

A.E.CO. TYPE 85A TELEPHONE SET  
MODIFICATION FOR USE IN 10A1, 10A2 AND 16A KEY TELEPHONE SYSTEMS

**1. GENERAL**

1.01 This section describes the modifications required to adapt the A.E. Co. Type 85A single-key telephone set for A-lead control in 10A1, 10A2 and 16A key telephone systems. The modified set may be used in conjunction with an external key or key adapter, or be connected permanently to one of the key system lines.

1.02 The modification procedure is applicable only to Type 85A sets used for single line service and arranged for cutoff of the self-contained ringer, cutoff of an extension ringer or control of a headset.

**2. SETS WITH PRINTED-CIRCUIT BOARD**

2.01 The wiring diagram of a Type 85A telephone set with self-compensating network components mounted on a printed-circuit board is shown in Figure 1 as modified for key system operation. The modification procedure is set forth in steps (1) through (7) below.

- (1) Terminate the white hookswitch lead on terminal 6 of terminal strip B.
- (2) Terminate the red hookswitch lead on terminal 5 of terminal strip B.
- (3) Cut the brown wire strap between hookswitch springs 2 and 5.
- (4) Unsolder the cutoff brown wire from hookswitch spring 2, solder a blue spade-tipped lead in its place, and terminate it on terminal 2.
- (5) Connect a length of red wire between network terminals 2 and 8.
- (6) Terminate the yellow line cord lead on terminal 5 of terminal strip B.
- (7) Terminate the black line cord lead on terminal 6 of terminal strip B.

2.02 If leads to an extension ringer or extension (headset) station are required, use the blue and white line cord conductors and connect as normally instructed for the yellow and black leads, respectively. If the blue and white conductors are required for signal leads, use the brown-yellow and brown-black conductors in a 10-conductor cord. Note that the extension (headset) station will have no A-lead control and will be unable to seize or hold the key system line when the Type 85A set is on-hook.

**3. SETS WITH POTTED SELF-COMPENSATING NETWORK**

3.01 Prior to the introduction of the printed-circuit network board, Type 85 telephone sets were assembled with self-compensating network components mounted in a shallow styrene shell and potted with a jelly-like compound. The wiring diagram of such a set is shown in Figure 2 as modified for key system operation. Follow the same modification procedure as set forth above for the printed-circuit board network in Paragraph 2.01.

