CERTIFICATION TEST REPORT

FOR

SEED2 DFM

FCC CLASS A COMPLIANCE

DATE OF ISSUE: FEBRUARY 02, 2023

REPORT NUMBER: R230202B

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TABLE OF CONTENTS

Administrative Information	3
Summary Of Results	4
Equipment Under Test (EUT) Description	4
Peripheral Devices	4
Report Of Measurements	5
Table 1; Six Highest Radiated Emission Levels	5
Table 2: Six Highest Conducted Emission Levels	6
Table A: List Of Test Equipment	7
EUT Setup	8
Test Instrumentation And Analyzer Settings	9
Table B: Analyzer Bandwidth Settings Per Frequency Range	9
Spectrum Analyzer Detector Functions	10
Peak	10
Quasi-Peak	10
Average	10
Test Methods	11
Radiated Emissions Testing	11
Conducted Emissions Testing	12
Sample Calculations	12
Appendix A: Information About the Equipment Under Test	13
Information about the Equipment under test	14
Required EUT Changes To Comply	14
Cable Information	15
Cable Connection Diagram	17
Photograph Showing Radiated Emissions (Front)	18
Photograph Showing Radiated Emissions (Rear)	19
Photograph Showing Conducted Emissions (1)	20
Photograph Showing Conducted Emissions (2)	21
Appendix B: Measurement Data Sheets	22

ADMINISTRATIVE INFORMATION

DATE OF TEST: February 01, 2023

PURPOSE OF TEST: To demonstrate the compliance of the EUT with the FCC

requirements for CLASS A devices.

MANUFACTURER: ELECTROSMITH, CORP.

1100 Calle Cordillera San Clemente, CA 92637

REPRESENTATIVE: Andrew Ikenberry

TEST LOCATION: CKC LABS, INC.

110 N. Olinda Place Brea, CA 92823

TEST PERSONNEL: E. Wong

TEST METHOD: CISPR32/ANSI C63.4 1992

FREQUENCY RANGE TESTED: 150 kHz-1000 MHz

EQUIPMENT UNDER TEST (EUT): SEED2 DFM

ADMINISTRATIVE NOTE: All tests were conducted under the

supervision of Doug Tobias, EMC Consultant

SUMMARY OF RESULTS

The Electrosmith, EUT was tested in accordance with ANSI C63.4 2014 for compliance with the CLASS A of the FCC Rules.

The above equipment was found to be fully compliant with the CLASS A limits of FCC for both radiated and conducted emissions without modifications to comply with conducted and radiated emissions requirements. Additionally, it should be noted that the results in this report apply only to the items tested, as identified herein.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The EUT is installed in a substantial metal enclosure.

PERIPHERAL DEVICES

Device	Manufacturer	Model #	S/N
Headphone	Sony	NA	NA
Powered Speaker	M-Audio	BX 8 Studiophile	NA
Non Powered Speaker	M-Audio	BX 6	

REPORT OF MEASUREMENTS RADIATED EMISSIONS

The following Tables 1 and 2 report the six highest radiated and conducted emissions levels recorded during the tests performed on the EUT. The data sheets from which these tables were compiled are contained in Appendix B.

TABLE 1: SIX HIGHEST RADIATED EMISSION LEVELS									
	METER	CORRECTED	SPEC						
FREQUENCY	READING	READING	LIMIT	MARGIN	NOTES				
MHz	dBuV	dBuV/m	dBuV/m	dB					
140.600	36.4	28.1	50.0	-21.9	Н				
344.185	38.7	35.0	57.0	-22.0	Н				
172.103	35.9	25.9	50.0	-24.1	V				
344.215	36.6	32.9	57.0	-24.1	V				
140.629	33.1	24.8	50.0	-25.2	V				
368.762	34.3	31.2	57.0	-25.8	Н				

Test Method: CISPR 32: 2012 NOTES: H= Horizontal Polarization
Spec Limit: CISPR 32 A V= Vertical Polarization
Test Distance: 3 Meters N= No Polarization

D= Dipole Reading Q= Quasi Peak Reading A= Average Reading

Modifications:

