

# MODEL 181427 NETWORK

CONTENTS	PAGE
1. INTRODUCTION .....	1
2. GENERAL DESCRIPTION .....	1
3. REMOVAL .....	3
4. DISASSEMBLY .....	3
5. REPLACEMENT PARTS .....	3
6. INSTALLATION .....	3

## 1. INTRODUCTION

1.01 This document covers the Model 181427 network. (See Figure 1.) A general description as well as information on removal, disassembly, replacement parts, and installation is included.

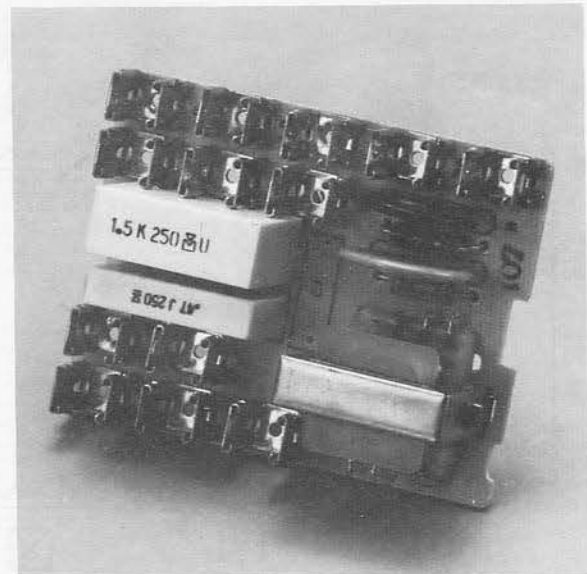
1.02 Whenever this section is reissued, reason for reissue will be listed in this paragraph.

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 181427 network assembly provides all the components necessary to connect and to match the impedance of the handset transmitter and receiver units to a two-wire telephone circuit. The network includes an RF filter, a sidetone balancing circuit, and a 0.47 microfarad ringer series capacitor.

2.02 The network is a printed circuit assembly. All components are assembled on a printed circuit board (PCB). (See Figure 2.) Push-on terminals on the PCB will accommodate up to four lugs per terminal. Additional connections can be made to spare terminals L1, L2, and G. Terminals E1 and E2 are provided as tie points. The schematic for the Model 181427 network is shown in Figure 3. The network is designed for field replacement; it fastens to a network spacer by means of a flexible retaining clip.



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Figure 1: Model 181427 Network

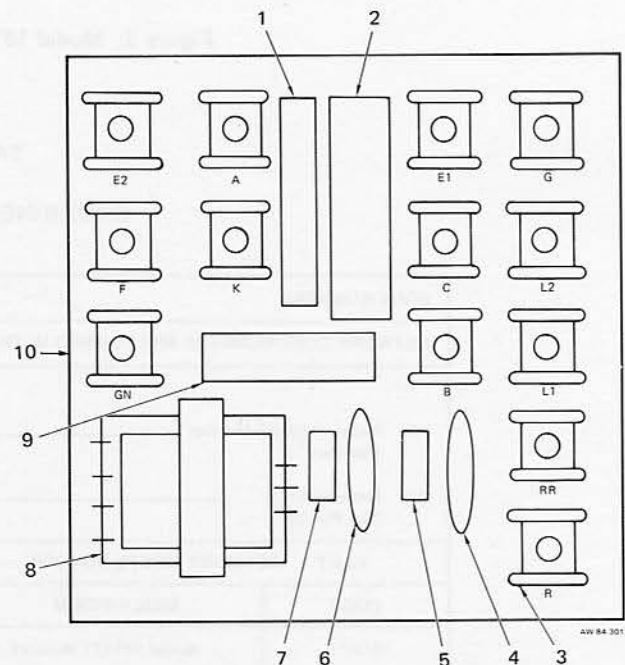


Figure 2: Model 181427 Network Component Location

2.03 The network is available in various styles and is identified by a code number etched on the PCB. Refer to ordering information in Table A for an explanation of the code number and for a description of styles.