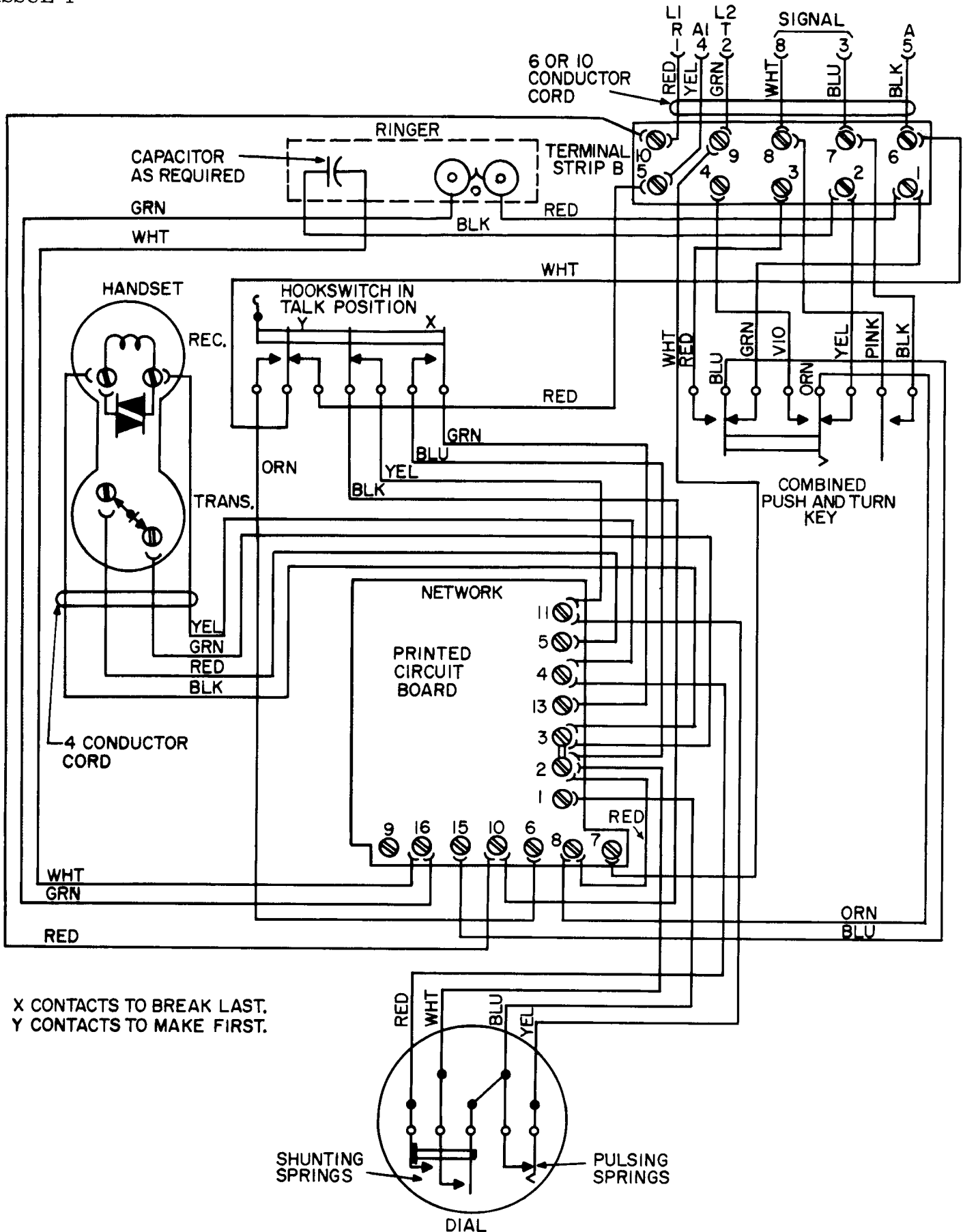
**4. MANUALLY-ADJUSTED RHEOSTAT SETS**

4.01 Prior to introduction of the potted network with the automatic sidetone compensation feature, Type 85 telephone sets were assembled with a similar potted shell containing a conventional induction coil, resistors and capacitors. These sets have an externally-adjusted, slotted-shaft rheostat mounted in the base to limit the transmitter current on short loops. The rheostat is manually adjusted at the time of installation to suit the loop resistance of the line on that day.

4.02 The wiring diagram of a Type 85A set with manually-adjusted series rheostat is shown in Figure 3 as modified for key system operation. The modification procedure is set forth in steps (1) through (5) below.

- (1) Terminate the white hookswitch lead on terminal 6 of terminal strip B.
- (2) Terminate the green hookswitch lead on terminal 5 of terminal strip B.
- (3) Terminate the yellow hookswitch and dial leads on terminal 13.
- (4) Terminate the yellow line cord lead on terminal 5 of terminal strip B.
- (5) Terminate the black line cord lead on terminal 6 of terminal strip B.

4.03 If leads to an extension ringer or extension (headset) station are required, use the blue and white line cord conductors and connect as normally instructed for the yellow and black leads, respectively. If the blue and white conductors are required for signal leads, use the brown-yellow and brown-black conductors in a 10-conductor cord of recent manufacture, or the yellow-slate and green-brown conductors of an older cord. Note that the extension (headset) station will have no A-lead control and will be unable to seize or hold the key system line when the Type 85A set is on-hook.



X CONTACTS TO BREAK LAST.  
Y CONTACTS TO MAKE FIRST.

Figure 1. Wiring Diagram of Modified Type 85A Telephone Set With Printed-Circuit Board Network.

