

**REPORT**

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 104186785

Date: June 10, 2020

**REPORT NO. 104186785CRT-001b****SOUND OUTPUT MEASUREMENTS ON A  
S003 SAF101H SIREN & CONTROLLER SYSTEM****RENDERED TO****JULUEN  
8TH FLOOR, NO.502, DA'AN ROAD,  
SHULIN DISTRICT  
TAIPEI 23849 TAIWAN****INTRODUCTION**

This report gives the results of sound output measurements of a Siren Controller with loudspeaker. The system components were supplied to the acoustical laboratory by the client and received at the laboratories on November 20, 2019.

**AUTHORIZATION**

Signed Intertek Quotation No. Qu-01027483-0

**TEST METHOD**

The laboratory method used in conducting these tests is in accordance with SAE J1849 revised February 2020, "Surface Vehicle Recommended Practice – Emergency Vehicle Sirens". The tests were done in an anechoic chamber with sound absorbing fiberglass on all surfaces. The microphone was placed 47 inches above the floor and 3 meters from the alarm under test. All sound levels listed in the report are sound pressure levels referenced to 20  $\mu$ Pa.

**EQUIPMENT**

Equipment	Calibration Date	Due Date	S/N	Model	Brand	Asset
Microphone/Pre	3/22/2019	3/22/2020	2775344	4189	Brüel and Kjær	A351
2270 Analyzer	3/22/2019	3/22/2020	2706893	2270	Brüel and Kjær	A350
Microphone Calibrator	3/12/2019	3/12/2020	2130586	4231	Brüel and Kjær	A227

## **DESCRIPTION OF TEST SPECIMENS**

The test specimens consisted of 1 S003 SAF101H Siren & Controller System with one loudspeaker. The system consisted of a controller, a CPU BOX/Amplifier, and one siren module. The sample was identified as a 4-switch, Handheld Controller Panel. The system was operated on a 13.6 VDC regulated power supply. The sample was labeled as system 1.



This sample also represents the following models with the changes identified below.

S001 SAF205H Siren & Controller System  
8-switch, Handheld Controller Panel

S002 SAF206S Siren & Controller System  
9-switch, Console Mount Panel

## Alarm Number 1 Sound Test Results

Customer Name	Julien
Project Number	G104186785
Date	12.2.2019
Temperature (Degrees F)	70
Relative Humidity (%)	25
Barometric Pressure (inHg)	28.38
Siren Model	S003
Amplifier	H003
Controller	with siren

Values in tables are sound pressure levels in dBA referenced to 20 micropascals.

	Requirements				Measured Values				RESULT				
		Max	Max	Average		Max	Max	Average	Average	Max	Max	Average	Average
		wail	yelp	wail or yelp		wail	yelp	wail	yelp	wail	yelp	wail	yelp
		<u>dBFA</u>	<u>dBFA</u>	<u>dBFA-avg</u>		<u>dBFA</u>	<u>dBFA</u>	<u>dBFA-avg</u>	<u>dBFA-avg</u>	<u>P/F</u>	<u>P/F</u>	<u>P/F</u>	<u>P/F</u>
Sample 1	0	118	117	115		122	120	118	117	P	P	P	P
Sample 1	10	117	116	114		122	120	117	117	P	P	P	P
Sample 1	20	116	115	113		121	119	117	116	P	P	P	P
Sample 1	30	115	114	112		120	117	116	115	P	P	P	P
Sample 1	40	113	112	110		118	116	114	114	P	P	P	P
Sample 1	50	111	110	108		117	114	112	112	P	P	P	P
Sample 1	-10	117	116	114		121	118	116	116	P	P	P	P
Sample 1	-20	116	115	113		119	117	116	115	P	P	P	P
Sample 1	-30	115	114	112		117	115	113	114	P	P	P	P
Sample 1	-40	113	112	110		115	113	112	112	P	P	P	P
Sample 1	-50	111	110	108		112	110	109	109	P	P	P	P

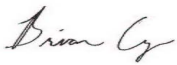
Yelp	
Highest Frequency (Hz)	750
Lowest Frequency (Hz)	1703
Cycling Period (s)	0.38
Continuous non stepped sound (Y/N)	Y
Wail	
Highest Frequency (Hz)	750
Lowest Frequency (Hz)	1615
Cycling Period (s)	5.03
Continuous non stepped sound (Y/N)	Y

June 10, 2020

## **CONCLUSION**

The sound pressure levels for sample number 1 met the required levels for the full acoustics tests. See results of tests for more information.

Report Approved by:



Brian Cyr  
Engineer  
Acoustical Testing

Report Reviewed By:



James R. Kline  
Engineer/Quality Supervisor  
Acoustical Testing

Attachments: None.