

SENDING PANEL PER J94002A

1. GENERAL

1.01 This section describes the sending panel per J94002A and its associated circuits which constitute a system for supplying and distributing standard testing power of 1000 cycles to any number of circuits from 1 to 150 for making transmission measurements. The panel includes a 1000-cycle machine per KS-5472 List 1. The circuit arrangements are covered in detail in Drawing SD-95000-01.

1.02 The equipment is installed in an office for automatic connection to a 105-125-volt 60-cycle source, by means of a starting relay.

2. EQUIPMENT AND CIRCUIT DESCRIPTION

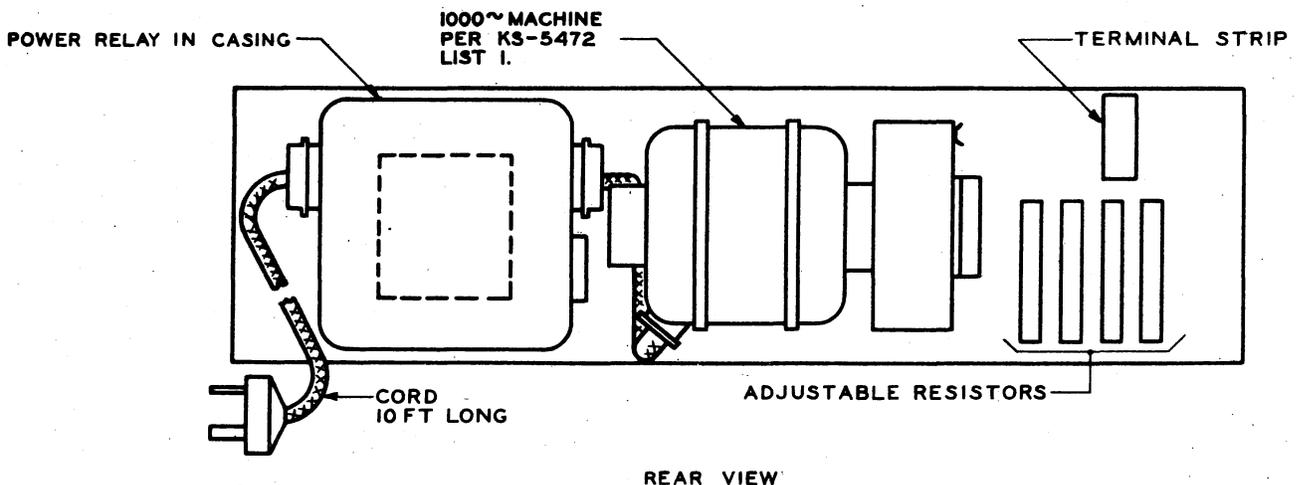
2.01 The sending panel includes a KS-5472 List 1 1000-cycle machine, four adjustable resistance units, a condenser, a repeating coil, and a relay for automatic starting control. The arrangement of this apparatus on the panel is shown in Fig. 1.

2.02 The circuit features of this sending panel and a typical one milliwatt supply pair and its associated starting lead are shown in Fig. 2.

2.03 Each milliwatt supply pair requires two 296-ohm resistances to build out the sending circuit to 600 ohms. Each supply pair should be provided with a termination of 600 ohms either connected to the relay contacts as shown in Fig. 2 or to jacks. Resistors A, B, C and D are adjusted as required to consume all excess power from the machine. Resistances and relays for each testing circuit are provided separately from the sending panel in several optional arrangements and are shown in greater detail on Drawing SD-95000-01.

3. TRANSMISSION PERFORMANCE

3.01 The sending power is constant to $\pm .05$ db for variations of the power source within the 105-125-volt range and the 59-61 cycle frequency range. The effect of being non-terminated at any one appearance does not exceed .05 db. The sending circuit is within 2 per cent. of



THE REPEATING COIL AND THE CONDENSER ARE MOUNTED ON THE FRONT OF THE PANEL.

Fig. 1.

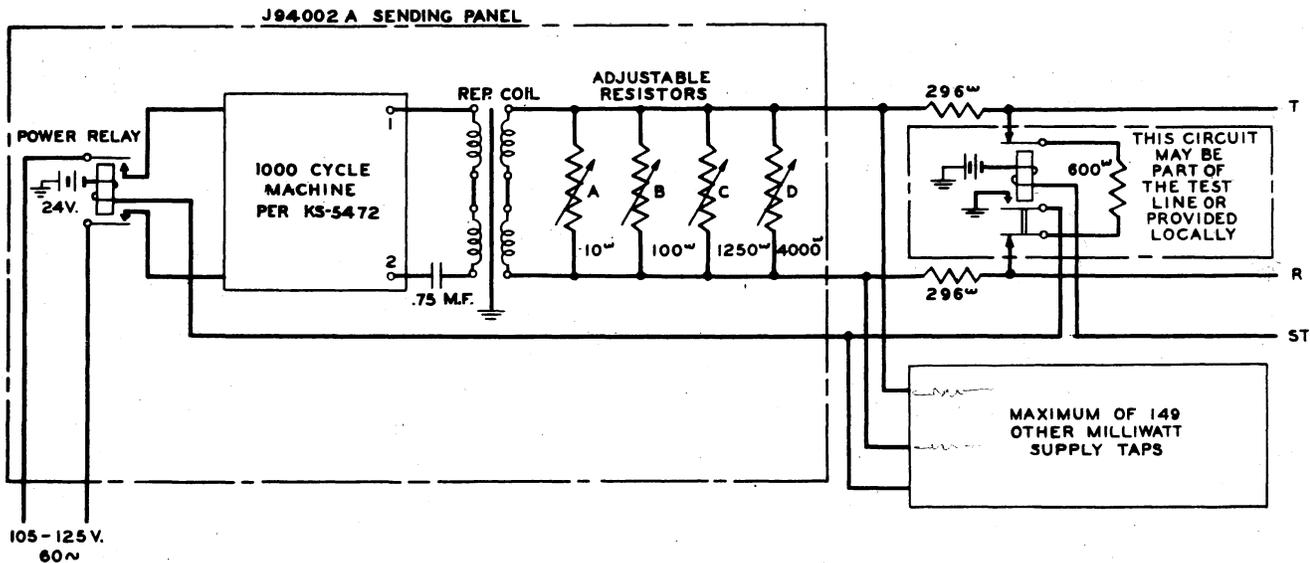


Fig. 2.

600 ohms impedance irrespective of the number of testing circuits to be supplied.

der to retain the termination, and minimize the effect on other milliwatt supply pairs.

4. OPERATING FEATURES

5. MAINTENANCE

4.01 When the starting relay is operated by grounding the ST lead, the 105-125-volt 60-cycle source is connected to the motor. The machine immediately starts and supplies one milliwatt of testing power to each 600-ohm termination of the sending circuit.

5.01 The calibration of the sending circuit can be verified and readjusted when necessary by measuring the output of one appearance by means of a 7A transmission measuring set. These adjustments consist of resetting by means of a screwdriver the resistors at the rear of the J94002A sending panel. The resetting of the resistors should be made as accurately as possible, using the D resistor for the fine adjustment, and all settings fastened securely.

4.02 The testing power can be used for straightaway transmission measurements with all standard receiving circuits.

5.02 The maintenance of the starting relay and the proper oiling of the machine should be done in accordance with other sections of Bell System Practices.

4.03 When connected manually the sending circuit should be patched last in or-