CONVENIENT GENERATOR-DETECTOR UNIT FOR BRIDGE MEASUREMENTS

The TYPE 1232-A Tuned Amplifier and Null Detector [1] and the TYPE 1311-A Audio Oscillator [2] have been combined in a single, convenient unit for use with audio-frequency bridges and other null-balance devices. This new assembly, the TYPE 1240-A Bridge Oscillator-Detector, occupies a minimum of bench space and is provided with removable panel extensions, which adapt it for rack mounting. The combination can also be easily disassembled so that component instruments can be used separately.

The oscillator supplies 11 fixed frequencies from 50 cps to 10 kc. The detector is tunable continuously from 20 cps to 20 kc, with additional spot frequencies of 50 kc and 100 kc.

[1] A. E. Sanderson, "A Tuned Amplifier and Null Detector with One-Microvolt Sensitivity," *General Radio Experimenter*, 35, 7, July 1961.
[2] R. G. Fulks, "High Performance, Low-Cost Audio Oscillator with Solid-State Circuitry," *General Radio Experimenter*, 36, 8 and 9, August-September 1962.

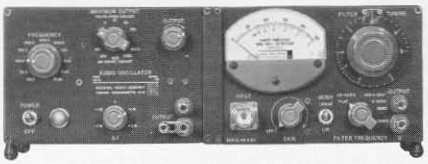
SPECIFICATIONS

Dimensions: Width 19, height 6, depth 7¾ inches (485 by 155 by 200 mm), over-all.

Net Weight: 13½ pounds (6.5 kg).

Shipping Weight: 28 pounds (13 kg).

Type		*Price*
1240-A	**Bridge Oscillator-Detector**	**$565.00**

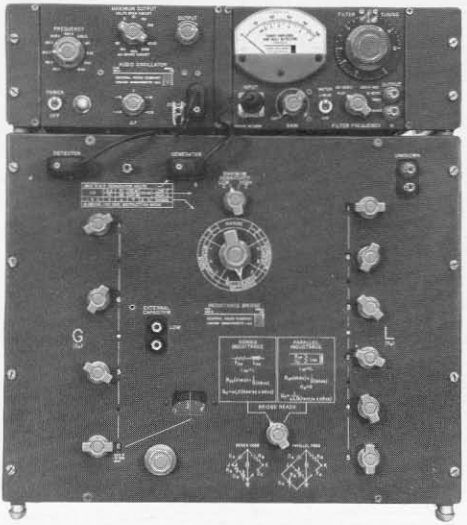


Panel view of the Bridge Oscillator-Detector Assembly.

Panel view with panel extensions attached for relay-rack mounting.

BRIDGE ASSEMBLY FOR PRECISION INDUCTANCE MEASUREMENT

For the precise measurement of inductance and the intercomparison of inductance standards, the TYPE 1632-A Inductance Bridge [1] offers both accuracy and convenience. Its wide range of inductance, from 0.0001 μh to 1111 h, embraces a variety of applications. It can measure rf coils at 1 kc (where stray capacitance is not a factor) to an accuracy of 0.1%. It can compare two 10-henry standard inductors at 100 cps to a precision of 1 part in 10^5.



Panel view of the Inductance Measuring Assembly.

Although designed primarily for measurements at 1 kc and lower frequencies, it is usable, with little impairment in accuracy, up to 10 kc.

This bridge is now available in combination with the TYPE 1240-A Bridge Oscillator-Detector [2] as the TYPE 1660-A Inductance Measuring Assembly.

SPECIFICATIONS

Dimensions: Width 19½, height 23, depth 10½ inches (495 by 590 by 270 mm), over-all.
Net Weight: 62 pounds (29 kg).
Shipping Weight: 92 pounds (42 kg).

Type		*Price*
1660-A	**Inductance Measuring Assembly**	**$1555.00**

[1] J. F. Hersh, "A Bridge for the Precise Measurement of Inductance," *General Radio Experimenter*, 34, 11, November 1959.
[2] See page 17.

INEXPENSIVE VARIAC® AUTOTRANSFORMER LIGHTING CONTROL

By Fred B. Otto

The control board described here was designed and built by the author in order that the eight Variac® autotransformers, obtained by the Mansfield Players over the past several years, could be operated with the convenience and versatility of a lever action and a mechanical master found in professional boards. Because the operator can hold several levers in each hand and can also master them to a single lever, he can easily carry out operations that are impossible with knobs. Since, like many other amateur theatrical groups, the Mansfield Players are challenged by a budget that is practically nonexistent, the board was designed to use materials that are inexpensive and readily available.

The autotransformers were mounted in two rows to conserve space and to bring the handles closer together. Eight 3-inch V-belt pulleys were then mounted on a ½-inch shaft, which was mounted in two holes in the box. A 1½-inch pulley was used as a mounting for the master handle. Since it was found that a setscrew was not sufficient to keep this pulley from slipping when all eight dimmers were mastered, a hole was drilled through the pulley and shaft, and a cotter pin inserted. The spacing between pulleys was maintained by short pieces of pipe cut to length and slipped over the shaft. A smooth pipe was mounted near the first row of autotransformers, as shown in Figure 1, to guide the cord.

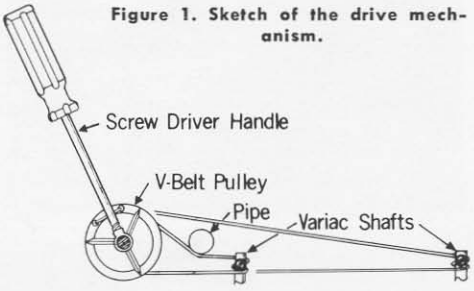


Figure 1. Sketch of the drive mechanism.

The connection between the V-belt pulley and the autotransformer shaft was made by means of a piece of heavy Venetian-blind cord. The cord was secured to the shaft of the Variac by means of a machine screw worked through the cord and into a hole that had been drilled and tapped in the side of the shaft about ½ inch from the end. The cord was given one and a half turns around the shaft of the Variac and then was tied to the V-belt pulley