The SI 1200 is a completely integrated engineering workstation. The 1220 offers swept sine-frequency response analysis (FRA), logarithmic-frequency analysis and octave analysis. The instrument is ideal for applications in acoustics, structural and environmental testing, control system analysis, rotating machines and electronic devices. It comes in two- or four-channel configurations and can analyze all four channels to 50 kHz with 500- line resolution. The zoom facility allows the user to analyze to a resolu-

tion of .001 Hz anywhere in the 50 kHz bandwidth. The built-in charge pre-amplifiers and ICP supplies for all channels allows direct connection of transducers. The instrument offers powerful data-processing functions, with 3-D and greyscale waterfall displays. **Schlumberger Instruments** 131

Four short application notes focusing on modal analysis have been published. The first, entitled "Mobility Measurements," provides a short, practical introduction to the field, with an overview of applications. An "Introduction to Modal Testing" outlines the theory of modal testing and illustrates the ease with which the company's modal analysis system can be applied to real-life problems. "How to Determine the Modal Parameters of Simple Structures" illustrates how modal frequencies, damping and mode shapes can be found from basic measurements by using only a Type 2032

Dual-Channel Signal Analyzer or a Type 2034 analyzer. "Four-Channel Modal Testing" explains how a simple modification within the Type 2032 or the Type 2034 permits simultaneous measurements of the force input and the vibration response of a structure in three directions. **Bruel & Kjaer Instruments, Inc.** 134

Two plug-in hardware boards and a sophisticated integrated software package allow an IBM PC/AT (or fully compatible) computer to become a full-function, dual-channel, real-time FFT spectrum analyzer and oscilloscope. The 2.22 version of WAVEPAK software introduces many powerful options and allows direct interface to the company's Model 1032, a 32-Channel Multiplexer. Modal-data analysis, transient-data collection, and acoustic applications are also compatible with the new release. **C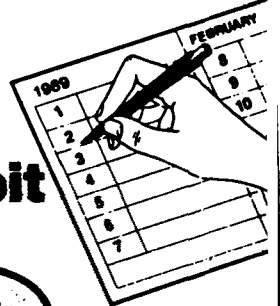omputational Systems, Inc.** 159