

SECTION REPLACEMENT

CABLE CONTAINING

VOICE-FREQUENCY PAIRS

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1. GENERAL

1.01 This section outlines the methods of identifying and transferring voice-frequency pairs when replacing one or more sections of cable. Both inaudible and audible test sets are covered by this practice. *Inaudible identification should be utilized unless the make-up of the cable prevents the use of the inaudible test sets. Special circuits, DTWX, and repeatered circuits cannot be subjected to a bridged tap condition and, therefore, must be transferred on an out-of-service basis.*

1.02 This section is reissued to:

- Reflect a change of nomenclature of the AT-7865 B Cable Clip now known as the B Transfer Cord.

- Eliminate section replacement of cables containing carrier, which is covered in another section of the 634 Division of the Plant Series Practices.

- Show the use of the B Transfer Cord in making in-service transfer of voice-frequency pairs regardless of the test set being utilized for identification purposes.

Since this reissue covers a general revision, marginal arrows ordinarily used to indicate changes have been omitted.

1.03 The general rules to be followed when making section replacements are covered in Section 634-355-500. Arrange with the control office to get releases on high priority circuits before proceeding with work on the cable.

1.04 Arrange the cables to make splicing to the new cable convenient. Open the cables and prepare them for splicing in the usual manner. It is desirable to remove additional sheath from the cable being replaced to facilitate testing and handling the pairs.

1.05 The tone can be applied from either end in a toll or trunk cable. In exchange cables send tone from the splice nearest the central office.

NOTICE

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ELECTRIC - Proprietary

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2. INAUDIBLE TONE METHODS

2.01 To identify and transfer voice-frequency pairs using the 20 kc Test Set (AT-8121, L1A) after a talking pair has been established, proceed as follows:

- (1) Make connections as shown in Fig. 1.
- (2) Plug in the W3AP Cord to turn on the transmitter at the sending end and connect the red clip to the ring side of the pair to be identified.

(3) Identify the ring side of the old pair at point B and verify ring side of new cable pair at point C with the AT-8121, List 4A Probe.

(4) Connect the red clip of the W3AP Cord to the tip side of the pair at point A.

(5) Identify the tip side of the old pair at point B and verify the tip side of the new pair at point C with the AT-8121, List 4A Probe.

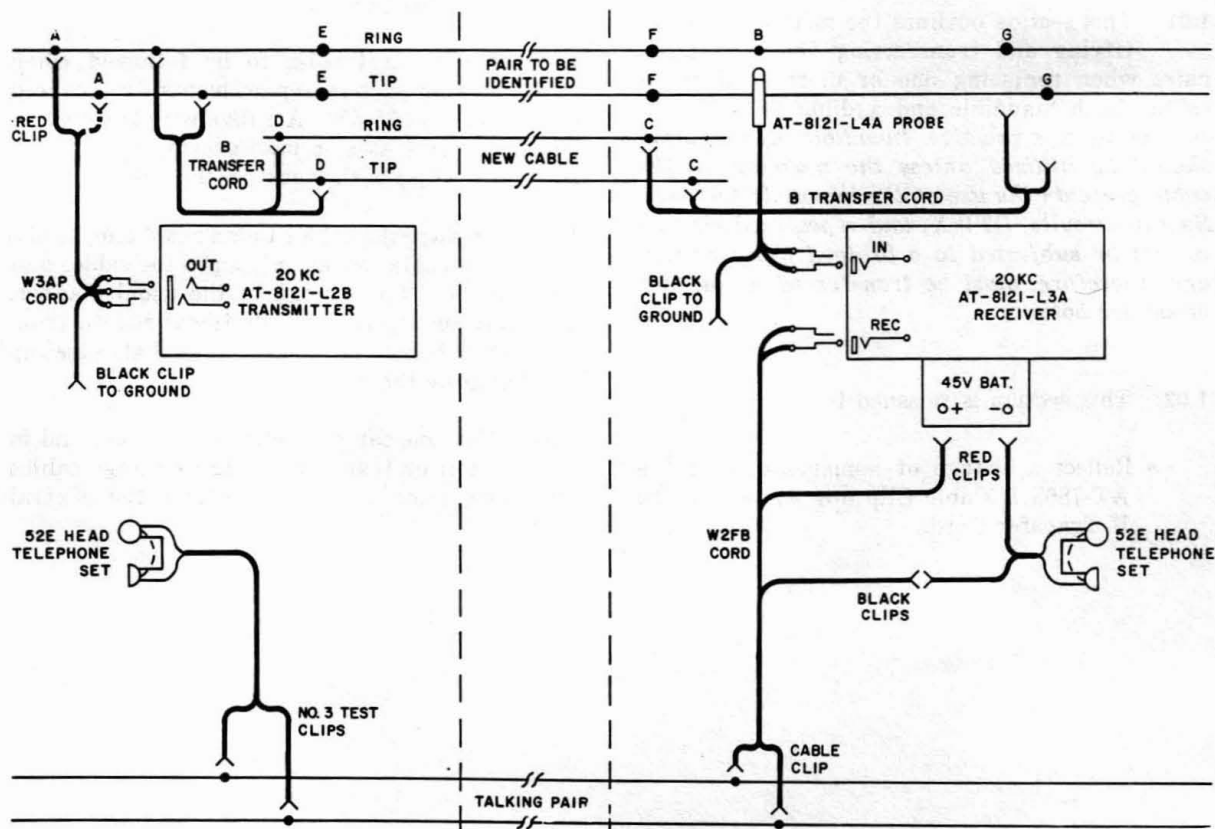


Fig. 1 — Identification of Voice-Frequency Pairs Using AT-8121, L1A Test Set

- (6) Connect the free end of the B Transfer Cord to the tip and ring conductors at point G observing correct polarity.
- (7) Cut the tip and ring conductors simultaneously in the old cable at points E and F.
- (8) Trim and splice the tip and ring conductors to the new conductors one at a time.
- (9) Repeat (2) through (8) for each pair to be transferred.

Note: If difficulty is experienced in receiving the tone, it may be helpful to transmit tone metallic. Information on the type of circuit the 20 kc Test Set should be used on is described in Section 634-200-520.

2.02 To identify and transfer voice-frequency pairs using the 120A Test Set after a talking pair has been established, proceed as follows:

- (1) Make connections as shown in Fig. 2.
- (2) Operate the T/G, R/G lever switch on the 116A Test Set (transmitter) to the R/G position.

