

Acoustic Test Report

Model Name : **ES34069**

Ver : **A**



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1. Executive Summary of Results

The Chenbro Micom [ES34069](#) Chassis balances the noise level with adequate thermal performance for the [Albatron KI690-AM2](#) mainboard with [ZAWARD Active](#) Heatsink.

Operation Mode	Test Results
Idle Mode	33.3dB
80%Loading	33.5dB
100%Loading	33.9dB

Table 1 – Summary of Results

2. Introduction

The purpose of this test is to ensure that the design of tested chassis model can balance the noise level with the thermal goal under specific configuration which is either inquired or the most critical one.

This report has defined test configuration and all the relevant modifications. The test result would be valid only when the same circumstance has been applied.

The test was done by Chenbro Micom Co., Ltd. which is located at following address:

15Fl., No.150,Jian Yi Road, Chung Ho City, Taipei Hsien, Taiwan, R.O.C.

3. Test Configuration

The tested system configuration is as following.

Component	Manufacturer	Model Number	Q'ty	Specification
Chassis	Chenbro	ES34069	1	Mini-Tower chassis
Main Board	Albatron	KI690-AM2	1	Full function
CPU Type	AMD	Athlon64X2 3800	1	Socket AM2
Memory	Kingston	KVR667D2S5/512	1	DDR2 667 SO-DIMM memory module
Chipset	AMD	690G	1	Full Function
VGA	ATI	Radeon Xpress 1250	1	On Board VGA
LAN (on board)	Marvell	88E8056	1	1Gb/s Controller
Hard Drive	Seagate	ST3750640AS	2	SATAII 750GB
PSU	FSP	FSP150-AAA	1	150W PSU
System Fan (rear)	Migac	Engineer Sample	1	70x70x20/2000 RPM
CPU Cooler	ZAWARD	Engineer Sample	1	Aluminum Heatsink
CPU Fan	ZAWARD	Engineer Sample	1	80x80x15/2500 RPM

Table 2 – System Configuration

4. Chassis Description (as Tested)

The ES34069 chassis is a Slim-Tower chassis that may ship with a FSP 150W power supply (optional) and two system fans. It has one exposed slim CD-ROM drive bay and four 3.5" Hotswap HDD drive bays.

The chassis is manufactured by Chenbro Micom Co., Ltd. which is located at following address:
15Fl., No.150,Jian Yi Road, Chung Ho City, Taipei Hsien, Taiwan, R.O.C.

5. Test Facility Used

Test Facility

Item	Manufacturer	Model
Semi-Anechoic Chamber	Free Field Acoustic	N/A
Microphone	B&K	4190-L-001
Acoustic Analyzer	B&K	2827-002

Semi-Anechoic Chamber



Fig. 1 –Semi-Anechoic Chamber

6. Test Setup

The test was performed in accordance with the ISO 7779:1999 standard. The microphone position was placed at operator position i.e., $1.20\text{m} \pm 0.03\text{m}$ above the floor and $1.00\text{m} \pm 0.03\text{m}$ horizontally.

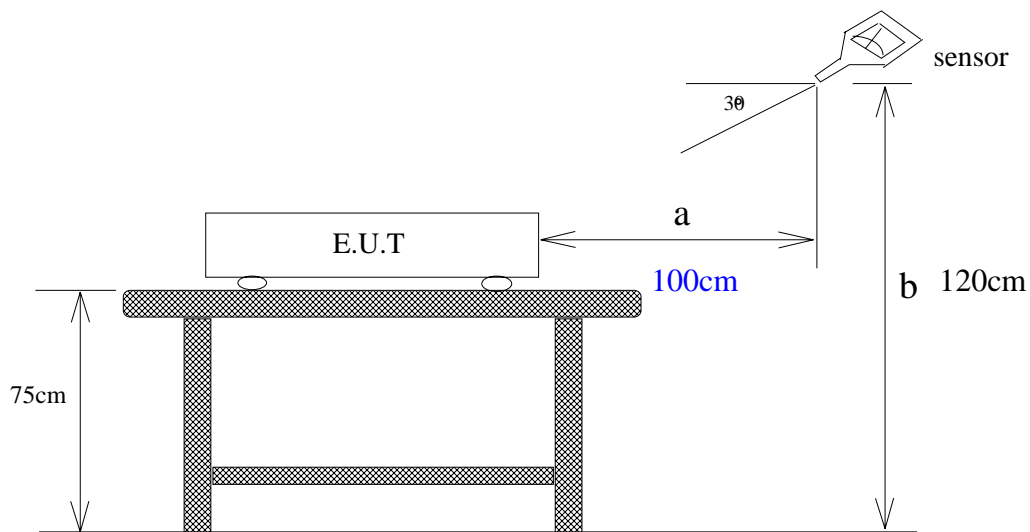


Fig. 2 – Test Position

7. Test Ambient

- ♦ Ambient Pressure: 985 mbar
- ♦ Ambient Temperature: 27.4 degree C
- ♦ Relative Humidity: 60.7%RH
- ♦ Background Noise: 15.8dB(A)

