

AMPLIFIER EQUIPMENT FOR DEAF SUBSCRIBERS DESCRIPTION

1. GENERAL

1.01 This section describes station equipment for the use of subscribers with impaired hearing.

1.02 **Amplifier:** For persons who require increased volume of sound to enable them to use the telephone, a vacuum tube amplifier with a volume control switch in the regular receiver circuit is available. The amplifier with cover open to show the arrangement of the equipment is shown in Fig. 1.

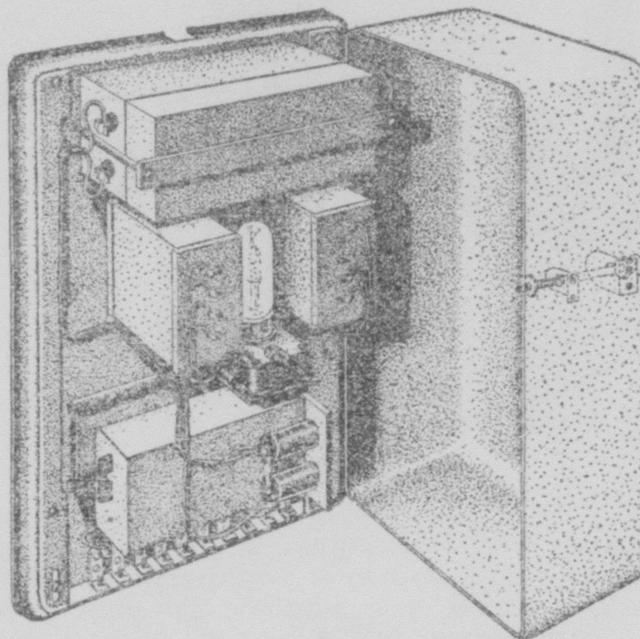


Fig. 1.

1.03 **Portable Amplifier:** Since increased volume of sound may not always assist a deaf person effectively, a trial installation of amplifier equipment is in many cases desirable before permanent installation is made. For this purpose portable amplifier equipment is available. Fig. 2 shows a portable amplifier with cover open.

