

Obsolete
See Issue 3
K 31.30
A 702.617
E 40.340

1000-CYCLE MACHINE PER KS-5472

1. GENERAL

1.01 This section describes a 1000-cycle machine per KS-5472 for generating testing power for the sending circuits of transmission measuring systems. It operates from a 105-125-volt 60-cycle source.

1.02 The machine is provided with or without a portable carrying case. It supplies 1 milliwatt of testing power at 1000 cycles to one 600-ohm circuit. It is also provided as an integral part of the J94002A sending panel for supplying more than one circuit as described in other sections of practices.

2. EQUIPMENT AND CIRCUIT FEATURES

2.01 The general features of the 1000-cycle machine without a carrying case

and the circuit features are shown in Fig. 1.

2.02 The terminal block to which the external connections are made is also used for mounting the output circuit network. With this network the machine supplies one milliwatt to a 600-ohm circuit from terminals 5 and 6.

2.03 The motor is a two-pole split phase induction motor designed for quick starting when directly connected to a 105-125-volt source. The alternator is of the inductor-alternator type with excitation furnished by a permanent magnet. No speed regulator or other accessories are required. The rotor has 17 teeth and turns at approximately 3530 r.p.m. which results in an output frequency of 1000 cycles when the supply frequency is 60 cycles per second.

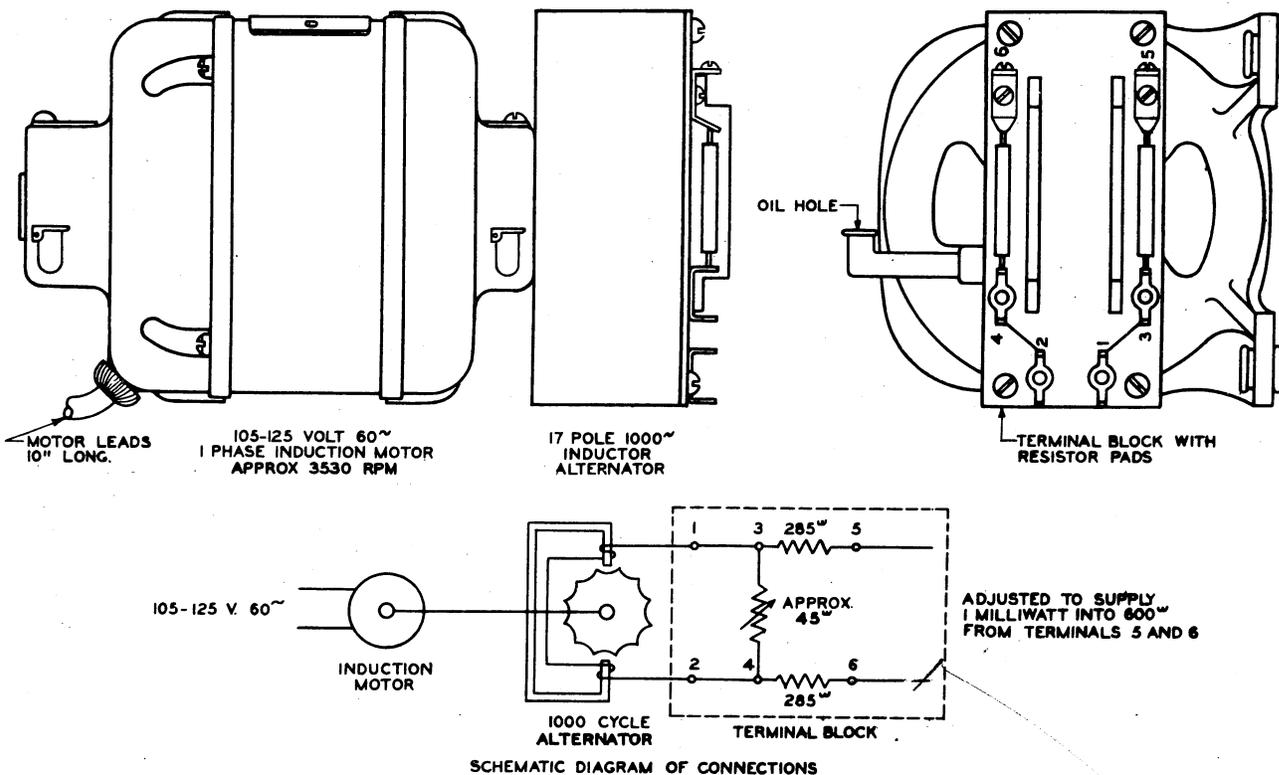


Fig. 1.

