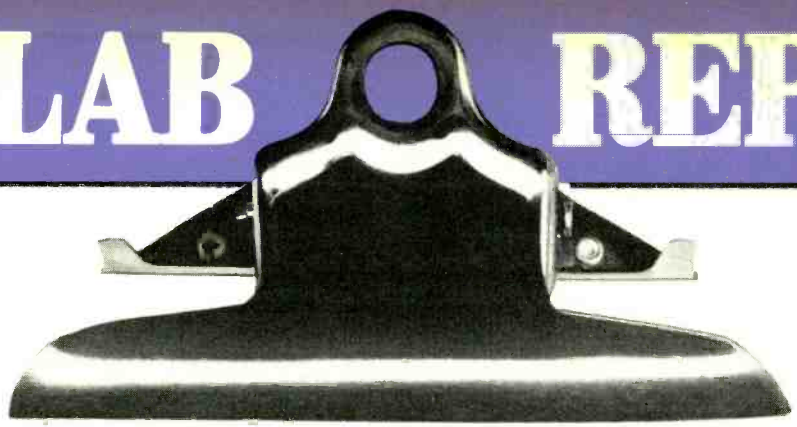
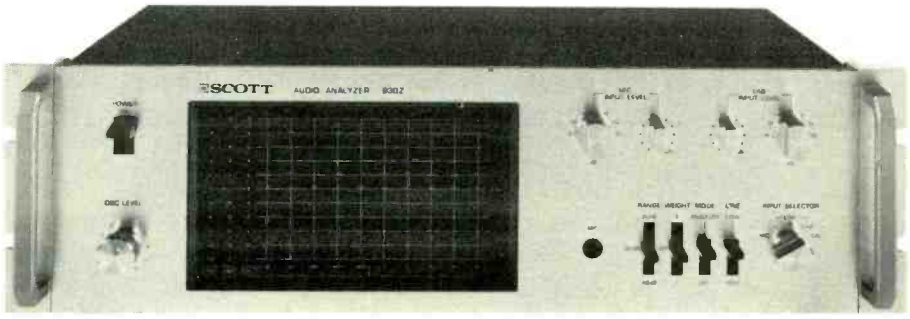


NORMAN EISENBERG AND LEN FELDMAN

Scott 830Z Audio Analyzer



General Description: The Scott 830Z is a ten-octave real-time analyzer intended for making measurements of sound-pressure level, frequency-response (of individual components and of a system) and sound distribution in a room. The last-named application is of course preparation for adjusting room response, presumably with an octave-band equalizer. It may be interfaced with a sound system at various levels, and it is supplied with a calibrated microphone that may be plugged into its front panel.

The unit consists of two main sections. One is the oscillator which generates a 10-octave mixed (multi-frequency) signal on center frequencies from 32 Hz to 16 kHz which may be used for certain tests (amplifier response, tape recorder response, room response). For phono pickup tests, Scott supplies a special test record as the source. For measurements of sound-pressure levels, the manual instructs you to play music through the system.

The other main section is the analyzer itself which consists basically of a preamp, ten bandpass filters, ten logarithmic amplifiers (each with a separate detector), and a multiplexed LED display. The display occupies a prominent area on the unit's front panel. It is arranged as a grid with horizontal lines for + and − dB values, and vertical lines for the ten center frequencies (32, 63, 125, 250, 500 Hz, and 1, 2, 4, 8 and 16 kHz). The dB scale is adjustable to span ranges of 40 (±20), 30 (±15) or 20 (±10) dB. The display is created by a matrix of 110 LEDs which come in various combinations at various levels to present a graphic response pattern as applicable.

To the left of the display is the unit's power off/on switch. Below this is the oscillator level control which, in its extreme counterclockwise position, clicks off.

To the right of the display and near the top of the front panel are two pairs of knob controls, one pair for microphone input level and the other pair for line input level. Each pair consists of a stepped attenuator and a continuously variable fine adjustment. These controls adjust the display on the screen.

Below these controls are the microphone input jack, followed by four toggle switches. These include the display range selector, a weighting selector ("A", off, and "C"); a mode selector (analyzer or SPL); and the line selector (low or high). Finally there's another knob for input selector (microphone, line left, line right, line left plus right and calibrate).

At the rear are the line inputs and the oscillator outputs. The former include both high and low connections. The high line terminals are press-to-connect types, one pair for each channel. These are used for connecting to the speaker outputs of an amplifier (or receiver). The low-line inputs are pin-jacks for each channel. A similar pair of jacks feeds the oscillator signal out. Also at the rear are a detachable power cord, a