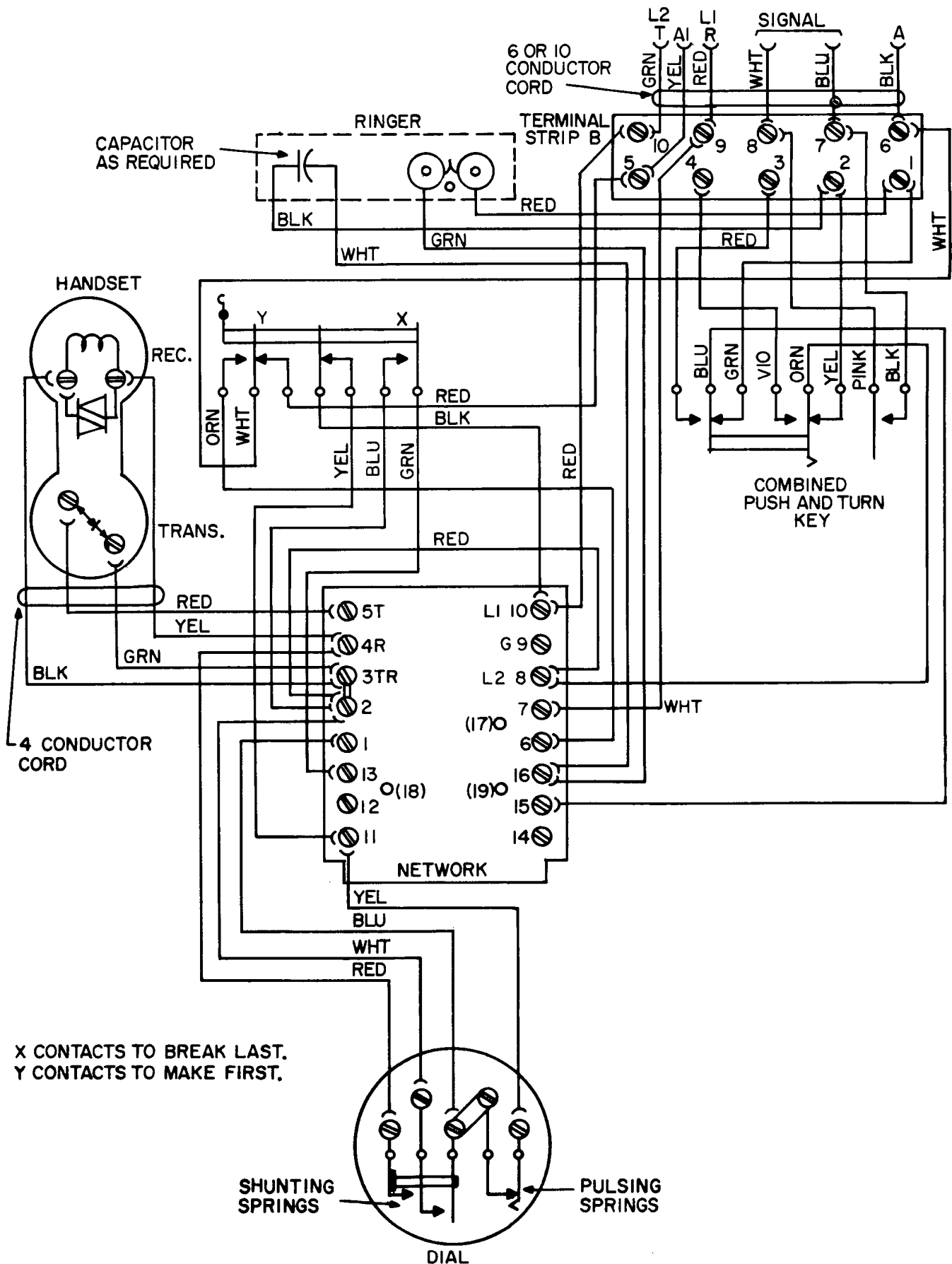


Figure 2. Wiring Diagram of Modified Type 85A Telephone Set With Potted Self-Compensating Network.