8. Test Results

Operation Mode	Test Results
Idle Mode	33.3 dB
80%Loading	33.5dB
100%Loading	33.9dB

Table 3 – Test Results

9. Conclusion

The ES34069 chassis (as tested) does balance the noise level under 40dB(A) with adequate thermal performance at specific configuration.

The tested system does not necessarily represent the absolute worst-case that the system is subject to.

10. Appendix A - System Setup



Fig. 3 – System Setup

11. Appendix B – Acoustic Diagram (Idle Mode)

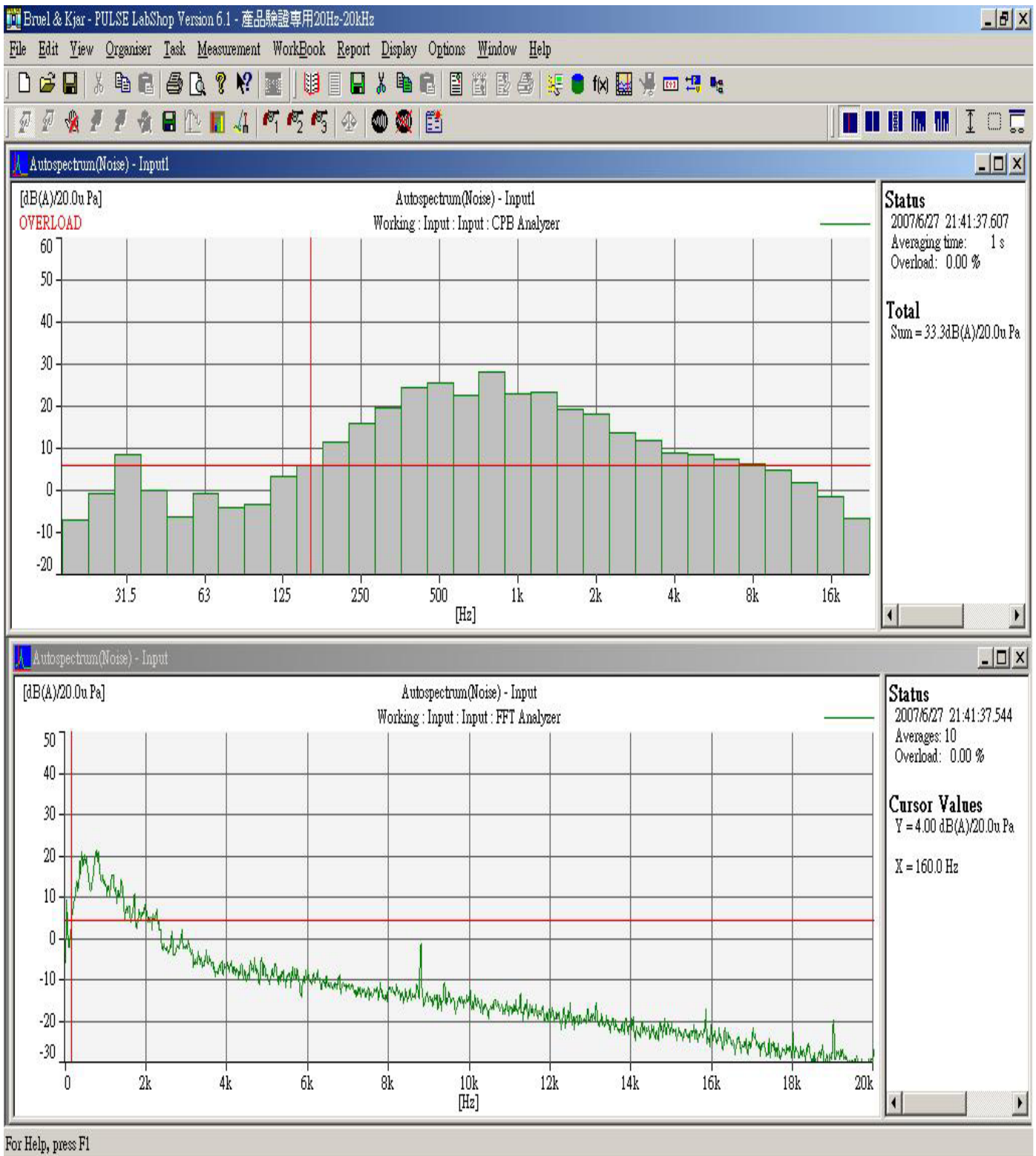


Fig. 4 – Acoustic Diagram (Idle Mode)

12. Appendix C – Acoustic Diagram (80%Loading)

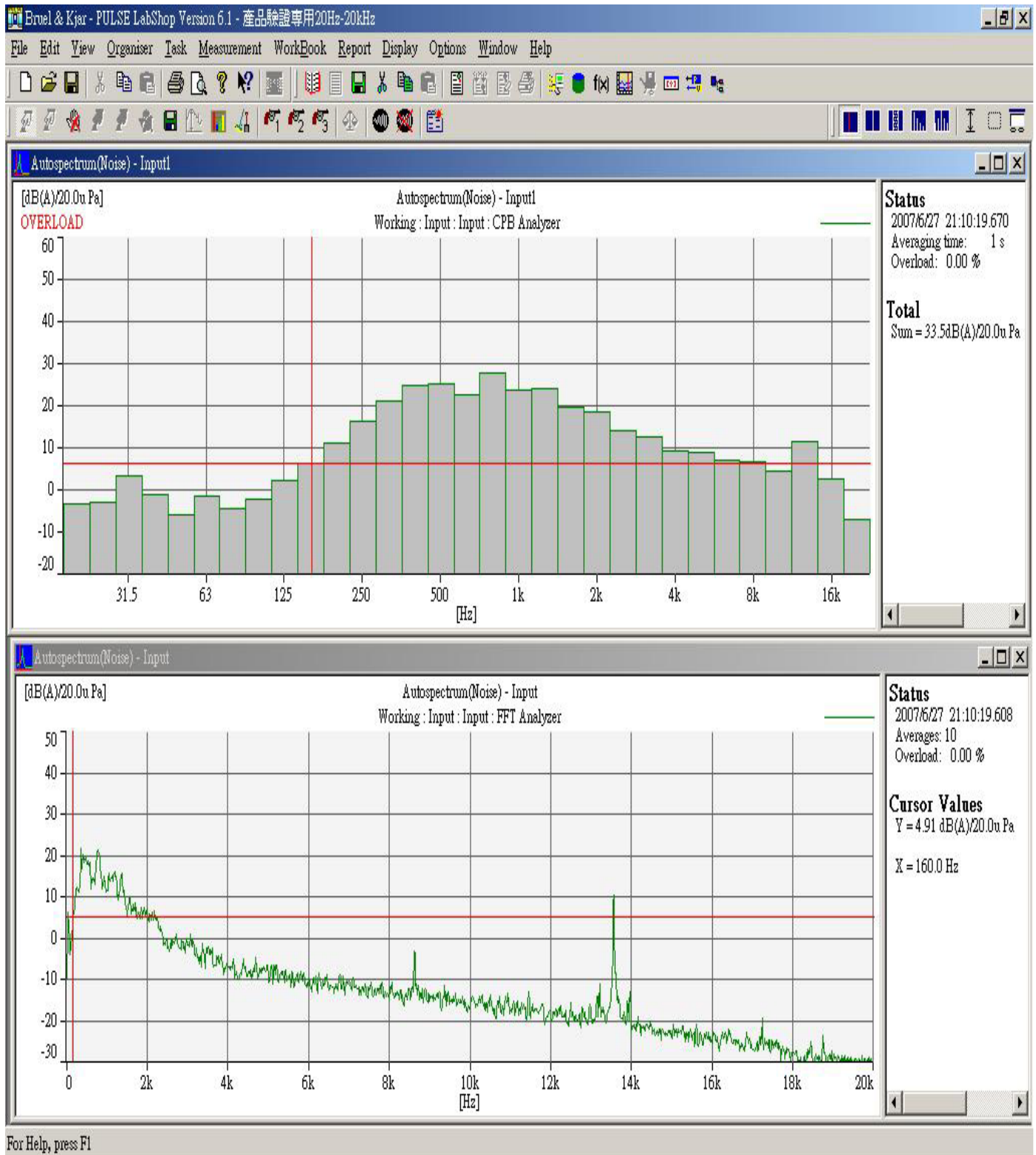


Fig. 5 – Acoustic Diagram (80%Loading)