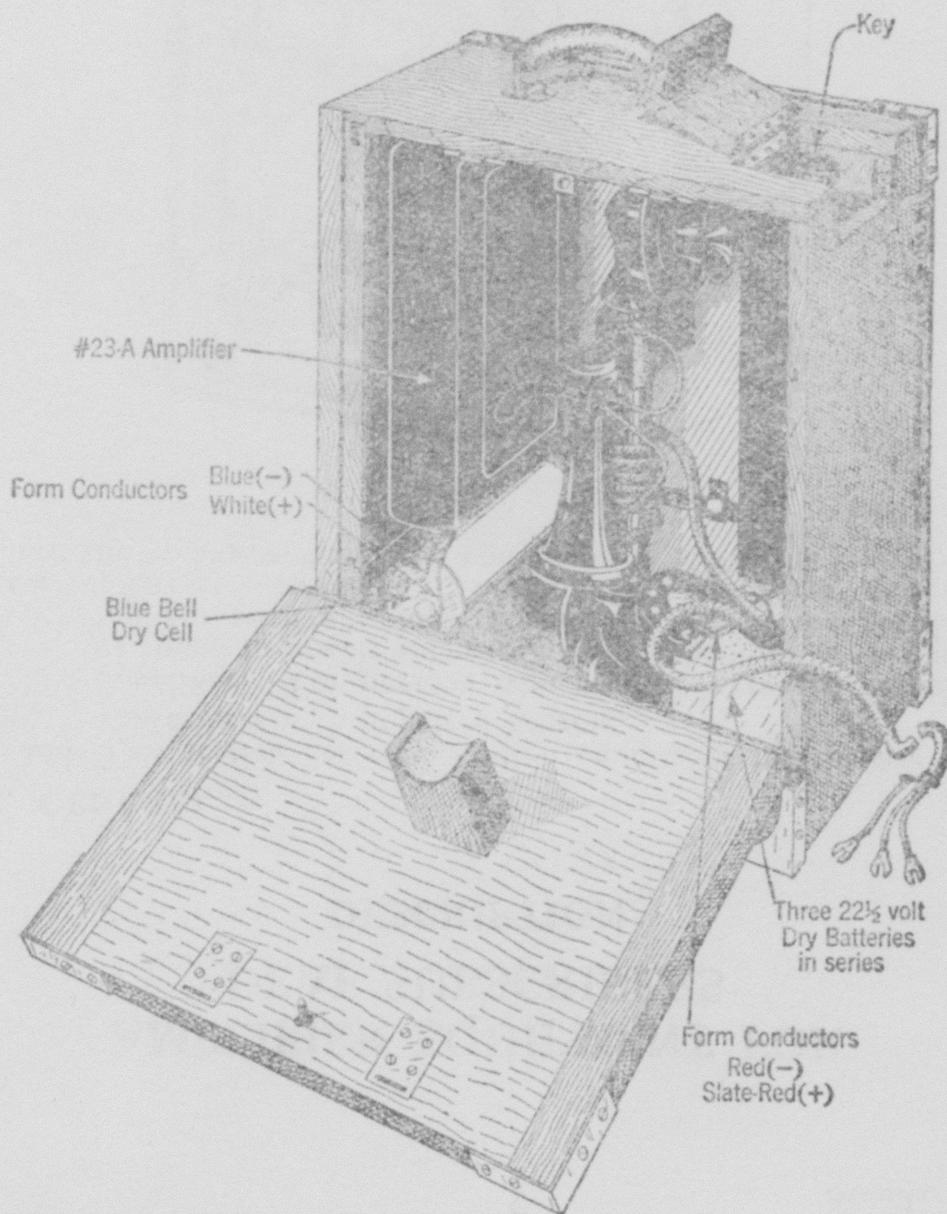


Fig. 2.

1.04 **Available Arrangements:** Amplifier equipments have been available in the past for use at sidetone desk stand installations generally. To facilitate maintenance and for use at stations for which anti-sidetone arrangements are not available, information on the arrangements used at sidetone stations is included in the practices. Where hand sets are used, anti-sidetone equipment is required in all cases.

1.05 Equipments with circuits of the anti-sidetone type covered in these practices are available for use at stations having classes of service as covered by the table in Section C54.102, Amplifier Equipment for Deaf Subscribers—Apparatus.

1.06 **Double Head Receivers:** For those who can hear satisfactorily if a separate receiver is provided for each ear, the double head receiver arrangement with a key to permit its substitution for the regular hand receiver is available. The double head receiver arrangement is covered in the sections under C54.000.

1.07 **Signaling Arrangements:** Where a greater volume of sound is desired than is afforded by the regular station ringers, the standard loud ringing bells or power operated station auxiliary signals may be provided.

1.08 If very loud signals are not desired, there are available for the more common classes of service wooden sets having exposed gongs of low pitch which in many cases are more easily heard by partially deaf subscribers than the regular ringer gongs.

1.09 To supplement the audible signals, either continuous or non-continuous lamp signals may be used. Two general types are available; those suitable for operation directly from the 110 volt lighting circuit and others suitable for operation from low voltage sources.

2. METHOD OF OPERATION

2.01 The method of operation of station equipment when the key controlling the amplifier is in the "Off" position is the same as at stations not having amplifier equipment.

2.02 Operation of the key controlling the amplifier to the "On" position introduces the relay of the amplifier into the transmitter circuit by opening the short circuit path around the relay winding. This key operation also transfers the receiver circuit from the receiver and closes it through the volume control switch to the input circuit of the amplifier and at the same time transfers the receiver to the output circuit of the amplifier. Fig. 3 shows a schematic circuit of the amplifier with an anti-sidetone subscriber set and hand telephone set.

2.03 With the key in the "On" position removal of the receiver or hand set from the switchhook or plunger closes a circuit from the line (or local transmitter battery) through the induction coil, transmitter and relay in series. A circuit is also closed from the line through the induction coil and the volume control switch to the input of the amplifier. Current flowing in the transmitter circuit causes the relay to operate which in turn closes a circuit from the 1.5 volt battery of the amplifier to the filament of the vacuum tube causing the tube to glow slightly and become operative.

2.04 **Volume Control:** The volume control switch adjusts the input to the amplifier and thus controls the output. With the switch at the terminal marked "Loud" the amplifier receives the entire available input voltage which exists across the potentiometer resistance. Each step of the switch away from the "loud" position reduces the voltage applied to the amplifier input, thus progressively reducing the volume of the amplifier output.