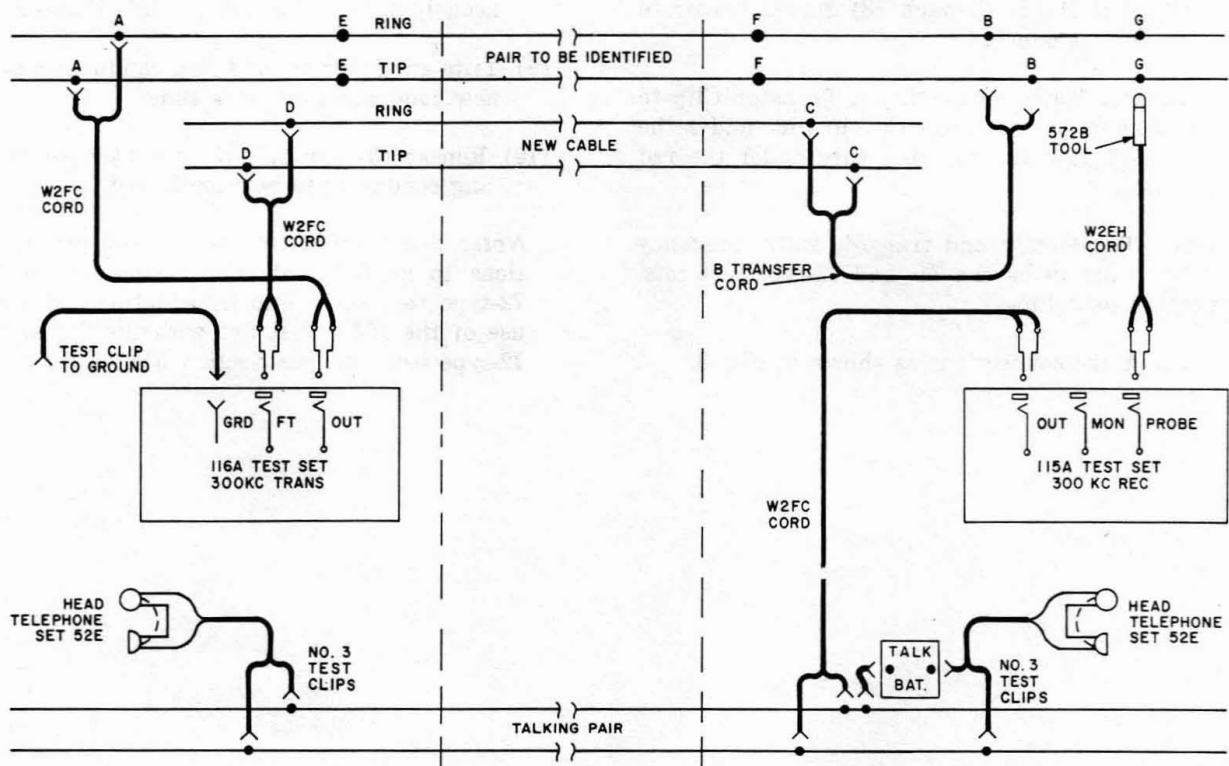


Fig. 2 — Identification and Transfer of Voice-Frequency Pairs Using the 120A Test Set

- (3) Identify the ring side of the old pair at point G and verify the ring side of new pair at point C with the 572 Tool (probe).
- (4) Operate the T/G, R/G lever switch on the 116A Test Set (transmitter) to the T/G position.
- (5) Identify the tip side of the old pair at point G and verify the tip side of the new pair at point C with the 572B Tool (probe).
- (6) Connect the free end of the B Transfer Cord to the tip and ring conductors at point B observing correct polarity.
- (7) Cut the tip and ring conductors simultaneously in the old cable at points E and F.
- (8) Trim and splice the tip and ring conductors to the new conductors one at a time.
- (9) Repeat (2) through (8) for each pair to be transferred.

Note: When connecting a Transfer Clip to a cable pair, connect the tip wire under the black jaw and the ring wire under the red jaw.

2.03 To identify and transfer voice-frequency pairs using the 71- and 72-type test sets, proceed as follows:

- (1) Make connections as shown in Fig. 3.

- (2) Plug in the W2CC Cord to turn on the transmitter at the sending end.
- (3) Connect the red clip to the ring side of the pair at point A.
- (4) Identify the ring side of the old pair at point B and verify the ring side of the new pair at point C with the 572B Tool (probe).
- (5) Connect the red clip of the W2CC Cord to the tip side of the pair at point A.
- (6) Identify the tip side of the old pair at point B and verify the tip side of the new pair at point C with the 572B Tool (probe).
- (7) Connect the free end of the B Transfer Cord to the tip and ring conductors at point G observing correct polarity.
- (8) Cut the tip and ring conductors simultaneously in the old cable at points E and F.
- (9) Trim and splice tip and ring conductors to new conductors one at a time.
- (10) Repeat (3) through (8) for each working conductor to be transferred.

Note: See Section 106-310-115 for precautions to be followed when using 71- and 72-type test sets. For information on the use of the 104A Test Set with the 71- and 72-type test sets, see Section 634-350-503.

