

AMPLIFIER EQUIPMENT FOR DEAF SUBSCRIBERS INSTALLATION

1. GENERAL

1.01 This section covers the installation of deaf set amplifier equipment which is required to supplement the regular station apparatus where facilities are provided to assist partially deaf persons in the use of the telephone.

2. LOCATING

2.01 **Temporary Amplifier Equipment:** At temporary installations place the portable amplifier either beside the desk where the telephone is located or in such other suitable location that the volume control key is within convenient reach of the user although care should be taken to keep this equipment, in so far as possible, out of the way.

2.02 **Amplifiers at permanent installations** should be located near the associated subscriber set. In the case of installations on desks, the amplifier and subscriber set may be located on one side of the knee well, leaving the other side for the battery box.

2.03 **Keys:** Locate the 6013B key for permanent amplifier installations within convenient reach of the user of the telephone. Locations where the key would be in the way, as in the knee well of a desk should be avoided.

2.04 **Battery Box:** The 9A Battery Box should be mounted where it will not be unsightly or in the way. Locations near stoves or radiators or where the dry cells would be subject to damage from water are not satisfactory. When the installation is made on a desk, the battery box should be located in the knee well at the extreme rear and as high as possible. At such installations locate the battery box on the opposite side of the knee well from the amplifier and subscriber set. Locate dry cells in battery box as shown in Fig. 1. Date new dry cells when battery installation is made.

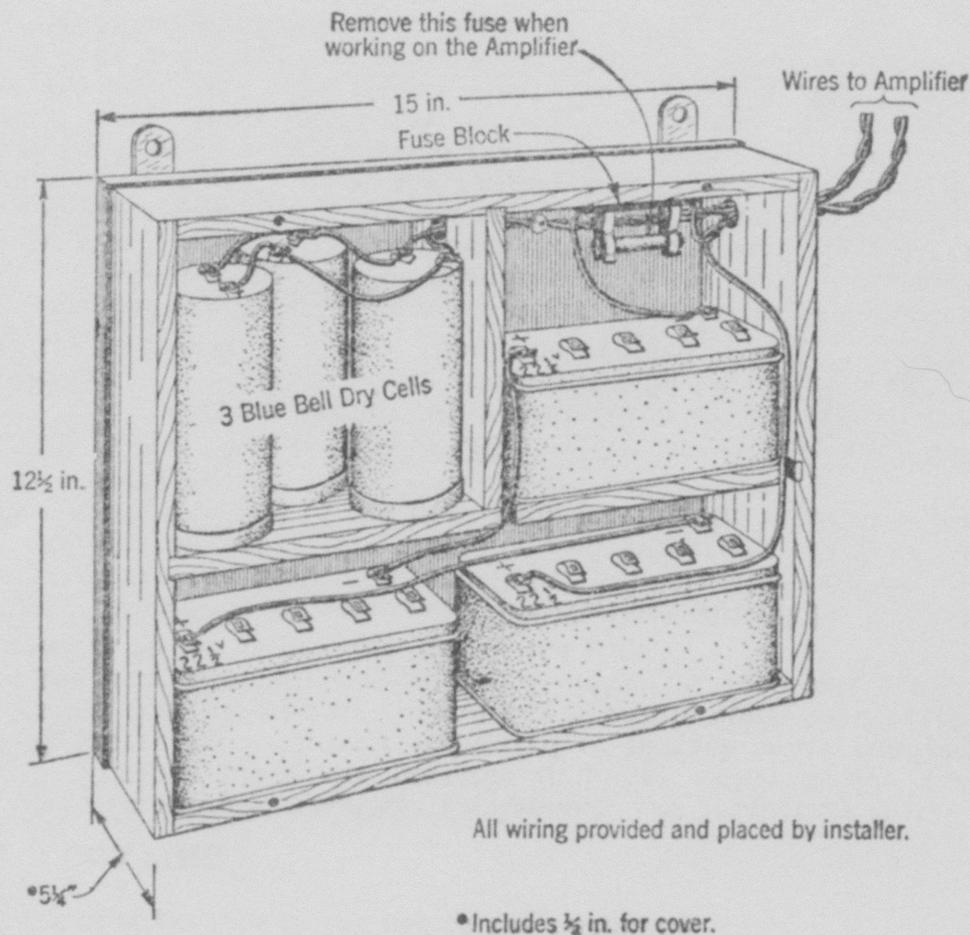


Fig. 1.