2.04 When assembled in a carrying case shown in Fig. 2 the combined weight is approximately 16 pounds and the dimensions are approximately 6" x 9" x 6".

2.05 The output leads are brought through a bushed hole in the end of the carrying case. The connection to the local a-c. supply is made by means of an extension cord inserted in the receptacle in the side of the box.

3. TRANSMISSION PERFORMANCE

3.01 The output variation is not more than $\pm .2$ db for ± 10 -volt or ± 1 -cycle frequency variations in a-c. power supply. The correct power is available almost instantaneously since the motor reaches full speed within approximately one second after being turned on. The impedance of the sending circuit is 600 ohms ± 2.0 per cent.

3.02 The harmonic and extraneous frequency content of the sending power includes in terms of the fundamental (1000 cycles) value, about 1 per cent. second harmonic, about 7 per cent. third harmonic and less

than 1 per cent. of any frequency other than these, such as 20 or 60 cycles per second.

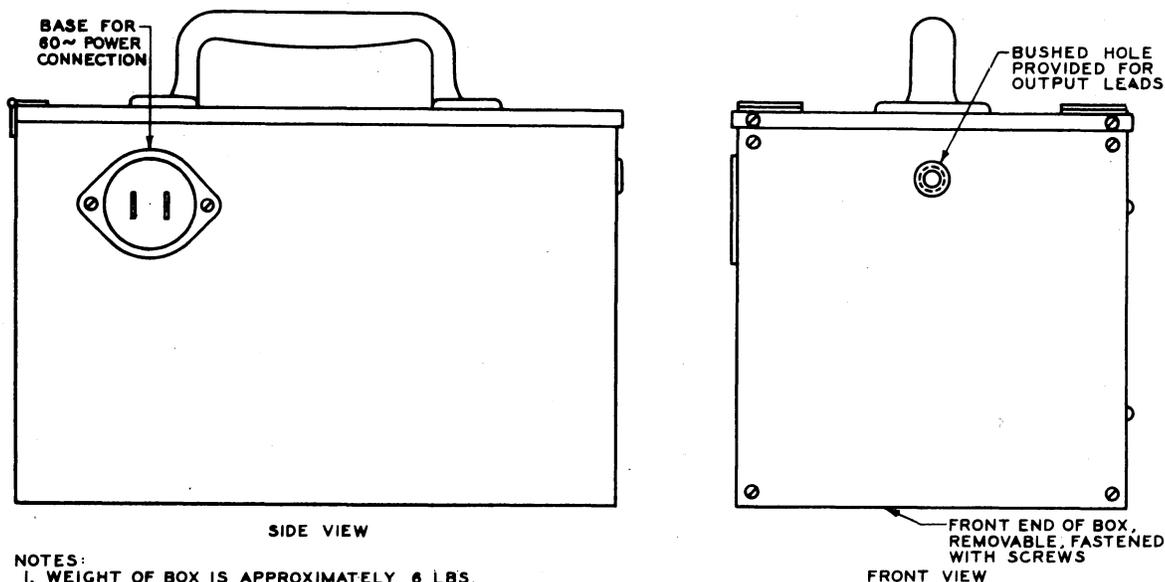
3.03 The frequency accuracy is 1000 cycles ± 1 per cent. plus any deviations due to the local 60-cycle power supply.

4. OPERATING FEATURES

4.01 The portable and unmounted arrangements of this machine have no starting relay or switch, it being necessary to connect it to a source of 105-125-volt, 60-cycle power, and to disconnect it when tests are completed. The machine may be operated continuously without danger of overheating, the maximum increase in temperature being 90° F. Its power consumption is approximately 25 watts. It runs sufficiently quietly for general use.

5. MAINTENANCE

5.01 The bearings of this machine can be oiled in the usual manner and other standard maintenance applied as covered in other sections of the Bell System Practices.



- NOTES:
1. WEIGHT OF BOX IS APPROXIMATELY 6 LBS. WEIGHT OF BOX AND MACHINE IS APPROXIMATELY 16 LBS. THE SIZE IS 6 X 6 X 9 INCHES.
 2. THE CARRYING CASE HAS A HINGED COVER AND A REMOVABLE FRONT END FASTENED WITH SCREWS.
 3. AN EXTENSION CORD IS PROVIDED WITH THE CARRYING CASE.

Fig. 2.