NONE

REPORT NO. R230202B

REPORT OF MEASUREMENTS CONDUCTED EMISSIONS

TABLE 2: SIX HIGHEST CONDUCTED EMISSION LEVELS										
	METER	CORRECTED	SPEC							
FREQUENCY	READING	READING	LIMIT	MARGIN						
MHz	dBuV	dBuV/m	dBuV/m	dB						
00.167453	36.4	42.6	66.0	-23.4 - L1(L) lead						
00.467789	32.9	39.0	66.0	-27.0 - L1(L) lead						
26.780000	23.1	30.3	60.0	-29.7 - L1(L) lead						
00.164544	35.4	41.7	66.0	-24.3 - L2(N) lead						
25.717000	22.1	29.4	60.0	-30.6 - L2(N) lead						
24.998000	21.3	28.6	60.0	-31.4 - L2(N) lead						

Test Method: CISPR 32: 2012 NOTES: Q= Quasi Peak Reading Spec Limit: CISPR 32, CLASS A A= Average Reading

TABLE A

LIST OF TEST EQUIPMENT USED

SEE TEST DATA SHEETS

EUT SET UP

In general, the equipment under test (EUT) and the peripherals listed were setup in a manner that represented their normal use. Any special conditions required for the EUT to operate normally are identified in the comments that accompany Table 1 for radiated emissions, and Table 2 for conducted emissions. Additionally, a complete description of all the ports and I/O cables is included on the information sheets contained in Appendix A.

During radiated emissions testing, the EUT was mounted on a nonconductive rotating table 1 meter above the conductive grid. The nonconductive table dimensions were 1 meter by 1.5 meters. This configuration is typical for radiated emissions testing of table top devices.

I/O cables were connected to the EUT and peripherals in the manner required for normal operation of the system. Excess cabling was bundled in the center in a serpentine fashion using 30-40 centimeter lengths.

During conducted emissions testing the EUT was located 80 centimeters above the conducting ground plane on the same non-conducting table as was used for radiated testing. The metal plane was grounded to the earth through the green wire safety ground. Power to the EUT was provided via 3 meters of shielded power cable from a filter grounded to the metal plane to a LISN. The LISN was also grounded to the plane and attached to the LISN was a 4 ganged grounded outlet whose source was also shielded and 60 centimeters in length. All other objects were kept a minimum of 1 meter away from the EUT during the conducted test.

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Table A was used to collect both the radiated and conducted emissions data for the EUT. For radiated measurements below 300 MHz, the Bi-conical type antenna listed was used. For frequencies from 300 to 1000 MHz, the log periodic antenna was used. All antennas were located at a distance of 10 meters from the edge of the EUT. Conducted emissions tests required the use of the FCC type LISN's.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. For conducted emissions, a reference level of 100 dBuV and a vertical scale size of 10 dB per division was used. A 10 dB external attenuator was also used during conducted tests, with internal offset correction in the analyzer. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dBuV, and a vertical scale of 10 dB per division.

SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in Tables 1 and 2 indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in Table 1 or Table 2. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data for the EUT.

Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold", the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP 85650A Quasi-Peak Adapter for the HP 8566B Spectrum analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

Average

When the frequencies exceed 1 GHz, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set in the linear mode and scan time is reduced.

Test Methods

The radiated and conducted emissions data of the EUT, was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the "Sample Calculations". The corrected data was then compared to the CISPR32 emissions limits to determine compliance.

Preliminary and final measurements were taken in order to better ensure that all emissions from the EUT were found and maximized.

Radiated Emissions Testing

During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode (printing "H"s to the CRT and peripherals if applicable) with the I/O cables and line cords facing the antenna. The frequency range of 30 MHz-88 MHz was then scanned with the Bi-conical antenna located about 1.5 meter above the ground plane in the vertical configuration. During this scan, the turntable was rotated and all peaks which were at or near the limit were recorded. Next, the frequency range of 100-300 MHz was scanned in the same manner with the Bi-conical antenna, and the peaks recorded. Lastly, a scan of the FM band from 88-110 MHz was made, using a reduced resolution bandwidth and a reduced frequency span. The Bi-conical antenna was changed to the horizontal polarity and the above steps were repeated. After changing to the log periodic antenna in the horizontal configuration, the frequency range of 300-1000 MHz was scanned. The log periodic antenna was changed to the vertical polarity and the frequency range of 300 - 1000 MHz was again scanned. Care was taken to ensure that no frequencies were missed within the FM and TV bands. An analysis was performed to determine if the signals that were at or near the limit were caused by an ambient transmission. If unable to determine by analysis, the equipment was powered down to make the final determination if the EUT was the source of the emission.

For the final radiated scan, the equipment was again positioned with it's I/O and power cables facing the antenna, and a thorough scan of all the frequencies using a small frequency span was manually made. The turntable was rotated as needed. Comparison with the previously recorded measurements was then made.

Using the peak readings from both scans as a guide, the test engineer then maximizes the readings with respect to the table rotation, antenna height and configuration of the peripherals and cables. Maximizing of the cables was achieved by monitoring the spectrum analyzer on a closed circuit television monitor while the EUT cables were being moved and rearranged on the EUT table for maximum emissions. Figures and photographs showing the final worst case configuration of the EUT are contained in Appendix A.

Conducted Emissions Testing

For conducted emissions testing, a 30 to 50 second sweep time was used for automated measurements in the frequency bands of 150 kHz to 1.705 MHz, 1.705 MHz to 3 MHz and 3 MHz to 30 MHz. All readings within 20 dB of the limit were recorded. At frequencies where the recorded emissions were close to the limit, further investigation was performed manually at a slower sweep rate.

Tables 1 and 2 show the corrected values of the six highest readings obtained for the EUT.

Sample Calculations

An example of how the basic spectrum analyzer reading is converted using correction factors is given for the six highest emissions readings in Table 1 and 2. For radiated emissions in dBuV/m, the spectrum analyzer reading in dBuV is corrected by using the following formula:

Meter reading (dBuV)

- + Antenna Factor (dB)
- + Cable Loss (dB)
- Distance Correction (dB)
- Pre-amplifier Gain (dB)
- = Corrected Reading (dBuV/m)

This reading is then compared to the applicable specification limit to determine compliance. For conducted emissions, no corrections factors are needed when 50 uH, LISN's are used.

APPENDIX A

INFORMATION ABOUT THE EQUIPMENT UNDER TEST

INFORMATION ABOUT THE EQUIPMENT UNDER TEST

Test Software/Firmware: N/A

The EUT is placed on the turn table, connected to support devices via the connection below

- A) 10' shielded audio cable 1/4" to 1/8" TS phone jack
- B) 18" shielded audio cable XLR
- C) 12" shielded audio cable 1/4" TS phono jack
- D) 2' speaker wires shielded

REQUIRED EUT CHANGES TO COMPLY:

NONE

CABLE INFORMATION

Power Cords:

1) Unit: m200 Amplifier MFG: Generic Shielded (Y/N): N Length: 6 ft.

2) Unit: SEED2 DFM MFG: Adaptor Shielded (Y/N): N Length: 6 ft.

3) Unit: BX8 Powered Speaker MFG: Generic Shielded (Y/N): N Length: 6 ft.

I/O Cables – External Connections:

1) SEED2 DFM to m200 AMPLIFIER (1/4" to 1/8" TS phonojack)

Shielded (Y/N): Y MFG: Generic Length: 10 ft

2) SEED2 DFM to SEED2 DFM (1/4" TS phonojack) (3)

Shielded (Y/N): Y MFG: Generic Length: 12 IN

3) m200 to BX8 (XLR)

Shielded (Y/N): Y MFG: Generic Length: 18 in

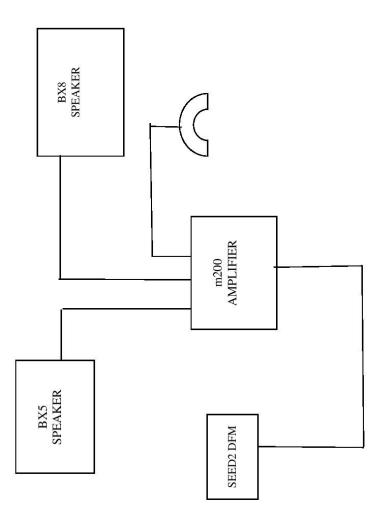
4) m200 to BX5

Shielded (Y/N): Y MFG: Generic Length: 2 ft

5) m200 to SONY Headphones

Shielded (Y/N): Y MFG: Generic Length: 4 ft

CABLE CONNECTION DIAGRAM



PHOTOGRAPH SHOWING RADIATED EMISSIONS TEST (FRONT)



PHOTOGRAPH SHOWING RADIATED EMISSIONS TEST (REAR)



PHOTOGRAPH SHOWING CONDUCTED EMISSIONS TEST (FRONT)



PHOTOGRAPH SHOWING CONDUCTED EMISSIONS TEST (REAR)



APPENDIX B

MEASUREMENT DATA SHEETS

Test Location: CKC Laboratories, Inc • 110 N. Olinda Place • Brea, CA • 714 993 6112

