



# EDM Automated Alarm Limit Functions

# Typical Applications

- Automated Production Test
- Wind Turbine Conditioning Monitoring
- Rotating Machine Monitoring
- Construction Noise
- Cooling Fan Vibration Monitoring
- Airport Noise
- Highway Tunnel, Railway Tunnel Vibration

# What Can be Measured with a Spider System

- Vibrations with alarm limits
  - ▣ Time blocks
  - ▣ Long recording signals
  - ▣ RMS or peak levels
  - ▣ Harmonics level
  - ▣ Power spectra
  - ▣ FRF (Frequency response function)
  - ▣ Phase measurement
- Various sound levels with alarm limits
- Temperature, humidity, voltage, strain gage

# Spider-80X Module



Front View: 8 input channels  
with control buttons

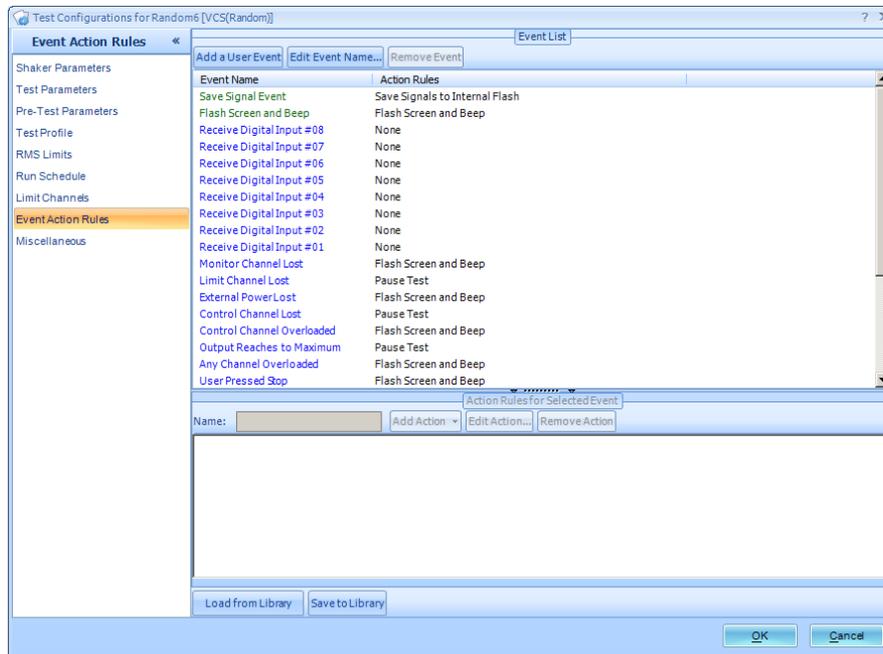
Back View: Power, Ethernet  
connector, GND, RS-485, reset  
button



# Automated Schedule and Limiting Test

- Automated limit test function allows the Spider-80X to conduct automated limit checking for time or frequency signals.
- **Test Signals:** time block signals, auto spectrum, frequency response function, octave spectrum.
- **Limit Signals:** user defined upper or low limit signals. For spectra signal the spectrum type will also be assigned. Limit signals will be bound to testing signals. Maximum segments of each limit signal: 64; Maximum number of limit signals: 64.
- **Testing Schedule:** automatically control the test duration and automates the operation. Multiple testing schedules can be developed and one is executed at a time. Testing schedule event entries: loop/lend-loop, run duration, hold, limit check on, limit check off, start recording, stop recording, save signals, turn signal source on and turn signal source off.
- **Testing Log and Summary Report:** a log file is automatically created for each run of the schedule to record up to 1024 major events. A summary report is provided for the limiting check status for the last schedule run.
- **Limit Check Alarm Events:** beep, screen flashing, add event to testing log, send message to host PC, save signals, and send emails or text messages.

# Define the Event Action Rules for Alarm Limits

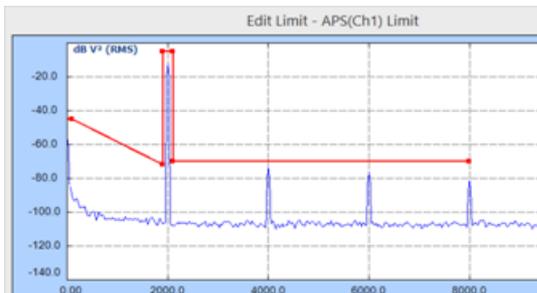


- Customize response to every test event
- Create user-defined events and activate them from the test schedule