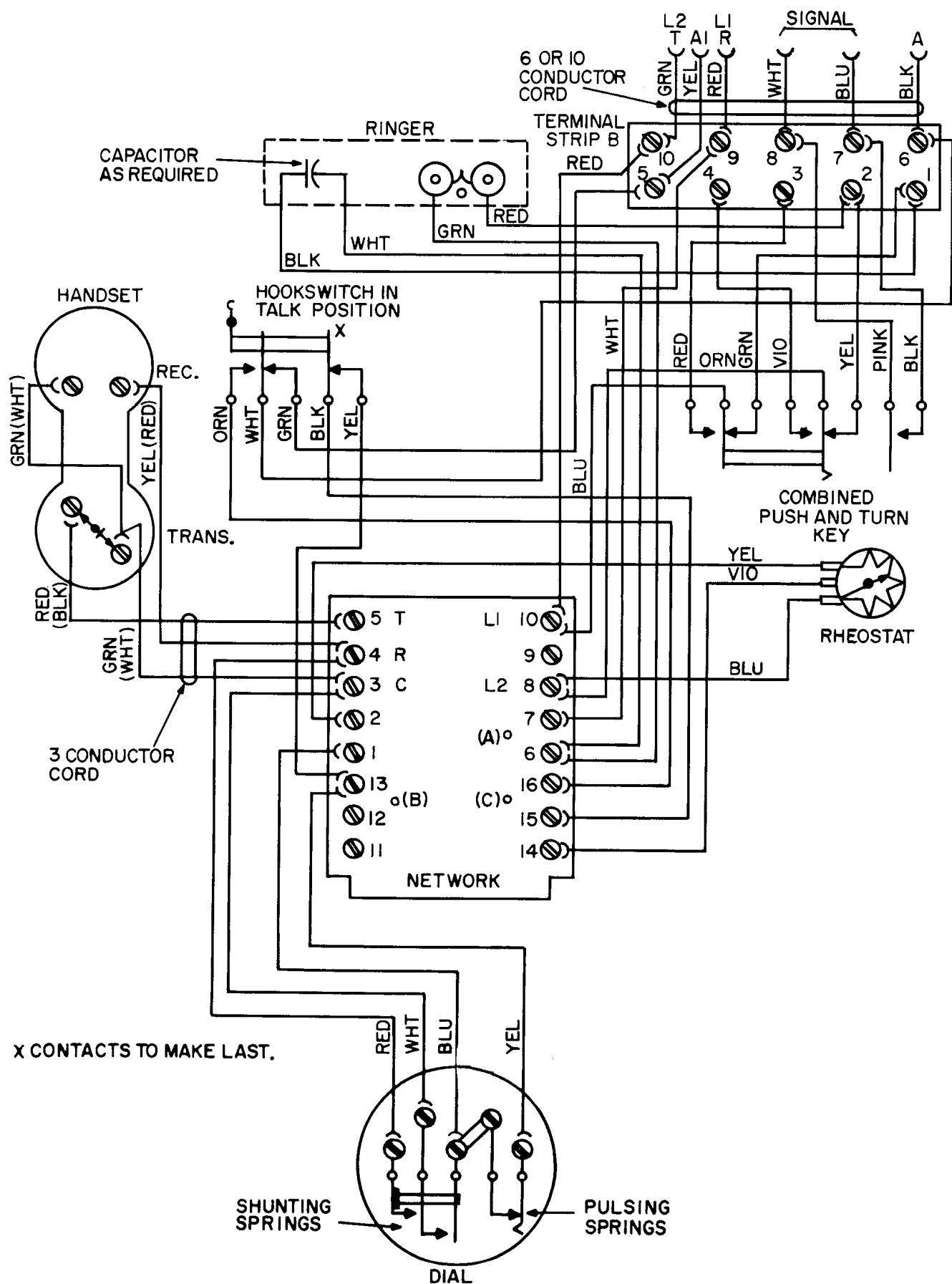


Figure 3. Wiring Diagram of Modified Type 85A Telephone Set With Series Rheostat.

A.E.CO. TYPE 85A TELEPHONE SET  
MODIFICATION FOR USE IN 10A1, 10A2 AND 16A KEY TELEPHONE SYSTEMS

1. GENERAL

1.01 This addendum is issued to add information concerning modification of NC-series Type 85A instruments to that appearing for NB- and prior series sets in Section 473-502-800, Issue 1.

1.02 In ink or red pencil, make the entry indicated in Part 2, and file this addendum ahead of the abovementioned section in the practices binder.