Customer: Electrosmith

Specification: CISPR 32 Radiated Emissions Class A (3m)

Work Order #: 108026 Date: 2/1/2023
Test Type: Radiated Scan Time: 13:48:51
Tested By: E. Wong Sequence#: 1

Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
SEED2 DFM	Electrosmith	NA	NA
Amplifier	Darkglass Electronics	M200	NNTE34CK333

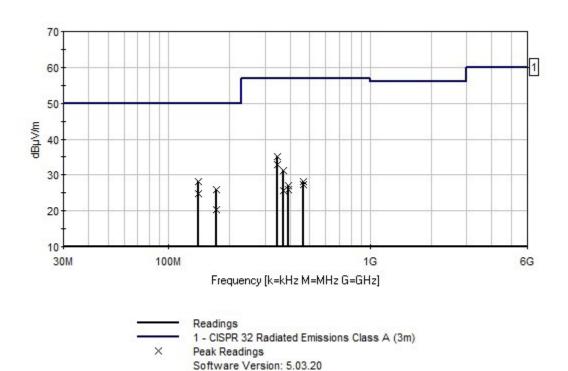
Support Equipment:

Support = quipment				
Device	Manufacturer	Model #	S/N	
Headphone	Sony	NA	NA	
Powered Speaker	M-Audio	BX 8 Studiophile	NA	
Non Powered Speaker	M-Audio	BX 6		

Test Conditions / Notes:

The EUT is placed on the turn table, connected to support devices via the connection below

- A) 10' shielded audio cable 1/4" to 1/8" TS phone jack
- B) 18" shielded audio cable XLR
- C) 12" shielded audio cable 1/4" TS phono jack
- D) 2' speaker wires shielded



Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
	AN02869	Spectrum Analyzer	E4440A	12/13/2022	12/13/2023
T1	AN00851	Biconilog Antenna	CBL6111C	4/21/2022	4/21/2024
T2	ANP05198	Cable-Amplitude	8268	12/31/2022	12/31/2024
		+15C to +45C (dB)			
Т3	AN00309	Preamp	8447D	12/13/2021	12/13/2023
T4	ANP05050	Cable	RG223/U	12/31/2022	12/31/2024

Measur	rement Data:	Read	ding listed	d by order	r taken.		Тє	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	140.629M	33.1	+17.4	+2.1	-28.0	+0.2	+0.0	24.8	50.0	-25.2	Vert
2	172.103M	35.9	+15.5	+2.3	-28.0	+0.2	+0.0	25.9	50.0	-24.1	Vert
3	344.215M	36.6	+20.5	+3.4	-27.9	+0.3	+0.0	32.9	57.0	-24.1	Vert
4	368.750M	28.7	+21.0	+3.5	-27.9	+0.3	+0.0	25.6	57.0	-31.4	Vert
5	393.200M	28.2	+21.6	+3.7	-27.9	+0.3	+0.0	25.9	57.0	-31.1	Vert
6	466.600M	28.1	+23.6	+4.0	-27.9	+0.3	+0.0	28.1	57.0	-28.9	Vert
7	140.600M	36.4	+17.4	+2.1	-28.0	+0.2	+0.0	28.1	50.0	-21.9	Horiz
8	172.102M	30.4	+15.5	+2.3	-28.0	+0.2	+0.0	20.4	50.0	-29.6	Horiz
9	344.185M	38.7	+20.5	+3.4	-27.9	+0.3	+0.0	35.0	57.0	-22.0	Horiz
10	368.762M	34.3	+21.0	+3.5	-27.9	+0.3	+0.0	31.2	57.0	-25.8	Horiz
11	393.198M	29.4	+21.6	+3.7	-27.9	+0.3	+0.0	27.1	57.0	-29.9	Horiz
12	466.598M	27.4	+23.6	+4.0	-27.9	+0.3	+0.0	27.4	57.0	-29.6	Horiz

Test Location: CKC Laboratories, Inc • 110 N. Olinda Place • Brea, CA • 714 993 6112

Customer: **Electrosmith**

Specification: CISPR 32 AC Mains Class A - Average

Work Order #: 108026 Date: 2/1/2023
Test Type: Conducted Emissions Time: 2:17:26 PM

Tested By: E. Wong Sequence#: 5

Software: EMITest 5.03.20 120/60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N	
SEED2 DFM	Electrosmith	NA	NA	

