dB 8KHz to 16kHz：± 1dB
Typical noise level	<16dBA
Sensitivity	50mV/Pa (-26.0dB±2dB) re 1V/Pa
Dynamic range	16dBA-135dBA
Power supply requirement	IEPE 4mA

Basic feature：

1. Pinna simulator referencing the anatomical shape of Type 3.3 pinna specified in ITU-T P.57
2. Conforming to IEC 60318-4:2010 Ed.1.0 (formerly IEC 60711) electroacoustics - human ear and head simulators, Part 4: Plug ear simulators for measuring insertable headphones.
3. Equipment conforming to ITU-T Recommendation P.57 (08/96) of the P-series: telephone transmission quality, measurement objectives: ear simulator.
4. Equipment conforming to SJ/T 10659-1995: occluded ear simulator for measuring insert earphones.

Mouth simulator	
Frequency range	100Hz – 10KHz
Maximum power	10W
Impedance	4 ohm
Frequency response (after equalization)	Satisfy ETSI TS 102 924
THD	Superior to ITU-T P.58 standard
Basic feature: 1. Complies with the requirements of the "mouth reference point" recommended by IEEE269,661 international standards and ITU-T P.51 for transmitting acoustic signals 2. Acoustic measurement standard sound source 3. Low distortion, high stability	

Use & Place the environment	
Operating temperature	0°C – 50 °C, 32°F – 122°F
Storage temperature	-20°C – 70°C, -4°F – 158°F
Humidity	20% – 80% RH

Head and torso	
Overall dimensions (length * width * height)	400X200X680 mm
Weight	About 23Kg
Horizontal/Vertical deflection angle	±90°
Deflection accuracy	±0.1
Maximum horizontal rotational speed	20rpm
Maximum vertical rotational speed	10rpm
Configuration: 1. Complies with the requirements of the external geometric dimensions of ITU-T P.58 2. High consistency in headphone placement and removal 3. Meet testing requirements for multiple scenarios including headphones, smart glasses, and automotive smart cockpits	

Operating instruction

Hardware connection	
Computer control line	RS232-DB9
Power supply	220V

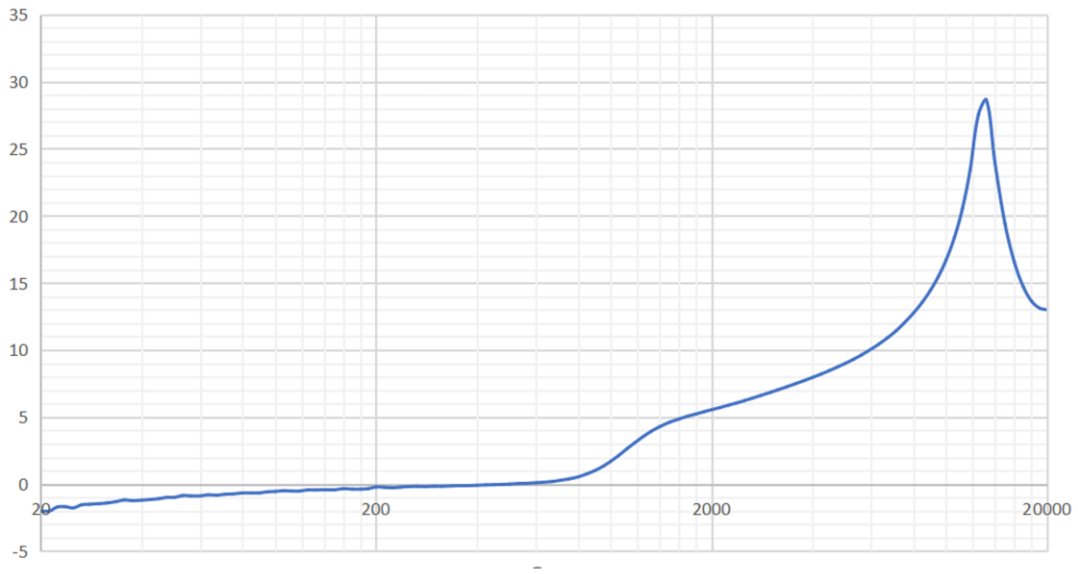
Serial communication parameters	
Baud rate	115200
Data bits	8
Parity	None
Stop bits	1.0
Flow control	None
Termination char	\n

Program control instruction			
Note: In the table below, '\s' represents a space, and Hex is 20.' \r\n 'represents carriage return and line feed, and Hex is 0D0A			
Name	**Send**	**Feedback**	**Note**
Obtain the product version number	“>Get_Version\r\n”	“OK\r\nMegaSig AH268V**x.x**\r\n”	x.x is current version number， the first version was 1.0, and so on.
Vertical axis rotation command	">Nod_head=**a,s,d**\r\n"	"OK\r\n"	Parameter a: input the absolute value of the rotation angle (1-180°) Parameter s: input rotation speed (1-10) Parameter d: input rotation direction (0: top view direction 1: top view direction)
Horizontal axis rotation command	">Shake_head=**a,s,d**\r\n"	"OK\r\n"	Parameter a: input the absolute value of the rotation angle (1-180°) Parameter s: input rotational speed (1-20) Parameter d: input rotation direction (0: rotate the head perspective to the right 1: rotate the head perspective to the left)
Get the current angle command	">GET_CUR_ANGLE\r\n"	"Xangle=x\r\n" "Yangle=x\r\n"	Feedback the current angles of the X-axis and Y-axis
Return to zero command	">ZERO\r\n"	"OK\r\n"	Return the angle between the X-axis and