2. CHANGES

2.01 Adjacent to step (3) in Paragraph 2.01, enter the notation "See Addendum". NC-series telephone sets use a hookswitch assembly with an individual lead per spring, and a network which lacks terminal 7 and has a different terminal arrangement. When converting an NC-series instrument, eliminate steps (3) and (4), as the connection is provided by factory wiring (see Figure 4).



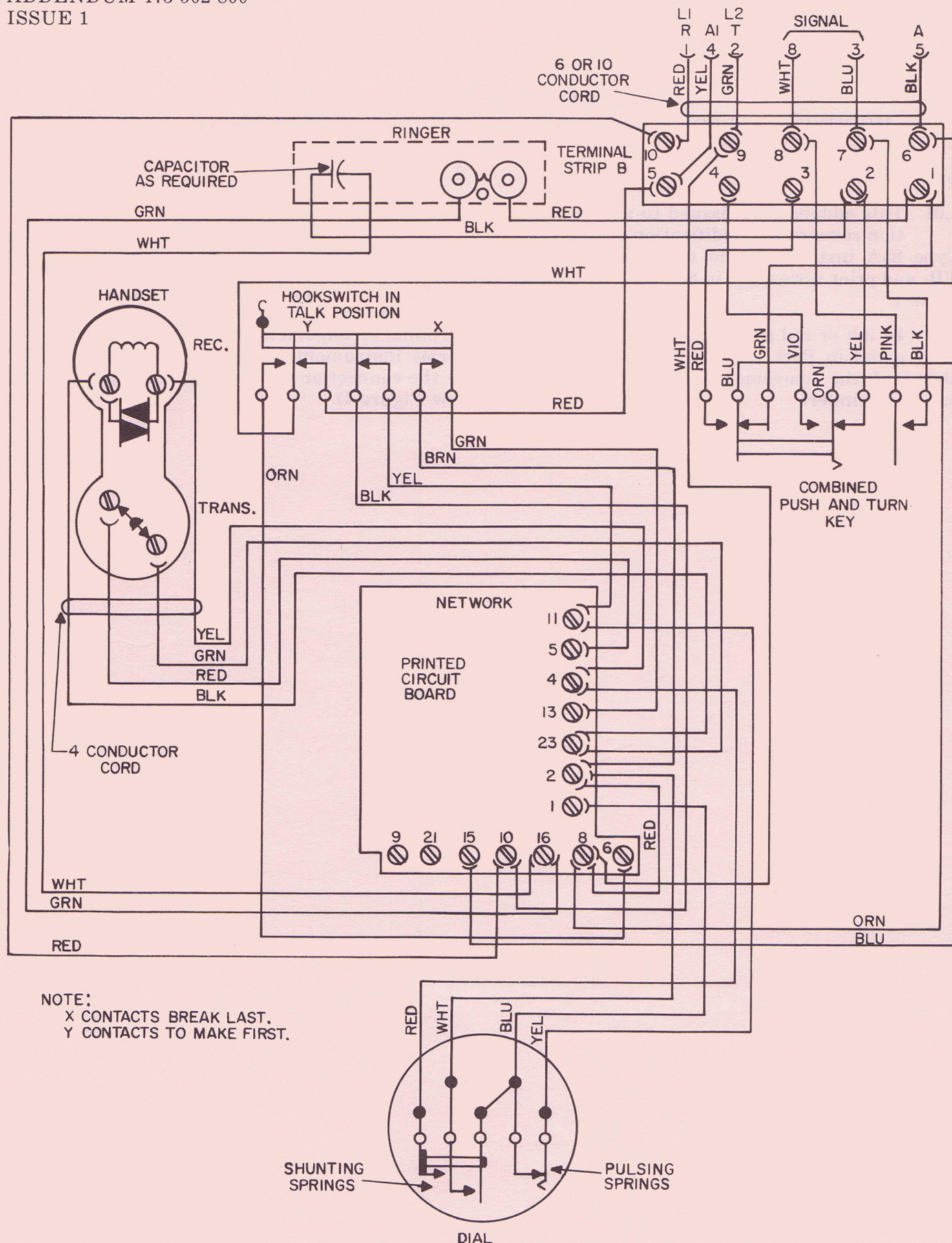


Figure 4. Wiring Diagram of Modified NC-Series Type 85A Telephone Set.