

Connection of Sidetone Desk Stands to Common Battery Antisidetone Subsets

BELL SYSTEM PRACTICES
Station Installation and Maintenance

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DESK STANDS CONNECTIONS COMMON BATTERY

1. GENERAL

1.01 This addendum covers the method of connecting a sidetone desk stand to an anti-sidetone subscriber set for anti-sidetone use on individual lines without extensions.

1.02 No changes are required in the connections of sidetone desk stands and only a few changes in the connections to the anti-sidetone subscriber sets (bell boxes) as shown by the typical case (Fig. 1).

1.03 A sidetone desk stand, used with an anti-sidetone subscriber set to obtain the equivalent of an anti-sidetone circuit, should be connected as shown by the typical case in Fig. 1. Its use should be restricted to individual lines without extensions and only one low impedance or two high impedance ringing bridges are permitted on the line.

1.04 The 5A varistor is required only for the 52AB desk stand.

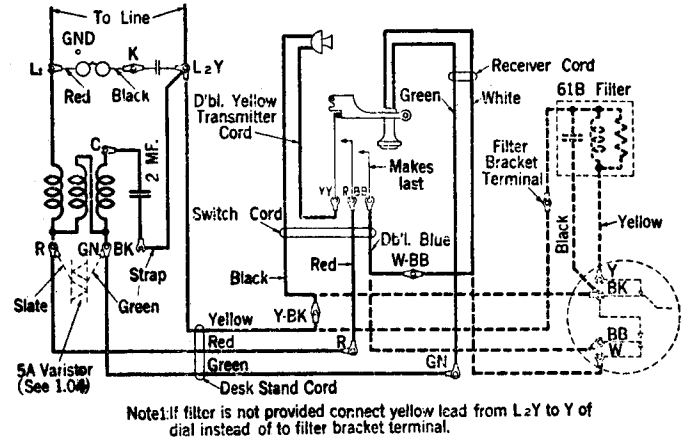


Fig. 1 —51AL Sidetone Desk Stand For Anti-Sidetone Service (Manual and Dial)

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To understand why this BSP places the limitations it does, trace the path from L1 to L2 through the 3 windings of the induction coil in series and the 2 MF (2 uF) capacitor. When connected to a talking set with only 3 switchhook contact springs, this path is not controlled by a switchhook contact as required.

This path has a resistance of approximately 100 ohms, presenting a much lower impedance than even the lowest impedance (1000 ohm) ringers. Since it is always present, this low impedance path would result in reduced speech signal levels at other phones on the line if a phone wired this way were connected to the line contrary to the limitations stated in the BSP.

The number of ringers that can be operated is also limited because 2uF presents a Ringer Equivalence Number (REN) of at least 4. A modern telephone has a REN of 1 due to use of a ½ uF (0.5 uF) capacitor. The maximum allowable REN is 5.

The simplest way to avoid this problem is to connect 2 of the three switchhook contacts between the line and L2-Y terminal and connect the 3 leads normally connected to the switchhook directly together. Be sure to install a varistor across the R and GN terminals of the IND coil.

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