

TYPE 1650-P1 TEST JIG

This test-jig adaptor provides a way to connect components quickly to a pair of terminals which can be placed on the bench directly in front of the operator. Thus the test jig and 1650-A Bridge make a rapid and efficient component sorting device when the panel meter of the 1650-A is used as a limit indicator.

The test jig makes a three-terminal connection to the bridge, so that the

residual zero capacitance is negligible. The lead resistance (0.08 ohm total) has effect only when very low impedances are measured, and the lead capacitance affects only the measurement of the Q of inductors, introducing a small error in D (or $\frac{1}{Q}$) of less than 0.007.

Type	Code Word	Price
1650-P1 Test Jig	LOCAL	\$19.00

TYPE 1205-B ADJUSTABLE REGULATED POWER SUPPLY

A new idea in voltage regulation has made possible the high efficiency of the TYPE 1205-B Adjustable Regulated Power Supply. This new instrument, which delivers 120 watts, has an over-all volume of less than $\frac{1}{5}$ that of conventional supplies.

The features of the series regulator and the controlled rectifier are combined in this instrument. The fast-acting series regulator provides a low output impedance over a wide bandwidth, while the high-efficiency controlled rectifier maintains constant voltage drop across



Figure 1. Panel view of the Adjustable Regulated Power Supply.



the series regulator. Thus the series regulator always operates at the optimum operating point, and the power dissipation is held to the same minimum value regardless of the output voltage setting or of line voltage variations. Furthermore, the regulator performance is the same at any output voltage from 0 to 300 volts.

A pair of thyratrons is used as a high-efficiency full-wave rectifier. Control is obtained by variation of the thyatron bias through a dc feedback path (Figure 2) from the regulated output to the thyatron grids. Superimposed on this dc feedback voltage is an ac bias voltage, phase shifted 90° with respect to the thyatron plate voltage, to provide smooth control of the thyatron firing angle. The dc feedback path includes a voltage source which determines the voltage drop across the series regulator. Any variation in the voltage drop across the series regulator changes the thyatron bias and therefore the firing angle. The change in firing angle varies the voltage applied to the series tube to maintain constant drop across it.

The series regulator uses a differential

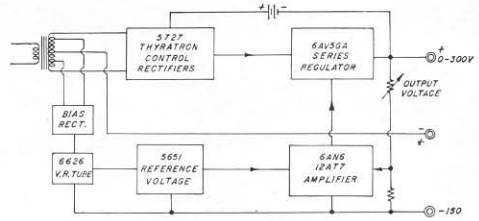


Figure 2. Block schematic of the power supply.

cascode amplifier for low drift and high gain. A cathode follower between the high-impedance cascode amplifier and the grids of the series tubes increases the bandwidth and improves the transient response of the regulator. Positive feedback within the over-all negative feedback loops is used to provide infinite amplifier gain and, therefore, essentially zero output impedance. To assure stability, the positive feedback is effective only at low frequencies. An oil capacitor across the regulated output terminals maintains the low output impedance at frequencies beyond the bandwidth of the amplifier.

Excellent regulation, high output, and low hum level make this power supply suitable for the most exacting applications.

SPECIFICATIONS

DC Output Voltage: 0 to 300 volts, continuously adjustable at 200 ma, max.

Regulation: No load to full load, 0.1 volt; 0.75 volt change for ± 10% change in line voltage.

120-Cycle Ripple: 1 millivolt.

Internal Impedance: Approximately 0.3 Ω + (3 μh in parallel with 4 μf).

Regulated Bias Voltage: -150 volts, dc, fixed at 5 ma, max.

Regulation: No load to full load, 0.5 volt ± 10% line-voltage change, 2 volts. Unregulated AC Voltage: 2 circuits, 6.3 volts at 5a.

Meter Accuracy: Voltage, 2%; current, 5%.

Input: 105 to 125 volts, 60 c, 250 watts.

Tube Complement: 2-6AV5-GA, 2-5727, 1-12AT7, 1-6AN8, 1-6626, 1-5651, 1-6BZ7.

Dimensions: Panel, (width) 9½ x (height) 5¼ inches; depth behind panel, 8¼ inches.

Net Weight: 15 pounds.

Type	Code Word	Price
1205-B Adjustable Regulated Power Supply	APPLY	\$290.00