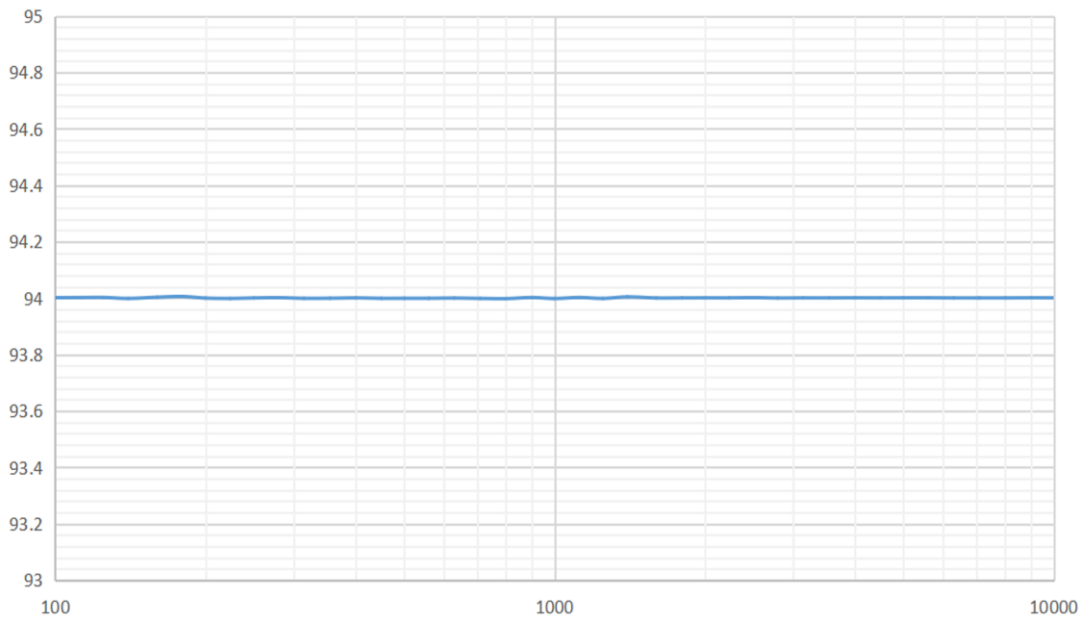
			the Y-axis to the 0 position

Relevant curve indicators

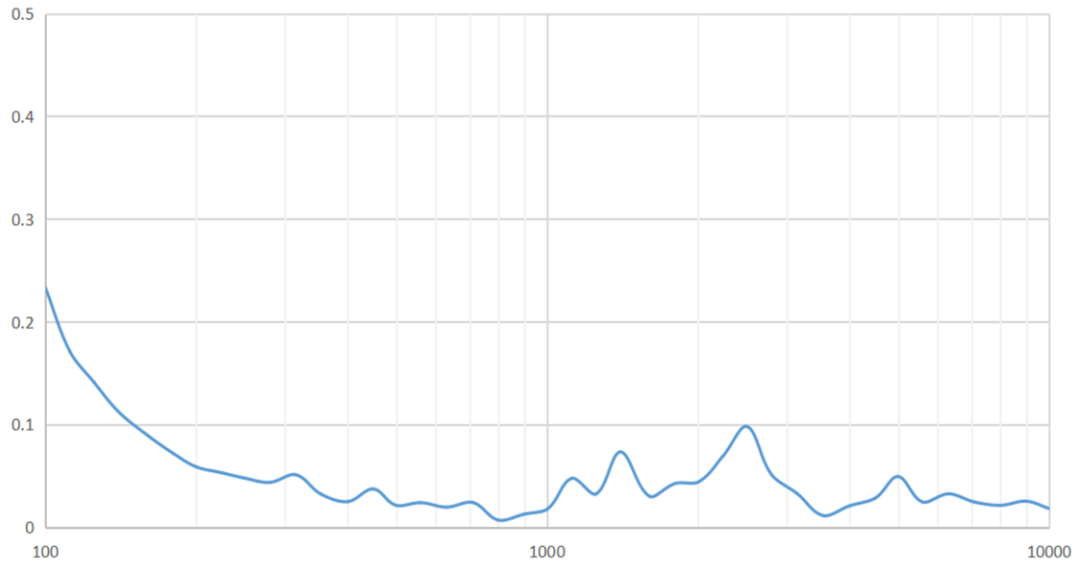
Frequency response of the ear simulator



Frequency response of the mouth simulator after EQ



Harmonic performance of the mouth simulator after EQ



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MegaSig Measurement & Control Technology Company Limited
Tel：0755-8950.8393
Fax：0755-8950.8392
Sales email：sale@megasig.com
Technical support email：support@megasig.com
Address： 4th & 5th floors, Unit 2, Building 1, Guangming Digital Smart Manufacturing Industrial Park, Jinmo Road, Guangming District, Shenzhen, China

Version number：V1.1_20260427_EN