13. Appendix D – Acoustic Diagram (100%Loading)

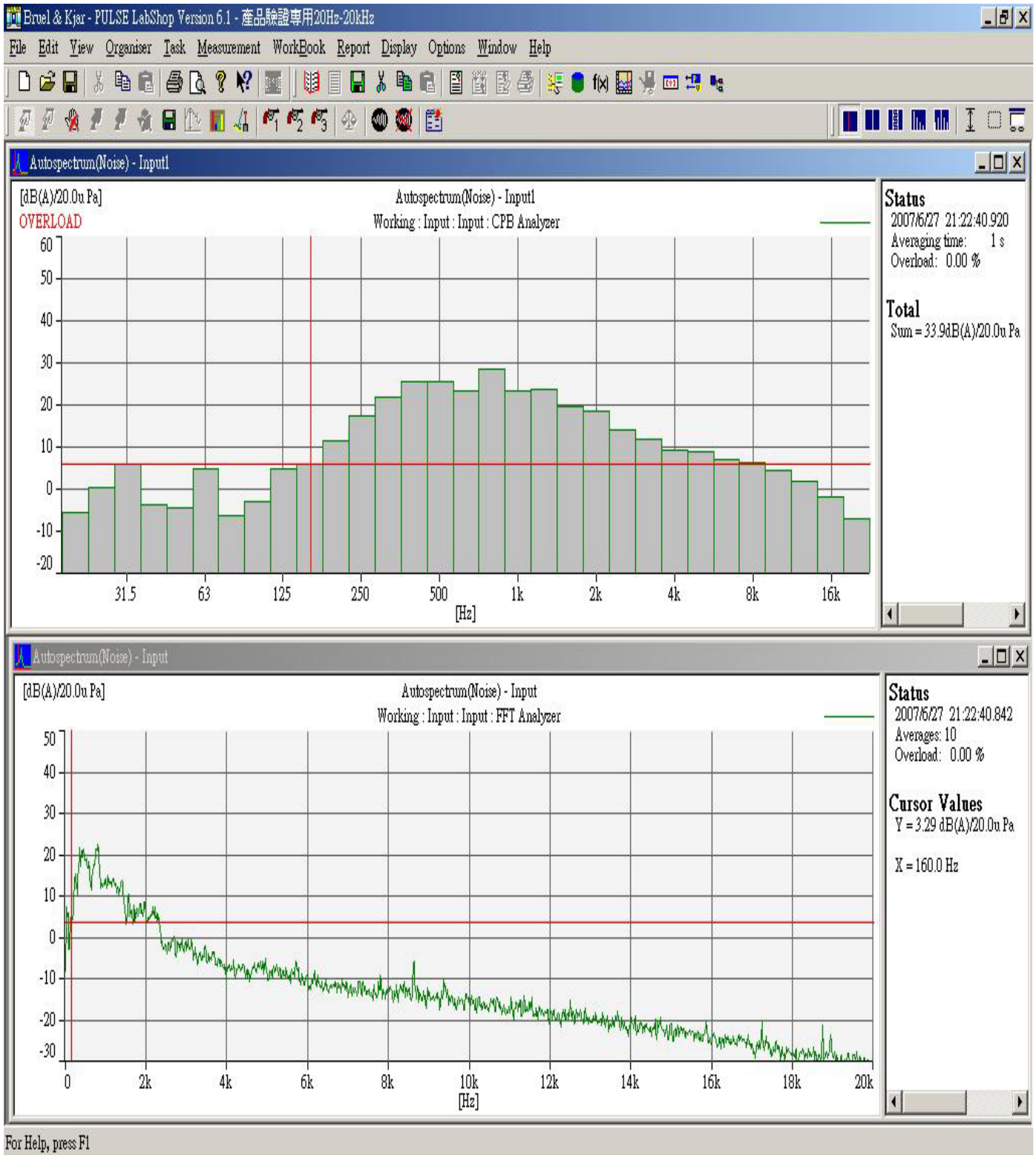


Fig. 6 – Acoustic Diagram (100%Loading)