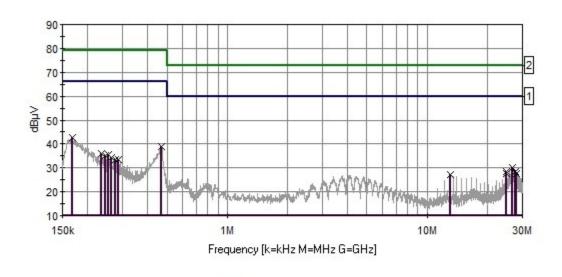
Support Equipment:

Device	Manufacturer	Model #	S/N
Headphone	Sony	NA	NA
Powered Speaker	M-Audio	BX 8 Studiophile	NA
Non Powered Speaker	M-Audio	BX 6	
Amplifier	Darkglass Electronics	M200	NNTE34CK333

Test Conditions / Notes:

The EUT is placed on the turn table, connected to support devices via the connection below

- A) 10' shielded audio cable 1/4" to 1/8" TS phone jack
- B) 18" shielded audio cable XLR
- C) 12" shielded audio cable 1/4" TS phono jack
- D) 2' speaker wires shielded



Sweep Data

1 - CISPR 32 AC Mains Class A - Average

2 - CISPR 32 AC Mains Class A - Quasi-peak

- Readings

Peak Readings

Software Version: 5.03.20

Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
	AN02869	Spectrum Analyzer	E4440A	12/13/2022	12/13/2023
T1	AN02343	High Pass Filter	HE9615-150K-	1/2/2023	1/2/2025
			50-720B		
T2	ANP07338	Cable	2249-Y-240	1/3/2022	1/3/2024
Т3	ANP08007	Attenuator	SA18N10W-06	10/24/2022	10/24/2024
T4	AN00969A	50uH LISN-Line	3816/2NM	10/16/2022	10/16/2024
		(dB)			
	AN00969A	50uH LISN-Return	3816/2NM	10/16/2022	10/16/2024
		(dB)			

Measur	ement Data:	Re	eading lis	ted by ma	ırgin.			Test Lead	l: L1-Line		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	167.453k	36.4	+0.3	+0.0	+5.8	+0.1	+0.0	42.6	66.0	-23.4	L1-Li
2	467.789k	32.9	+0.2	+0.0	+5.8	+0.1	+0.0	39.0	66.0	-27.0	L1-Li
3	26.780M	23.1	+0.2	+0.4	+5.8	+0.8	+0.0	30.3	60.0	-29.7	L1-Li
4	235.083k	30.0	+0.2	+0.0	+5.8	+0.1	+0.0	36.1	66.0	-29.9	L1-Li
5	253.991k	29.4	+0.2	+0.0	+5.8	+0.1	+0.0	35.5	66.0	-30.5	L1-Li
6	247.446k	29.0	+0.2	+0.0	+5.8	+0.1	+0.0	35.1	66.0	-30.9	L1-Li
7	24.998M	21.5	+0.2	+0.4	+5.8	+0.7	+0.0	28.6	60.0	-31.4	L1-Li
8	27.780M	21.2	+0.2	+0.4	+5.8	+0.8	+0.0	28.4	60.0	-31.6	L1-Li
9	262.717k	28.0	+0.2	+0.0	+5.8	+0.1	+0.0	34.1	66.0	-31.9	L1-Li
10	24.820M	20.7	+0.2	+0.4	+5.8	+0.7	+0.0	27.8	60.0	-32.2	L1-Li
11	28.123M	20.6	+0.2	+0.4	+5.8	+0.8	+0.0	27.8	60.0	-32.2	L1-Li
12	277.261k	27.6	+0.1	+0.0	+5.8	+0.1	+0.0	33.6	66.0	-32.4	L1-Li
13	27.985M	20.4	+0.2	+0.4	+5.8	+0.8	+0.0	27.6	60.0	-32.4	L1-Li
14	284.533k	27.5	+0.1	+0.0	+5.8	+0.1	+0.0	33.5	66.0	-32.5	L1-Li
15	13.085M	20.5	+0.2	+0.3	+5.8	+0.4	+0.0	27.2	60.0	-32.8	L1-Li

Test Location: CKC Laboratories, Inc • 110 N. Olinda Place • Brea, CA • 714 993 6112

Customer: **Electrosmith**

Specification: CISPR 32 AC Mains Class A - Average

Work Order #: 108026 Date: 2/1/2023
Test Type: Conducted Emissions Time: 2:13:08 PM