# How Customized Event Strings work?

## Step 1

EDM sets the alarm limit together with a special message string, such as “Exceeding Limit”



User will receive an alarm email

## Step 3



When alarm event happens, the customized string, “Exceeding Limit” will be sent to the EDM Cloud email service

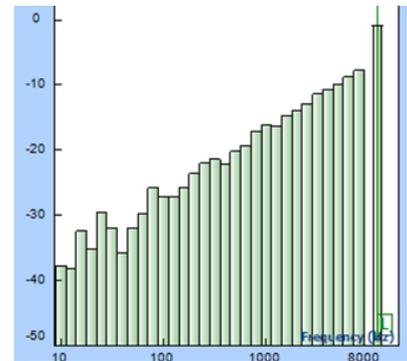
## Step 2



# EDM: Setup the Measurement

Measured signals may include:

- Time recording signals
- Octave spectra
- Sound level measurement
- Auto-power spectra
- RMS, Peak measurement
- Time blocks

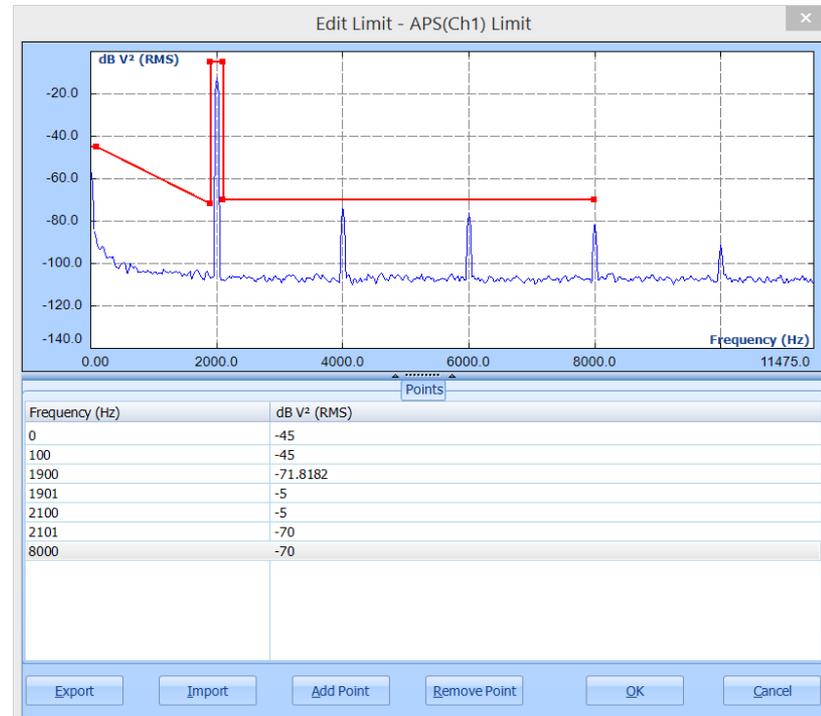


- Time Stream
  - PTx[t]
  - Ch2[t]
  - Ch3[t]
  - Ch4[t]
- Octave
  - TimeTrace(Ch1)[f]
  - TimeTrace(Ch2)[f]
  - TimeTrace(Ch3)[f]
  - TimeTrace(Ch4)[f]
  - OCT(Ch1)
  - OCT(Ch2)
  - OCT(Ch3)
  - OCT(Ch4)
- Sound Level Meter
  - SLMTimeTrace(Ch1)[t]
  - SLMTimeTrace(Ch2)[t]
  - SLMTimeTrace(Ch3)[t]
  - SLMTimeTrace(Ch4)[t]
  - SLMValues(Ch1)
  - dBHistogram(Ch1)
  - SLMValues(Ch2)
  - dBHistogram(Ch2)
  - SLMValues(Ch3)
  - dBHistogram(Ch3)
  - SLMValues(Ch4)
  - dBHistogram(Ch4)
- Time Blocks
  - Block(PTx)[t]
  - Block(Ch2)[t]
  - Block(Ch3)[t]
  - Block(Ch4)[t]
- Auto-Power Spectra
  - APS(PTx)[f]
  - APS(Ch2)[f]
  - APS(Ch3)[f]
  - APS(Ch4)[f]

# EDM: Set the Alarm Limits

Set up the alarm limits for measurement signals

- ▣ High alarm or low alarm
- ▣ With break points
- ▣ Check the value over the range with percentage



# EDM: Customize the Event Strings

Event strings will be shown in the runlog of the EDM Cloud.

The user can also apply a filter to search for the keywords of all history events.

Emails can be sent based on the keywords in the event strings.