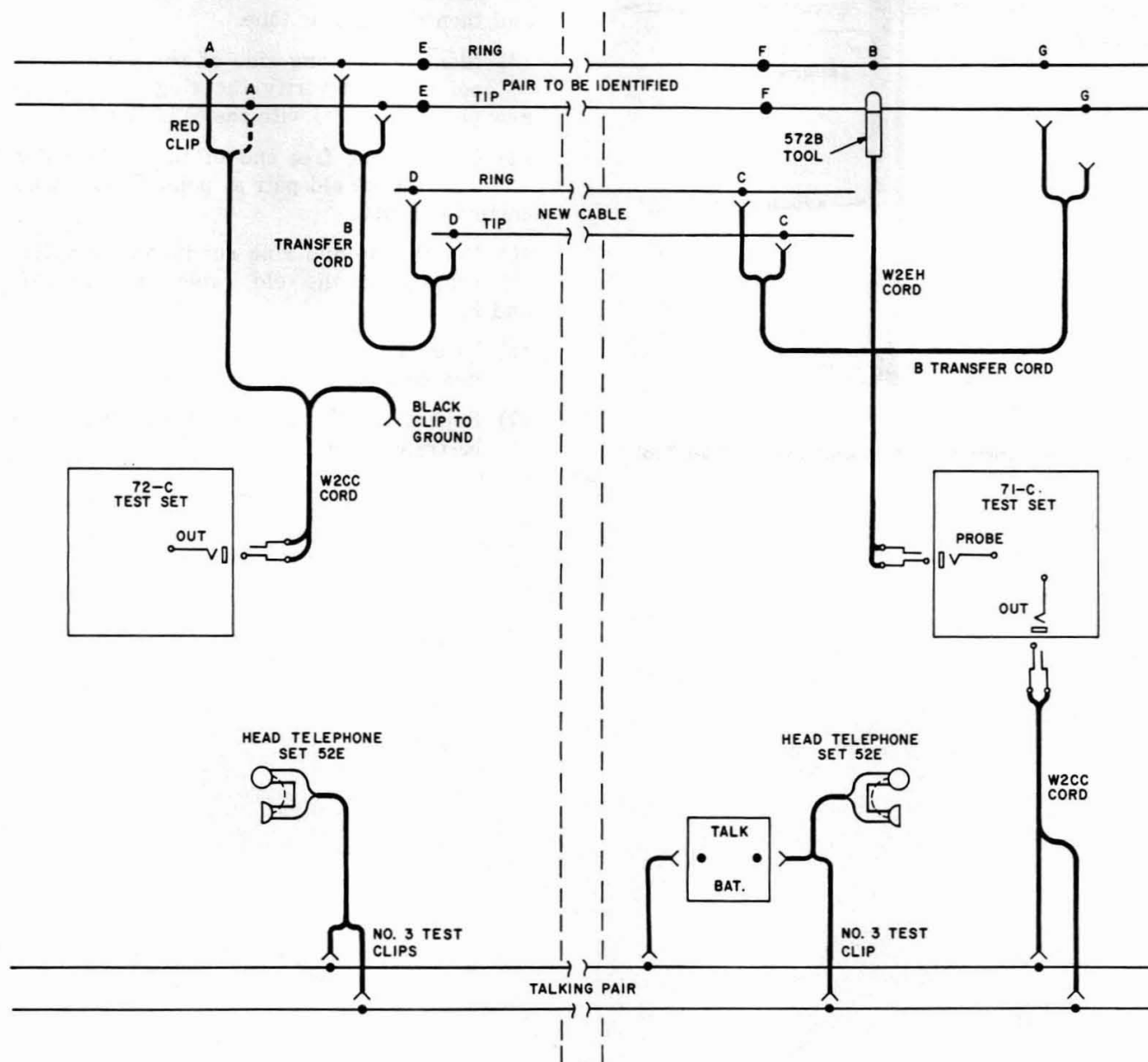


Fig. 3 — Identification of Voice-Frequency Pairs Using 71- and 72-Type Test Sets

2.04 When using a 572-type probe, maximum signal is obtained when its position with respect to the conductor is as illustrated in Fig. 4.

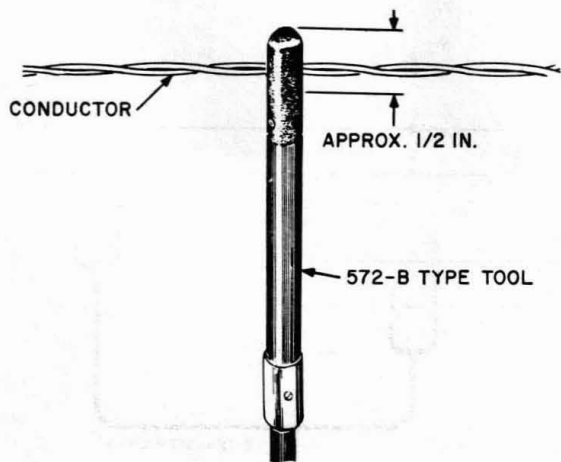


Fig. 4 — Correct Position and Use of 572B Tool

3. AUDIBLE TONE METHOD

3.01 After a talk pair has been established in the new cable, identify and transfer voice-frequency pairs using the 76-type test set.

