1. SysCheck2

SysCheck2™ is a GRAS-patented technology for verifying measurement chain integrity. This verification tool enables a remote health check on microphones, channel gain and cable integrity. The verifications can be made simultaneously on each SysCheck2-enabled microphone connected to a CCP power module with transducer electronic data sheet (TEDS) support and measurement software. SysCheck2-enabled microphones also provide on demand environmental data (temperature, barometric pressure and humidity).

2. When you connect the microphone

SysCheck2-enabled microphones function as their non-SysCheck2-enabled GRAS microphones until your data acquisition software is setup to enable the functionality.

Full SysCheck2 functionality is ready for use out of the box when connected to APx 500 Measurement Software with GRAS 12BA, 12BB or 12BC power modules, or Audio Precision APx series analyzer, or standalone APx analyzer with CCP TEDS support.

With other acquisition systems, all SysCheck2 features are accessible with a suitable CCP-based power module, analyzer and data acquisition system after setup with the GRAS-supplied software development kit (SDK) or application programming interface (API), depending on your system.

For full function and feature instructions, refer to the acquisition software's SysCheck2 interface.

3. What SysCheck2 can detect

In the evaluation of measurement chain health, SysCheck2 can detect microphone sensitivity or channel gain changes greater than 0.3 dB. Additionally, the microphone acquires data on local environmental conditions, including temperature, pressure and humidity.

4. What SysCheck2 can do

SysCheck2 microphones are equipped with an ultralow-power microcontroller located in the microphone preamplifier. This microcontroller is able to produce a reference signal that can be compared to a reference measurement to determine the measurement chain status. Changes in microphone or cable, channel gain or the unexpected use of a filter will result in a measurement deviation and will be reflected in a change in the output from the measurement channel and the status of the microphones will be updated in the software status interface* (see the SysCheck2 status indicators section). Once detected, the problem can be examined and then rectified.

The microphone also has built-in RGB LED lights* that can also be set to display visual cues to the health of the measurement chain and can be used for the easy identification of specific microphones.

SysCheck2-enabled microphones can also provide environmental data (temperature, static pressure and relative humidity) that can be used for reference and comparison.

5. General SysCheck2 verification procedure

1. Setup measurement and connect microphone as usual, including initial calibration.
2. Establish measurement reference signal.
3. Measure as required by test.
4. As needed, prior to subsequent measurements run SysCheck2 check to compare initial measurement reference signal to the current signal.

A status will be displayed in your data acquisition software according to your setup.

* *Color defined by acquisition software or user-specified.*

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6. SysCheck2 status indicators

6.1 Status 1

Status 1 represents a state where the microphone and measurement chain indicate zero faults. The system is unchanged from the initial check and measurements can be performed.

6.2 Status 2

Status 2 indicates that a deviation in the measurement chain has been detected. The measurement chain needs to be checked and an acoustic calibration is required.

The deviation could:

- Derive from a detected instability in the measurement chain.
- Result from a background noise event that is too high.
- Indicate that the check result falls outside of the acceptable uncertainty window.

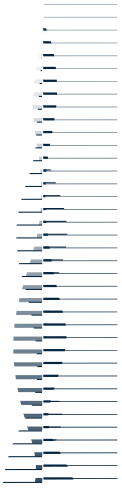
Depending on the expected level of accuracy required for the measurement to be performed, an acoustic calibration is suggested.

NOTE: SysCheck2 can also warn you if the environmental conditions have changed too drastically.

7. Where is the SDK?

The SDK can be downloaded from your microphone's Product Information page.

Quick Guide
SysCheck2



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www.grasacoustics.com

GRAS Sound & Vibration
Skovlytoften 33
2840 Holte
Denmark
+45 4566 4046

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