

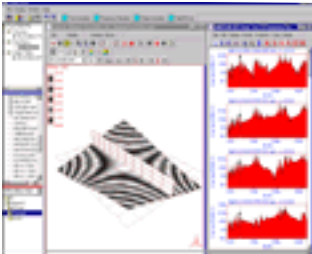
## THE MANUFACTURERS

**Spektra Vibration & Acoustics Systems Engineering.**  
It is the experience of the SPEKTRA staff in the development, manufacture and sale of electronic measuring instrumentation, on the one hand, and utilization of these techniques in providing special services for metrological and industrial applications, on the other, that have made it possible for SPEKTRA to gain a top position internationally in an interesting, fast growing market.

**Data Physics** designs & manufactures powerful instruments for Dynamic Signal Analysis, Closed Loop Vibration Control, electro- dynamic shakers, amplifiers software.



**Vibrant Technology** designs and produces advanced ODS & Modal analysis software.



### DYTRAN Instruments

Manufactures quality cables, accelerometers, pressure sensors, force sensors, Impact Hammers, Electronics.

**BSWA Tech** offers Type 1 & 2 measuring microphones, Impedance Tubes, Tapping machines, Sound Sources, Sound Level meters, DAQ h/w & s/w & accessories

**KINGDOM Pty Ltd** is a specialist in technical and scientific software, systems and instruments including vibration & acoustic analysers, vibration shakers & shaker controllers and a supplier of associated equipment such as modal analysers, sensors, accelerometers, microphones and including support and training.

## INVITATION & How to Register:

Please join us for a session of training, learning & exposure.

To register, email your, **Organisation, Name, Postal Address and Telephone** details of attendees to  
**vibration@a1.com.au** or  
Phone: 02 9975 3272.

## THE SEMINAR

This free seminar is the Australia, New Zealand & SEAsia Launch of a new KINGDOM Pty Ltd distributorship for Spektra Vibration & Acoustics Systems Engineering, specialists in Calibration Equipment and APS Long Stroke shakers.

### AGENDA..... Proposed

The seminar will be conducted as a Morning & Afternoon session suited to theoretical and practical methods.

#### Morning ... Theoretical Session.

##### Calibration – Acoustics, Acceleration, dynamic Force

8:00 Registration

8:30 Introduction: • Spektra Vibration & Acoustic Engineering

8:45 • Kingdom Pty Ltd Products & Services

9:00 **Calibration overview and Methods.** Basics, equipment, general coverage & background.

- The 'calibration pyramid'
  - Traceability from National Metrology Institute to final customer
- Primary Calibration, Secondary Calibration? What is that?
- Calibration Equipment: How, with What, How often

#### 10:20 Coffee and Tea

##### 10:40 Practical examples and experiences

- **Accelerometer Calibration** – From standard ranges to extremes  
Challenges at low frequencies (down to 0.1Hz) and high frequencies (20 kHz or more)
- **Dynamic Force Calibration** – Entering new ground
- **Acoustic Microphone Calibration** – from audible frequencies (31.5 Hz to 20 kHz) to the subsonic range 0.2 Hz to 31.5 Hz

#### 12:30 Light lunch

#### Afternoon ...Practical Session

**APS Long Stroke Shakers for excitation,** Vibration & Modal Analysis of bridges, buildings & Structures.

**13:15 Data Physics ACE-QUATTRO** Portable, Powerful, Precise dynamic signal analyser

**13:30 AutoPower Spectrum analysis,** Recording & Playback analysis, Transfer function measurement

**14:15 APS Long Stroke shakers, modal testing buildings, bridges etc**

**15:15 Coffee & Tea**

**15:30 Structural Testing incl** Impact & Shaker excitation. Transfer or Transmissibility Function,

**15:50 Modal Analysis.** Create wire frame, link points to wire frame. Create ODS & animate, evolve Modal Analysis.

**16:45 Interesting case studies:** Christchurch Earth Quake, Wind Turbine, Listen to fruit, better Sleep Apnoea, design a better peddle harp, measure power pole health, monitoring recirculating nuclear water, measure power transformer's health.

*Most items will use practical testing with appropriate equipment.*

17:00 Q&A and close.

# SPEKTRA-Dresden & KINGDOM PTY LTD

Present

A Training & Product Launch Seminar on  
Advanced Calibration Methods &  
Vibration Excitation as applied to  
Buildings, Bridges & Other Structures.

- Primary & Secondary Calibration methods & equipment for Vibration, Acoustics & Dynamics.
- Dynamic Signal Analysis for Power Spectrum & Transfer Function.
- Transfer Function as a prelude to ODS & Modal Analysis for Structural Testing.
- ODS & Modal Testing & Analysis.

Adelaide Sept 15th  
Melbourne Sept 19th



A free Occasional Seminar presented by:

