

## MODEL 180455 NETWORK

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### 1. INTRODUCTION

1.01 This document covers the Model 180455 network. (See Figure 1.) A general description as well as information on removal, disassembly, replacement parts, and installation is included.

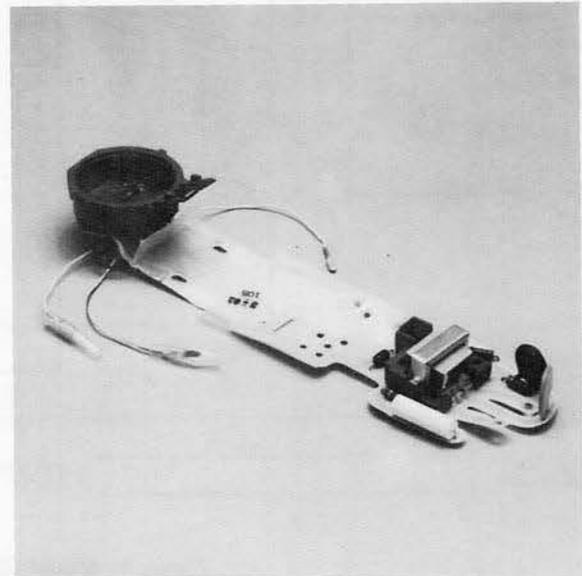
1.02 Whenever this section is reissued, reason for reissue will be listed in this paragraph.

1.03 For information concerning telephones that this network is used in, refer to the appropriate section in Volume 1 of the ITT Telephone Apparatus Practices Manual.

### 2. GENERAL DESCRIPTION

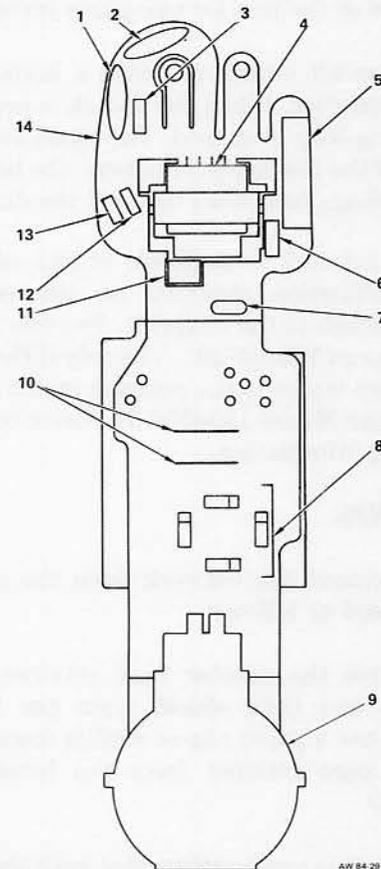
2.01 The Model 180455 network assembly provides all the components necessary to connect and to match the impedance of the Trendline pushbutton dial handset transmitter and receiver units to a four-wire telephone handset cord. The network includes a sidetone balancing circuit, an Automatic Number Identification (ANI) circuit, a recall switch, a dial lamp, and a transmitter cup assembly. All components are assembled on a flexible printed circuit assembly (flexprint). (See Figure 2.)

2.02 The sidetone circuit (see Figure 3) produces the proper level of sidetone via R2, RV2, C1, and the windings of the induction coil. The sidetone circuit allows the user's own voice to be heard in the receiver; this affects how loudly the user speaks.



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Figure 1: Model 180455 Network



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Figure 2: Model 180455 Network, Exploded View

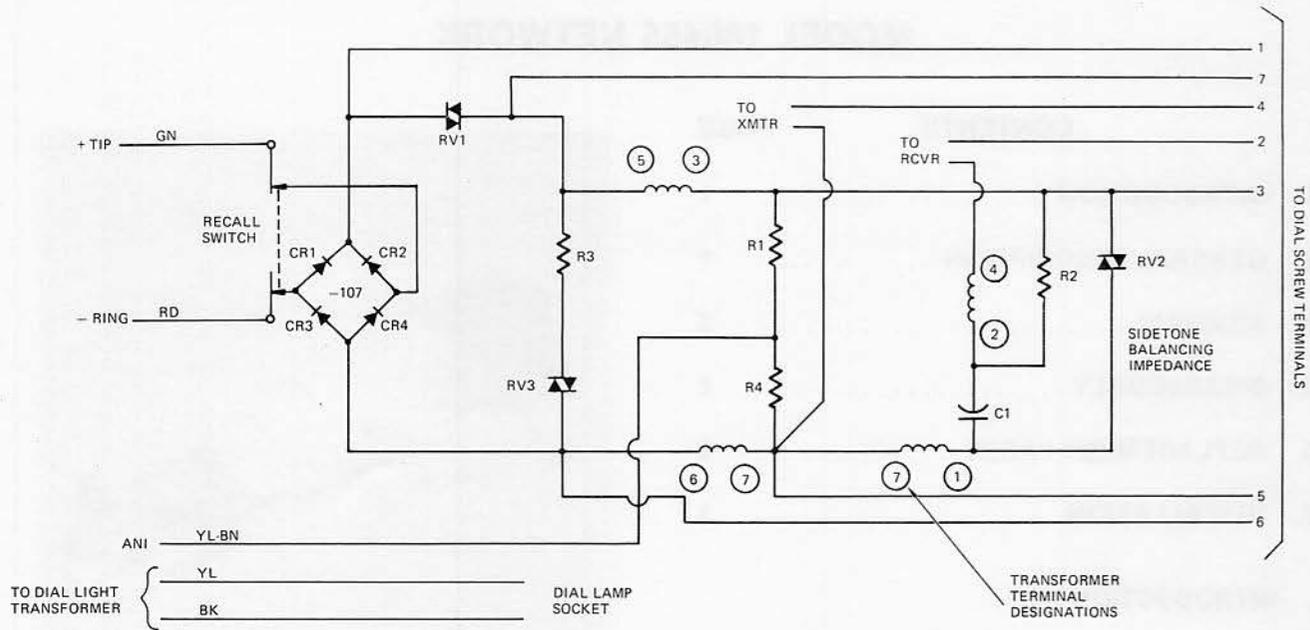


Figure 3: Model 180455 Network, Schematic

**2.03** The ANI circuit consists of two resistors, R1 and R4, that maintain a 2650 ohm ground on the Tip side of the line for two-party identification.

**2.04** The recall switch provides a hookswitch in the handset. When the switch is pressed, the Tip and Ring loop is opened. The recall switch does not turn off the dial lamp. However, the hookswitch in the telephone base does turn off the dial lamp.

**2.05** The network is available in two styles with identification stamped on the plastic insulator attached to the flexprint. The two styles are 180455-105 and 180455-107. The only difference between the two styles is the polarity guard circuit included on the Model 180455-107. Refer to Table A for ordering information.

### 3. REMOVAL

**3.01** To remove the network from the telephone, proceed as follows:

- (a) Remove the number card retainer, number card, and light shield from the telephone handset; use a paper clip or similar instrument to pry the card retainer from the handset. (See Figure 4.)
- (b) Remove the two screws that hold the handset cover to the handset housing. Remove the handset cover.

(c) Remove the four receiver screws. (See Figure 4.)

(d) Remove the seven terminal screws that connect the flexprint network to the dial.

(e) Bend the flexprint network back to expose the four dial mounting screws.

(f) Remove the four dial mounting screws.

(g) Lift the pushbutton dial from the handset.

(h) Remove the two screws that secure the transmitter mounting brackets. Remove the transmitter mounting brackets.

(j) Lift the network from the handset.

### 4. DISASSEMBLY

**4.01** Disassembly of the network is not recommended since it would require removal of components and terminals. For maintenance purposes, it is suggested that a questionable unit be substituted with a known good unit.

TABLE A  
ORDERING INFORMATION

CODE NUMBERS			
NETWORK CODE NUMBERS ARE FORMED IN TWO STEPS AS FOLLOWS:			
(1) Network Model Number (See Part 1)			180455
(2) Network Style (See Part 2)			105
PART 1 NETWORK MODEL NUMBER		PART 2 NETWORK STYLE	
CODE	DESCRIPTION	CODE	DESCRIPTION
180455	Model 180455 Flexprint Network For Pushbutton Dial Trendline Telephones	105	Network
		107	Network With Polarity Guard

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## 5. REPLACEMENT PARTS

5.01 Replacement parts for the Model 180455 network are listed in Table B.

## 6. INSTALLATION

6.01 To install the network inside a telephone, proceed as follows:

- (a) Remove the handset cover.
- (b) Place the network in the handset, with the network transmitter cup over the transmitter.

*Note:* Observe proper alignment of transmitter and gasket when mounting the network.

- (c) Mount the transmitter cup to the handset using the transmitter mounting brackets and two screws. (See Figure 4.)

*Note:* One end of a transmitter mounting bracket inserts into a notch in the handset.

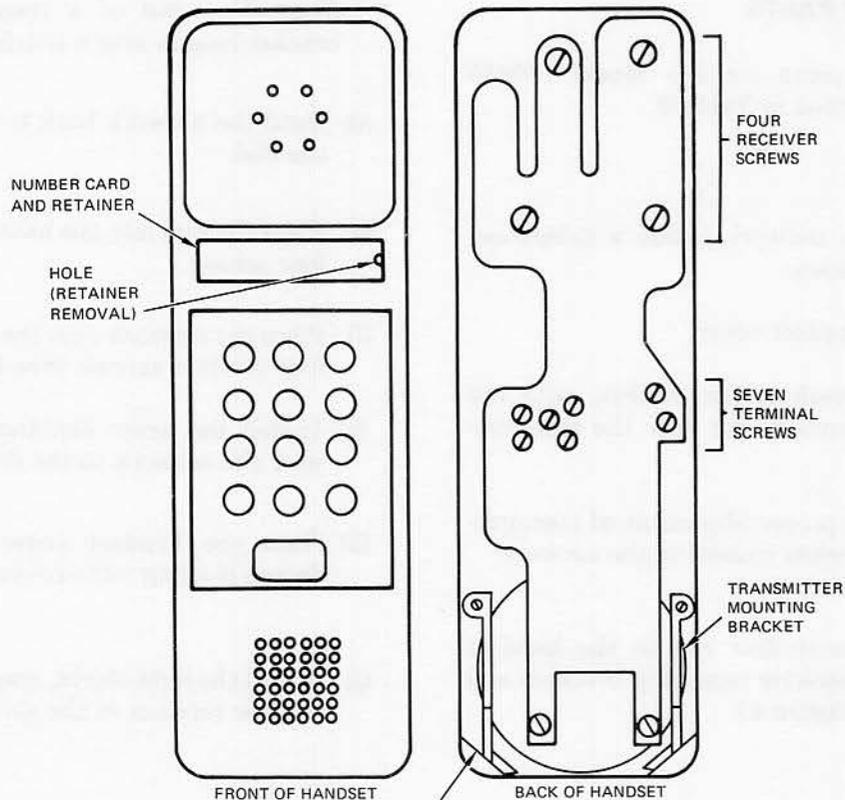
- (d) Bend the network back to allow mounting of the dial.
- (e) Place the dial into the handset. Mount it with four screws.
- (f) Place the network onto the dial and install the four receiver screws. (See Figure 4.)
- (g) Install the seven terminal screws that connect the network to the dial.
- (h) Place the handset cover on the housing. Secure it using two screws.
- (j) Install the light shield, number card, and card number retainer in the slot provided.

TABLE B  
REPLACEMENT PARTS LIST

INDEX NO	PART NUMBER	DESCRIPTION	QUANTITY USED	
			105	107
		<b>Model 180455 Network</b>	<b>105</b>	<b>107</b>
1	095974-102	Varistor, RV3	1	1
2	095974-101	Varistor, RV2	1	1
3	062948-778	Resistor, 220 Ohm, R3	1	1
4	088710-104	Coil Assembly	1	1
5	095995-112	Capacitor, 1.5 MFD, C1	1	1
6	062948-107	Resistor, 33 Ohm, R2	1	1
7	095655-101	Varistor, RV1	1	1
8	180658-101	Diode, 1N4004, CR1 - CR4	—	4
9	180429-101	Transmitter Cup Assembly	1	1
10	180335-101	Strap	1	2
11	180427-101	Lamp Block	1	1
12	062948-160	Resistor, 2 K, R4	1	1
13	062948-113	Resistor, 1.6 K, R1	1	1
14	180447-101	Board, Flexible Printed Wiring	1	—
14	183554-101	Board, Flexible Printed Wiring	—	1
	180414-101	Insulator	1	1

NOTE: All capacitor values are in microfarads (MFD).

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NOTE: Edge of brackets insert into a notch in the handset.

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Figure 4: Location of Network Mounting Hardware