# **DSA Acoustic Analysis**

Follow the guided steps below on how to set-up an Acoustic or Octave Analysis in EDM to use with Spider hardware.

## **Create Test**

In EDM, select to create a new test. From the New Test Wizard, select the **Acoustic Analysis** test type.





New Test Wizard ?						×			
Fill in the basic information for this test Note: you will be able to search for this test by "Test name" or "Test description"									
Create a new Acoustic Analysis test: Acoustic									
Test name:	est name: Acoustic		Append the sequence number	5					
Test description:									
Use the	e default libraries of the	previous test of the same type. If default libraries were not ap	plied before the manufacturing setting	gs will be used.					
© Create	Oreate test by using a template.								
<b></b>	-								
Select	Template Name	Description							
Spider syste	em: SYS_2597504								
Test directory: C:\Users\Drew\Documents\EDM\Spider_DSA\Acoustic Choose									
Create new run folder for each run									
				< Back Next >	Canc	.el			

Finally, select the signal types that are wanted. The options include Auto Power Spectra (APS), Tachometer (TACHO), Octave Analysis (OCT), and Sound Level Meter (SLM). You are **unable** to add more signal types to be computed once the test is created. Press **Finish** to create the test.

New Test Wizard	?	×
Please check the signal types to be computed in real time.		
Note: Go to Measured Signals setting to select the signals to be viewed or saved.		
✓ Time Streams and Time Block signals are always available		
Z APS: Auto Power Spectra using FFT		
TACHO: Tachometer		
SLM: Sound Level Meter measurement using real time digital filters		
OCT: Octave Analysis using real time digital filters		
Select all		
< Back Finish	Cano	el

## **Test Configuration**

For Acoustic Analysis, there are two unique parameters that may need to be set up, *Octave Filter* and *Sound Level Meter*. Please go here for more information on basic FFT Analysis Parameters.

### **Octave Filter Parameters**

If Octave Filters are being applied, their parameters must first be set.

Octave Resolution- Defines the octave resolution including: 1/1, 1/3, 1/6, 1/12, and 1/24.

Low/High Frequency Band- Defines the low and high frequency of the measurement in Hz.

Average Mode- Defines the averaging type: exponential, linear and peak hold.

*Frequency Weighting-* Defines the frequency weighting including A, B, C or Z.

*Time Trace Frequency*- Defines which center band frequency, overall or frequency weighted band is used to plot time traces.

*Trace Update Times-* Defines the time trace display duration. Select a larger update time to create longer time trace display duration.

Octave filter parameters						
Octave resolution	1/3	•				
Low frequency band (Hz)	10	•				
High frequency band (Hz)	10000	•				
Average mode	Exponential	•				
Frequency weighting	Z	•				
Time trace frequency	Overall	•				
Trace update times(s)	0.04	-				

#### Sound Level Meter (SLM) Parameters

If the SLM is being used, the parameters must first be set.

*Time Trace Type-* Defines the time weighting including L, Leq and LE.

Analysis Period- Specifies the time duration for each analysis period.

*Result Update Time(s)*- Defines how many times the result will be updated.

*Result History*- Defines the measurement length of the result history.

Sound level meter parameter					
Time trace type	L Time-weighted 💌				
Analysis period	None 🔹				
Result update time(s)	10				
Result history	256 🔹				
Frequency weighting	Z				

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