- (1) Make connections as shown in Fig. 5.
- (2) Select a pair in the old cable at point A and connect the *send cord* to the ring side of the pair. If the listening test indicates that the pair is spare or idle, send the signal tone and then the regular tone.
- (3) Identify the ring side of the old pair at point F and verify the ring side of the new pair at point C with the 513A Tool.
- (4) Connect the free end of the B Transfer Cord to the old pair at point G observing correct polarity.
- (5) Cut the tip and ring conductors simultaneously in the old cable at points E and F.
- (6) Trim and splice tip and ring conductors to new conductors one at a time.
- (7) Repeat (2) through (6) for each pair to be transferred.

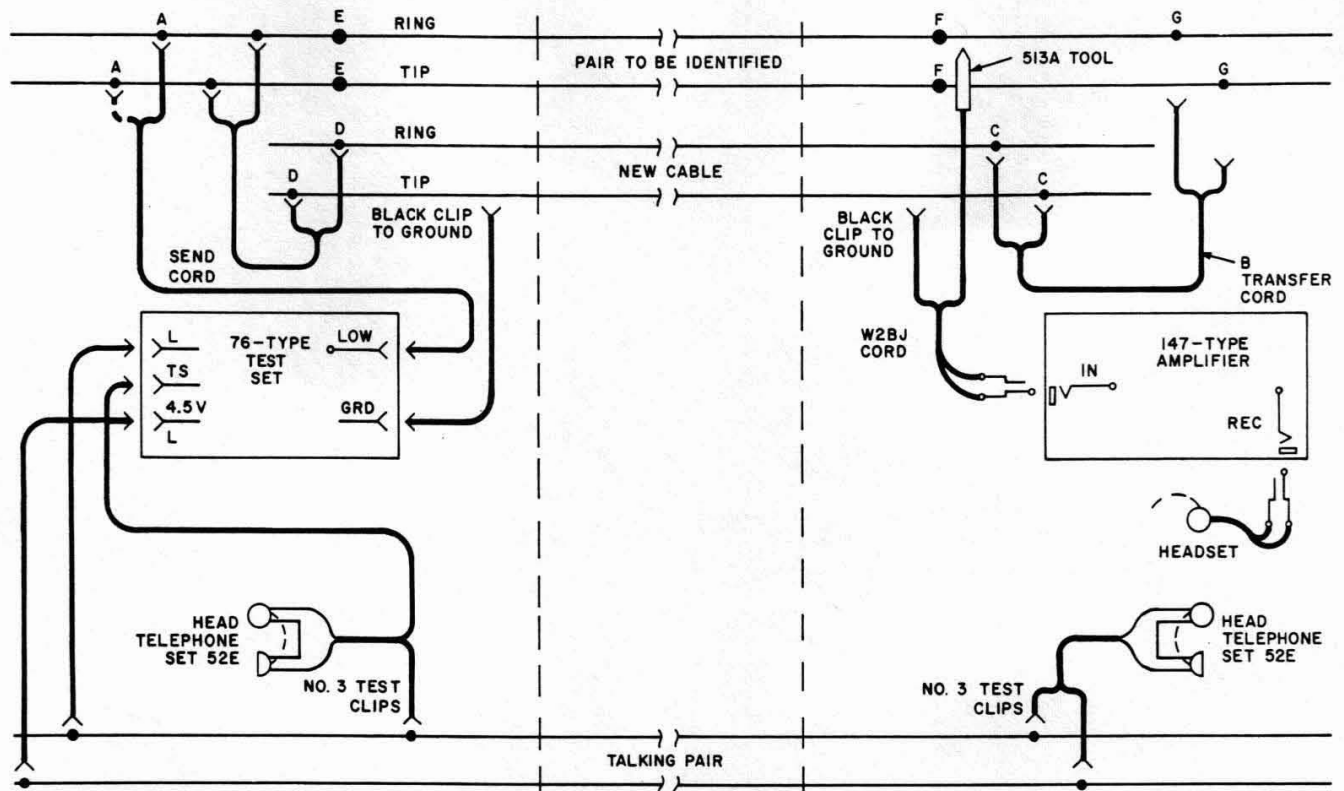


Fig. 5 — Audible Tone Method Arrangement Using 76-Type Test Set and 147 Amplifier