

## 238A AMPLIFIER

### 1.00 INTRODUCTION

This section identifies and describes the 238A amplifier.

### 2.00 GENERAL

**2.01** The 238A amplifier is a transistor amplifier designed for long loop service where long line circuits are used. This is a single stage amplifier consisting of a transistor, capacitor, inductor, and two resistors mounted on a printed circuit board which in turn is mounted on the back of a colored plastic transmitter cup. (See Fig. 1.)

**2.02** Each 238A amplifier shipped will include an information label reading: **EQUIPPED WITH 238A AMPLIFIER**. This label has an adhesive back and should be applied to the underside of the metal base plate on the telephone set in which the amplifier is installed. Fig. 3 shows the base plate of a 500- and 700-type telephone set with the label attached.

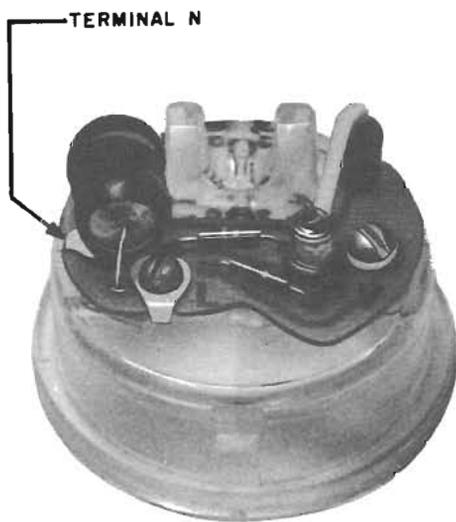


Fig. 1 - 238A Amplifier



*The area to which the label is applied must be dust free.*

### 3.00 IDENTIFICATION

**3.01** This assembly is designed to replace any transmitter cup in a G-type hand set where long loop conversion is desired. If in the process of conversion an older G-type hand set handle having cord retainer posts molded in the transmitter bowl is encountered, it will be necessary to substitute a handle without them.

**3.02** The input and output impedances of the 238A amplifier are 500 and 1000 ohms, respectively.

**3.03** Terminals L, N, and V are shown in Fig. 2. Terminal N is not marked on the assembly, but is located under the inductor and is electrically connected to one of the springs in the transmitter cup by a mounting screw. For proper operation of the 238A amplifier, the transmitter leads of the handset cord must be connected to the screw terminals marked L and V. (See Table A.) Terminal V of the 238A amplifier must always be positive relative to terminal L.



*If correct polarity of the 238A amplifier is not maintained, the transmitter will be inoperative.*

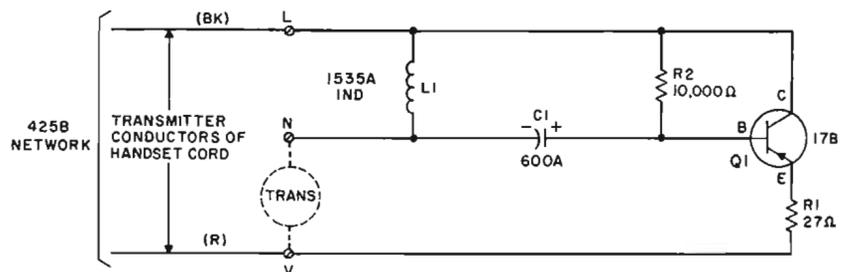
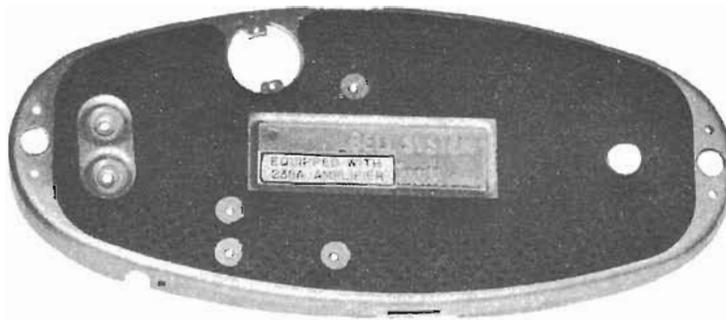


Fig. 2 - 238A Amplifier Circuit Diagram

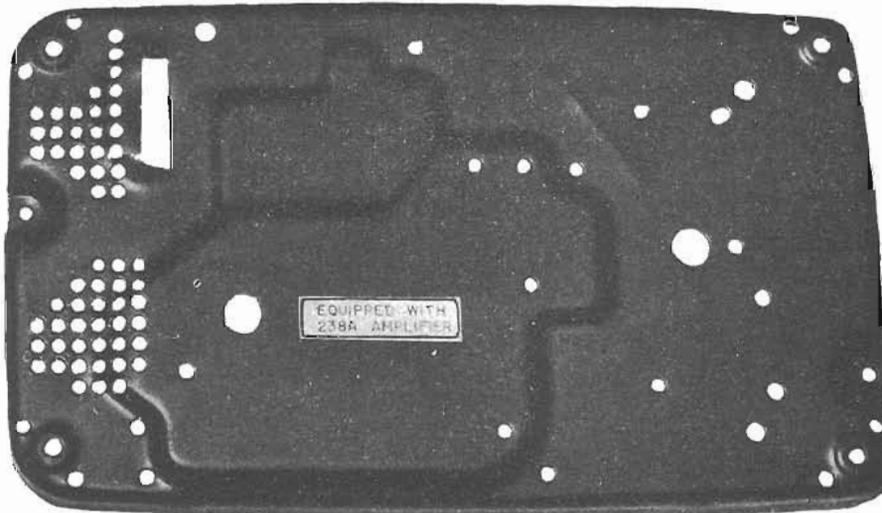
**TABLE A**  
**HANDSET CORD LEADS**  
**CONNECTIONS**

Handset Leads	Individual Party*	Ring Party*	Tip Party*
R	V	V	L
BK	L	L	V

\* Connections shown are for use with all auxiliary long line circuits except those in accordance with SD-26129-01 and SD-96588-01. When these circuits are used, reverse the red and black lead connections shown in Table A.



700-TYPE TELEPHONE, BASE PLATE



500-TYPE TELEPHONE, BASE PLATE

Fig. 3 – Base Plates with Label Attached