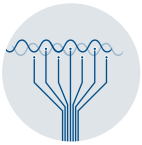




Resono's unsteady pressure measurement system, Chronos™, combines state-of-the-art data acquisition hardware with novel signal-processing algorithms to improve the productivity of your aerodynamic test and measurement applications. Chronos™ reduces instrumentation and model preparation cost, decreases down-time, and ensures reusability of expensive system components in your wind tunnel and field-testing applications.

Resono's proprietary algorithms address the pneumatic distortion of pressure tap/tubing/transducer systems, enabling well-established pressure scanning systems to be utilized for unsteady pressure measurements in aerodynamic applications.



Make use of the same tap/tubing setup for both steady and unsteady measurements, reducing preparation time.



Utilize robustness of pressure scanning technology in challenging applications.



Take advantage of additional flexibility in test design and instrumentation.

Chronos™ Primary Components:

Pulsar™

A compact hand-held device that enables test engineers to characterize the dynamic response of any tap/tubing system.

Presa™

A data acquisition system that interfaces with the Pulsar™ and your existing pressure scanners to unlock the full measurement capability of pressure scanners beyond the existing steady-state measurements.

Pmax™

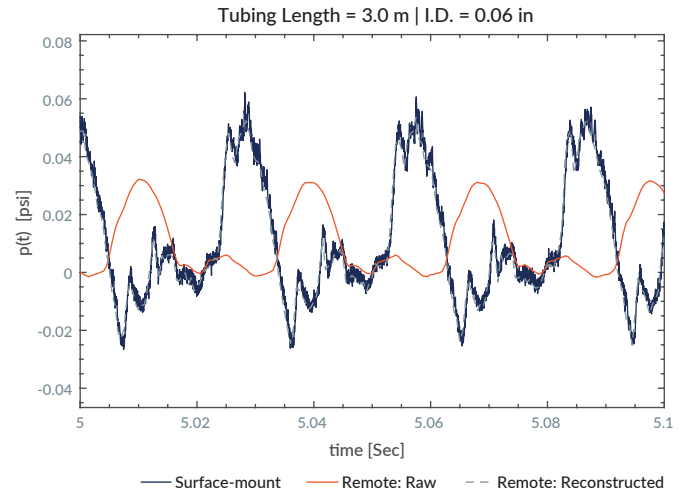
A software package that provides ultimate flexibility and ease of use in pressure data acquisition and processing. Pmax™ utilizes Resono's algorithms to compensate for the latency and distortions caused by the varying length of tubing lines connected to pressure scanners in your test facility.



How it works:

Are you using pressure scanners in your aerodynamic measurement application and need unsteady pressure data? With Chronos™, the rest is just plug-and-play.

- 1 Connect your pressure scanners to Presa™.
- 2 Apply the Pulsar™ to each pressure tap and characterize the dynamic response of the tubing lines.
- 3 Take pressure measurements in your test application (e.g. wind tunnel runs). Make use of the Pmax™ software to streamline your data acquisition workflow.
- 4 Use Pmax™ to analyze and visualize the reconstructed unsteady signals acquired with pressure scanners.



Features & Benefits:

Robust pressure scanning technology is used for unsteady measurements

- ✓ Perform tests on different models without the need for new transducers
- ✓ Eliminate cost & downtime from malfunctioning and failed transducers
- ✓ Integrate with existing tap/tubing systems, including tap/channels in 3-D printed models

Tap/tubing system response is determined with a simple process

- ✓ Fully characterize tubing response and perform leak checks in one step

Steady/unsteady pressures are measured at up to 256 locations with a single Chronos system

- ✓ Base your measurement resolution on what is needed to answer your research questions
- ✓ Decrease your per channel cost of unsteady measurements

Unsteady pressure measurements are synchronized with other flow-field or model measurements

- ✓ Gain additional insight on flow from coordinated unsteady pressure measurements

Unsteady pressures and their uncertainty are reconstructed on multiple channels quickly

- ✓ Replace costly, repeated hardware purchases with reconstruction process
- ✓ Focus on testing while leaving the analysis to our expert-system software

Specifications

Type of Pressure Scanners Supported:
Measurement Specialties' DTC scanners*

Number of Pressure Scanners Supported: up to 4 (256 independent pressure channels)

Maximum Scanning Frequency: 100 kHz/scanner

A/D conversion resolution: 16-Bits

Number of Auxiliary Transducer Ports (BNC): 6

Max Sampling Frequency for Auxiliary Channels: 100 kHz/ch

Trigger In/Out: 5 V/TTL

Network interface: 1000Base-T Ethernet

**Support for other pressure scanners and individual transducers under development*