Tested By: E. Wong Sequence#: 4

Software: EMITest 5.03.20 120/60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
SEED2 DFM	Electrosmith	NA	NA

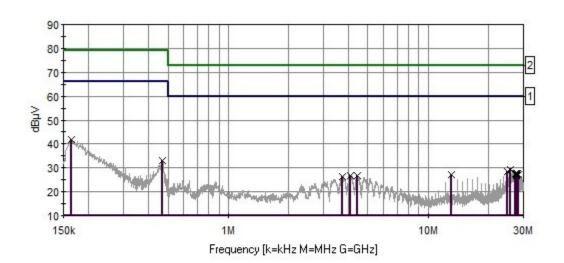
Support Equipment:

Device	Manufacturer	Model #	S/N
Headphone	Sony	NA	NA
Powered Speaker	M-Audio	BX 8 Studiophile	NA
Non Powered Speaker	M-Audio	BX 6	
Amplifier	Darkglass Electronics	M200	NNTE34CK333

Test Conditions / Notes:

The EUT is placed on the turn table, connected to support devices via the connection below

- A) 10' shielded audio cable 1/4" to 1/8" TS phone jack
- B) 18" shielded audio cable XLR
- C) 12" shielded audio cable 1/4" TS phono jack
- D) 2' speaker wires shielded



Sweep Data

1 - CISPR 32 AC Mains Class A - Average

2 - CISPR 32 AC Mains Class A - Quasi-peak

- Readings

Peak Readings

Software Version: 5.03.20

Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date	
	AN02869	Spectrum Analyzer	E4440A	12/13/2022	12/13/2023	
T1	AN02343	High Pass Filter	HE9615-150K-	1/2/2023	1/2/2025	
			50-720B			
T2	ANP07338	Cable	2249-Y-240	1/3/2022	1/3/2024	
T3	ANP08007	Attenuator	SA18N10W-06	10/24/2022	10/24/2024	
	AN00969A	50uH LISN-Line	3816/2NM	10/16/2022	10/16/2024	
		(dB)				
T4	AN00969A	50uH LISN-Return	3816/2NM	10/16/2022	10/16/2024	
		(dB)				

Measur	rement Data:	Re	eading lis	ted by ma	ırgin.			Test Lead	l: L2-Neu	tral	
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	164.544k	35.4	+0.4	+0.0	+5.8	+0.1	+0.0	41.7	66.0	-24.3	L2-Ne
2	25.717M	22.1	+0.2	+0.4	+5.8	+0.9	+0.0	29.4	60.0	-30.6	L2-Ne
3	24.998M	21.3	+0.2	+0.4	+5.8	+0.9	+0.0	28.6	60.0	-31.4	L2-Ne
4	27.437M	20.5	+0.2	+0.4	+5.8	+0.9	+0.0	27.8	60.0	-32.2	L2-Ne
5	27.526M	20.3	+0.2	+0.4	+5.8	+0.9	+0.0	27.6	60.0	-32.4	L2-Ne
6	27.972M	20.3	+0.2	+0.4	+5.8	+0.9	+0.0	27.6	60.0	-32.4	L2-Ne
7	13.085M	20.5	+0.2	+0.3	+5.8	+0.5	+0.0	27.3	60.0	-32.7	L2-Ne
8	28.383M	20.0	+0.2	+0.4	+5.8	+0.9	+0.0	27.3	60.0	-32.7	L2-Ne
9	469.971k	27.1	+0.2	+0.0	+5.8	+0.1	+0.0	33.2	66.0	-32.8	L2-Ne
10	27.780M	19.9	+0.2	+0.4	+5.8	+0.9	+0.0	27.2	60.0	-32.8	L2-Ne
11	27.574M	19.7	+0.2	+0.4	+5.8	+0.9	+0.0	27.0	60.0	-33.0	L2-Ne
12	4.092M	20.5	+0.1	+0.2	+5.8	+0.2	+0.0	26.8	60.0	-33.2	L2-Ne
13	4.441M	20.5	+0.1	+0.2	+5.8	+0.2	+0.0	26.8	60.0	-33.2	L2-Ne
14	27.835M	19.4	+0.2	+0.4	+5.8	+0.9	+0.0	26.7	60.0	-33.3	L2-Ne
15	3.727M	20.3	+0.1	+0.1	+5.8	+0.2	+0.0	26.5	60.0	-33.5	L2-Ne