2.05 **Limit in Length of Leads:** The various units of deaf set equipment need not be mounted together but, where it will make a more satisfactory installation, they may be so located as to conform to the best advantage with existing circumstances. To guard against unsatisfactory operation of sidetone equipment, runs between the subscriber set, amplifier, battery box and key should each be restricted to a maximum length of 12 feet. At **anti-sidetone** stations a longer run is permissible between the key and the amplifier. Operation will be satisfactory in most cases if this run does not exceed 75 feet in length. To avoid the possibility of increased tendency toward howling or crosstalk and noise pick-up, the length of all runs should be restricted to the shortest practicable length and particular care exercised to restrict or avoid runs closely paralleling other circuits, such as telephone or telegraph lines, lines to printers or loud speakers or a.c. lighting and power circuits.

3. WIRING

- 3.01 **General:** For general wiring instructions refer to the sections under C24.000, Station Wiring.
- 3.02 **Portable amplifier** installations do not require additional wiring.
- 3.03 **At permanent amplifier installations** wire key to amplifier as follows: Connect the key and the amplifier with parallel runs of inside wire or use inside cable. Where **anti-sidetone** equipment is used and connected with inside wire, make connection between the key, and amplifier with a run of triple for the "input" and "output" leads and a pair for the relay leads. At **anti-sidetone** stations, when inside cable is used or the run between amplifier and key exceeds 25 feet, connect one pair for the input and another pair for the output, omitting the strap between amplifier terminals 2 and 3. Terminate the leads from amplifier terminals 3 and 4 (or 4 and 3) on terminals 2 and 4 of the key. In cases where **sidetone** equipment is employed, use one pair for the "input" conductors, one pair for the "output" and the third pair for the leads to the relay, as shown on the circuit drawing in the section covering connections of this equipment.

4. MOUNTING

- 4.01 **General:** For mounting information not included here refer to the sections under C25.000, Locating and Mounting Common Station Apparatus.
- 4.02 **Keys** used with deaf set equipment are mounted in the same manner as other station keys of the same general construction.
- 4.03 **The 23A Amplifier** is subject to the same mounting requirements as apply generally to subscriber sets of the 534 and 634 types with the additional requirement that the vacuum tube must be in a vertical position.
- 4.04 **The 9A Battery Box** has two lugs attached to the rear upper edge from which it is hung. When mounted on a wooden surface, as in the usual installation, drill starting holes with a 1/8 inch drill at the point where these lugs will come and use 1 inch #14 R. H. blued wood screws for fastening. To further secure the box, drill a hole through the back near the bottom, using a #18 drill and fasten it with a 1-1/4 inch #8 R. H. blued wood screw.

5. TESTS AT TIME OF INSTALLATION

5.01 **General:** After completing the installation, inspect the work, place the fuse in the battery box and perform the usual tests of a newly installed station, first with the amplifier not in operation and then with the amplifier in operation. During the transmission test with the amplifier in operation, check to see that the volume control switch functions correctly in each of its six positions. (The amplifier does not function instantly on raising the switchhook or plunger because a brief interval is required for the filament to heat up.) For information covering the usual inspection and tests of a new station refer to the appropriate sections of Division C60. For apparatus requirements and adjusting procedures covering the amplifier and its associated key and batteries see section covering the maintenance of equipment for deaf subscribers.

5.02 **Howling Test:** At amplifier installations where hand telephone sets are furnished, test for tendency to howl. This test is included in the section covering maintenance of this equipment.

5.03 **Auxiliary Lamp Signals:** Where lamp signals are installed, observe to see that all lamps burn while ringing current is on the line and in the case of continuous signals, that they are retired when the call is answered. For information covering auxiliary signaling equipment refer to the sections under C54.300, Auxiliary Signals.