

AMPLIFIERS

151-, 241-, AND 242-TYPE IDENTIFICATION

1. GENERAL

1.01 The 151-type, 241A (MD), and 242B amplifiers are single-stage transistor circuits (Fig. 1, 2, and 4). The 241B amplifier is a two-stage bipolar transistor circuit (Fig. 3). Circuits consist of inductors, diodes, transistors, capacitors, and resistors. The components are mounted on printed circuit boards. In the case of the 151-type amplifier the components are housed in a metal can. The 151D, 151E, 241A, 242A, and 242B amplifier circuits include polarity guards. The 241B amplifier is not polarity sensitive and does not require a polarity guard. The guard insures proper polarity of the supply voltage for the transistor portion of the amplifier. The 241B has a diode surge protector.

1.02 This section is reissued to:

- Show amplifiers 151B, D, and E rated A&M Only
- Add capacitor to amplifier 241B (Fig. 3).

1.03 The 241B amplifier is recommended. The 151A, 151C, 241A, and 242A amplifiers are rated MD. The 151B, D, and E amplifiers are rated A&M Only.

2. IDENTIFICATION

Purpose

2.01 The 151-type amplifiers provide amplification for long loop operation, impaired hearing,

and noisy locations. The 241- and 242-type are used in telephone sets designed for headset/handset operation to increase transmitter output when using an operator's headset.

Ordering Guide

2.02 Order as:

- Amplifier—151B, D, E, F
- Amplifier—241B
- Amplifier—242B

Design Features

2.03 Refer to Table A.

Application

2.04 Refer to Table B.

3. CONNECTIONS

3.01 When the 241B amplifier is used in conjunction with the 425-type network, terminal 4 of the amplifier should always be connected to network terminal R, and terminal 1 of the amplifier should always be connected to network terminal B.

3.02 For other connection information refer to appropriate telephone set section.

NOTICE

Not for use or disclosure outside the
Bell System except under written agreement

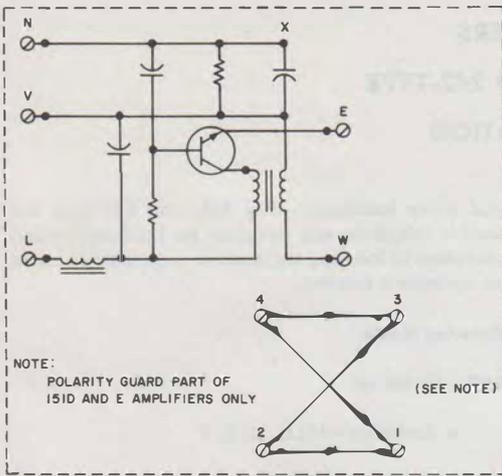


Fig. 1—151-Type Amplifier and Polarity Guard, Schematic

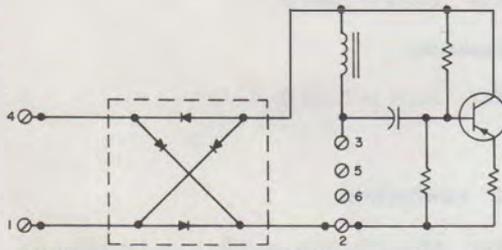


Fig. 2—241A (MD) Amplifier Schematic

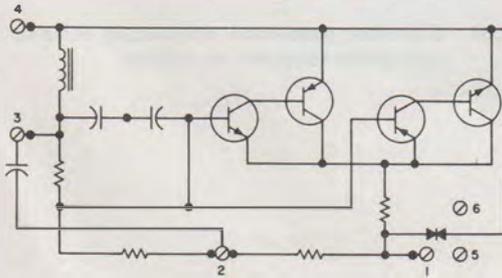


Fig. 3—241B Amplifier Schematic

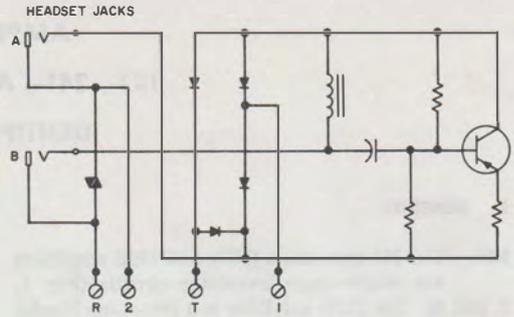


Fig. 4—242B Amplifier Schematic

TABLE A -
DESIGN FEATURES

DESIGN FEATURE	AMPLIFIER TYPE		
	151	241	242
Equipped with jacks arranged for 289-type, 396A or 464-type plugs			A, B
Equipped with polarity guard	D and E	A	A and B
Designed for use with 52-, 53-, 60-, 61-, or KS-type head telephone sets to amplify output of the transmitter unit		A* and B	A and B
Designed for use with the 292A operator's receive amplifier		B	
Designed for use with jack-equipped telephone sets except card dialers		A and B	

* Do not use the 241A with 60- or 61-type headsets on long loops (over 1200 ohms).

TABLE B
APPLICATION

APPLICATION	AMPLIFIER TYPE		
	151	241	242
500-, 560-, 630-, and 2600-type telephone sets		B	
532-, 533-, and 536-type telephone sets	B •	B	
636A1, 638A1, and 639A1 telephone sets	D •	B	
610B1 and 610B2 telephone sets	E •	B	
663-, 664-, 1663-, 1664-, 2663-, and 2664-type telephone sets			A and B
507-, 509-, 557-, and 559-type telephone sets	F		
636-, 637-, 638-, 639-, 1636-, 1637-, 1638-, and 1639-type telephone sets		A (MD), B	

• (A&M Only)