2.05 **Disconnection:** When the receiver or hand set is replaced on the switchhook or mounting, the transmitter circuit is opened causing the relay to release and the tube to become extinguished. The input circuit to the amplifier is also opened by the switchhook or plunger contacts.

Station Equipped with Deaf Set Amplifier Anti-Sidetone Equipment

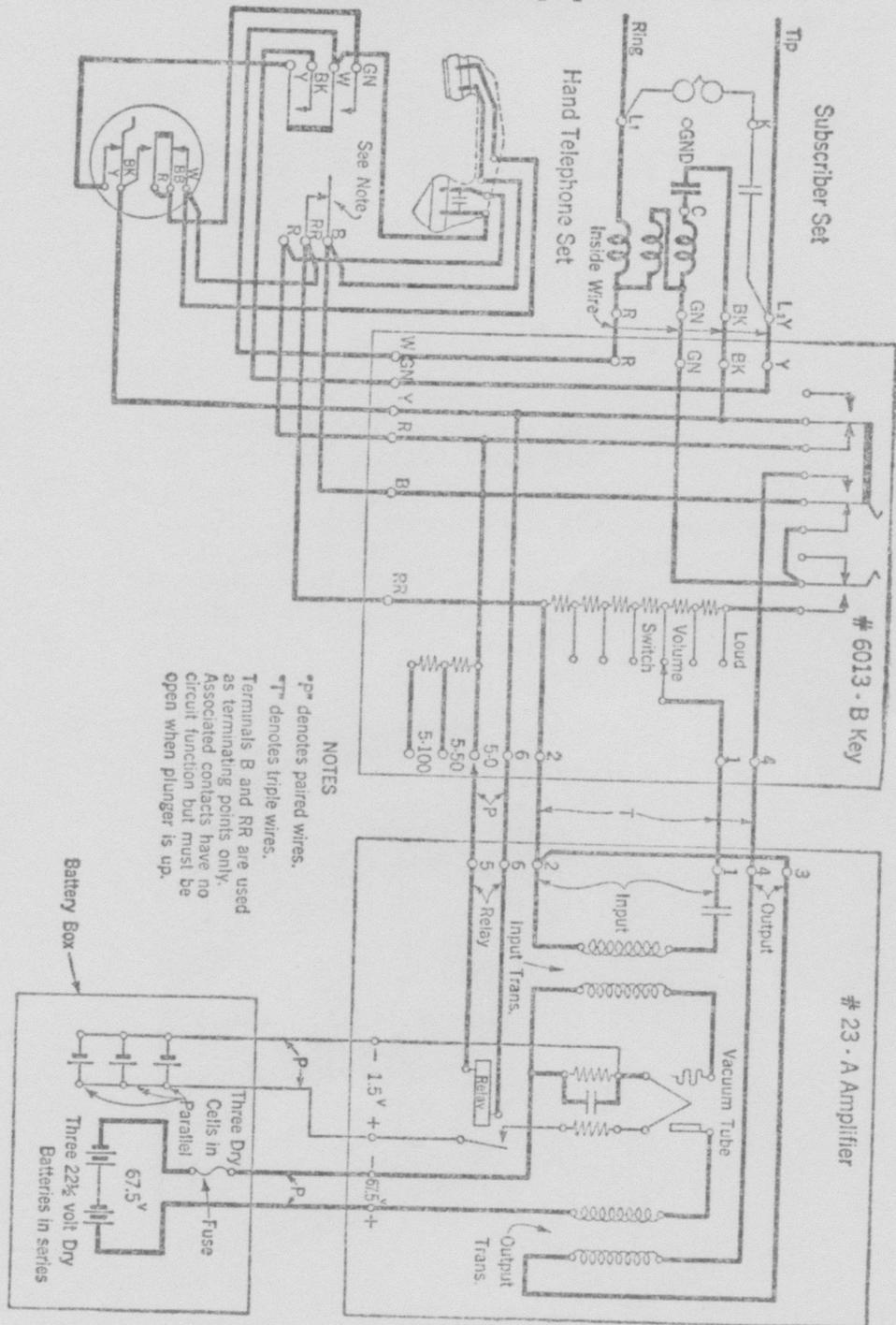


Fig. 3.

C54.101

Page 5
5 Pages

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