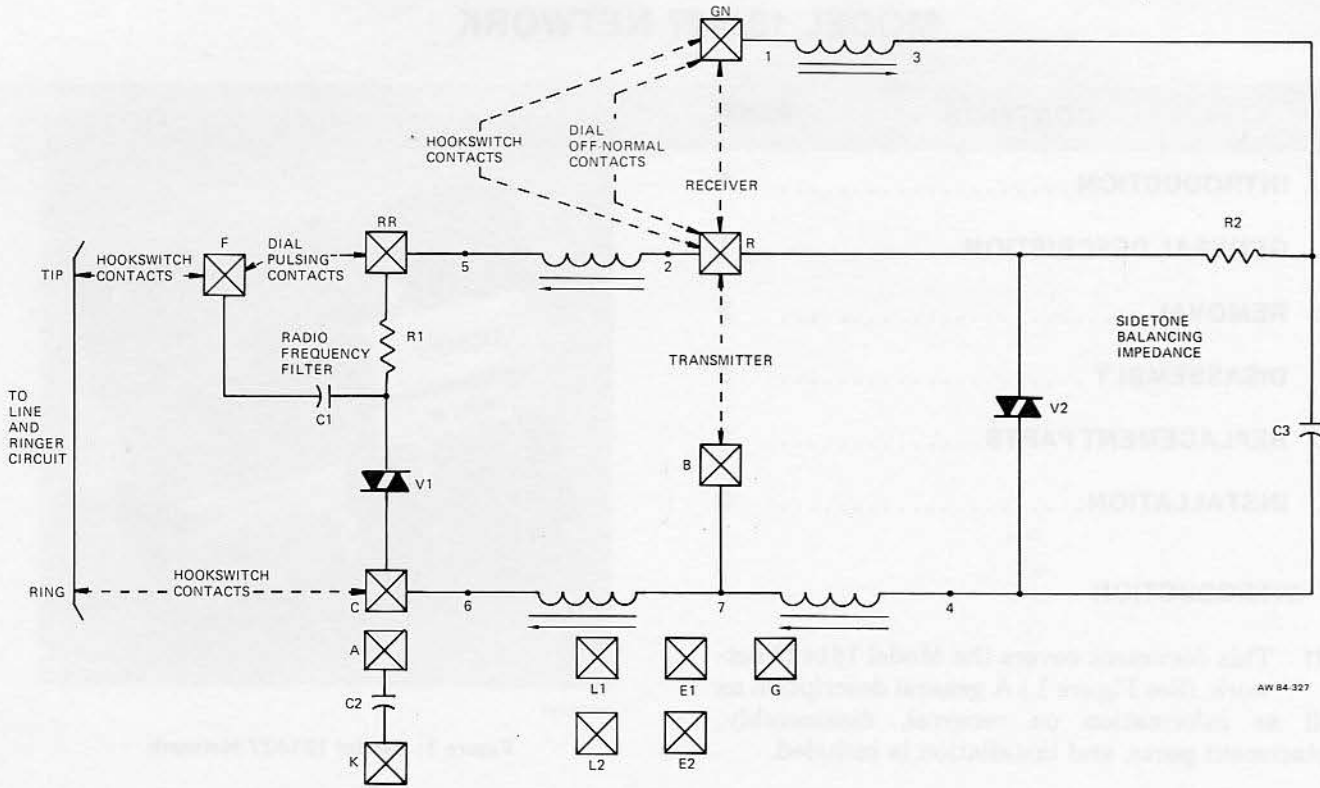


Figure 3: Model 181427 Network Schematic

TABLE A  
ORDERING INFORMATION

CODE NUMBERS			
NETWORK CODE NUMBERS ARE FORMED IN TWO STEPS AS FOLLOWS:			
(1) Network Model Number (See Part 1)	181427	101	
(2) Network Style (See Part 2)			
PART 1 NETWORK MODEL NUMBER		PART 2 NETWORK STYLE	
CODE	DESCRIPTION	CODE	DESCRIPTION
181427	Model 181427 Network	101	Standard Network
		102	Network Less RF Filter
		105	Network With Three Terminal Screws
		106	Network Less RF Filter With Three Terminal Screws
		107	Network Less RF Filter With Four Terminal Screws

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### 3. REMOVAL

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

- (a) Remove the telephone housing.
- (b) Remove any telephone component that may obstruct access to the network.
- (c) Disconnect the network leads.
- (d) Remove the network by bending the flexible retaining clip on the network spacer. Lift the network from the network spacer. (See Figure 4.)

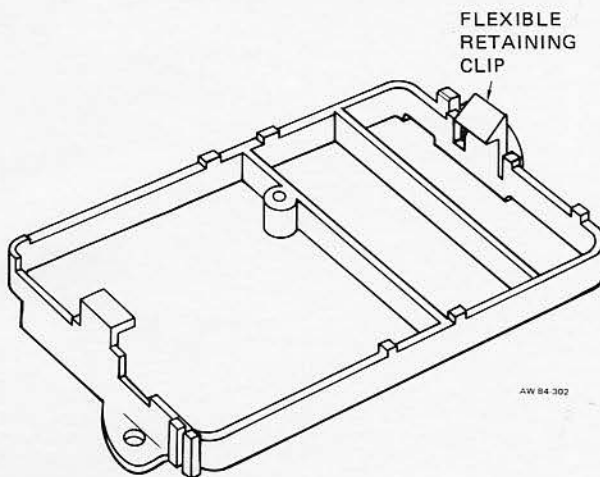


Figure 4: Network Spacer

### 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.

### 5. REPLACEMENT PARTS

5.01 Replacement parts for the Model 181427 network are listed in Table B.

### 6. INSTALLATION

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

- (a) Remove the telephone housing.
- (b) Remove any telephone component that may obstruct access to the network spacer.
- (c) Place the network on the network spacer so that the notches on the spacer align with the grooves in the PCB.
- (d) Press firmly on the PCB until it snaps into place.
- (e) Connect the various leads to the network while referring to the telephone circuit label.

TABLE B

REPLACEMENT PARTS LIST

INDEX NO	PART NUMBER	DESCRIPTION	QUANTITY USED				
			101	102	105	106	107
		<b>Model 181427 Network</b>	<b>101</b>	<b>102</b>	<b>105</b>	<b>106</b>	<b>107</b>
1	181164-110	Capacitor, C2, 0.47 MFD, 400 V	1	1	1	1	1
2	181164-115	Capacitor, C3, 1.5 MFD, 200 V	1	1	1	1	1
3	182373-101	Terminal, Four-Position	13	13	—	—	—
	182373-102	Terminal, Four-Position	—	—	13	13	13
4	095974-102	Varistor, V1, Black	1	1	1	1	1
5	062948-778	Resistor, R1, 220 Ohm, 1/2 W, 10%	1	1	1	1	1
6	095974-101	Varistor, V2, Orange	1	1	1	1	1
7	181789-236	Resistor, R2, 33 Ohm, 1/2 W, 5%	1	1	1	1	1
8	088710-104	Coil Assembly, T1	1	1	1	1	1
9	181164-112	Capacitor, C1, 0.12 MFD, 200 V	1	—	1	—	—
10	181425-101	PC Board, Drilled	1	1	1	1	1
	181649-102	Screw, Terminal (Not Shown)	—	—	3	3	4

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