

## LOUDSPEAKER SETS — 107 TYPE

### 1. GENERAL

1.01 This section contains identification, installation, connection, and maintenance information on the 107A loudspeaker set.

1.02 This section is reissued to change resistor in Fig. 4.

1.03 The 107A loudspeaker (Fig. 1) is designed to permit a small group of people assembled in a room to hear both sides of a telephone conversation.

1.04 The 107A loudspeaker can be used with all presently manufactured telephone sets and with 300-, 400-, and 211N/P-type sets.

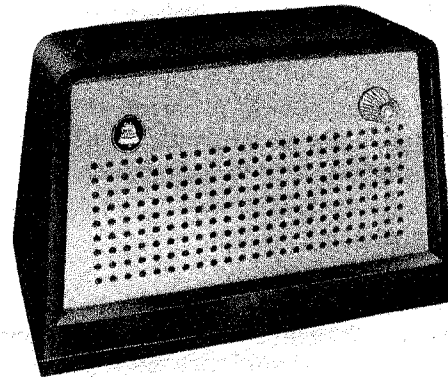


Fig. 1 — 107A Loudspeaker

### 2. IDENTIFICATION

2.01 The 107A loudspeaker has a plastic housing and is equipped with a 9-foot D4BM mounting cord. Loudspeakers and cords are available in the following colors:

Black	(-3)	Rose Pink	(-59)
Moss Green	(-51)	Light Beige	(-60)
Yellow	(-56)	Light Gray	(-61)
White	(-58)	Aqua Blue	(-62)
		Turquoise	(-64)

2.02 The over-all dimensions of the loudspeaker are as follows:

Width	—	5-3/4 inches
Height	—	4 inches
Depth	—	3-3/4 inches

2.03 The 107A loudspeaker consists of a KS-16881, List 2 loudspeaker (Fig. 2), a 2-stage transistorized amplifier printed circuit board mounted on a metal base plate, and a combination VOLUME and ON-OFF switch located on front panel.

### 3. POWER SUPPLY

3.01 An external power supply of 18 to 22 volts dc or ac is required.

3.02 The maximum length of inside wire (IW) cable should not exceed 200 feet from the power supply unit to the 107A loudspeaker set.

3.03 The 107A loudspeaker was designed to use a 2012B transformer, which requires a 105- to 125-volt ac receptacle. This receptacle will be furnished and maintained by the customer. A clamp is required to lock the 2012B transformer into the receptacle.

**3.04** Other power supplies may be used, such as the 18-volt ac terminals of a 101G power plant, or for temporary power supply, a 22.5- to 30-volt battery.

#### 4. INSTALLATION AND CONNECTIONS

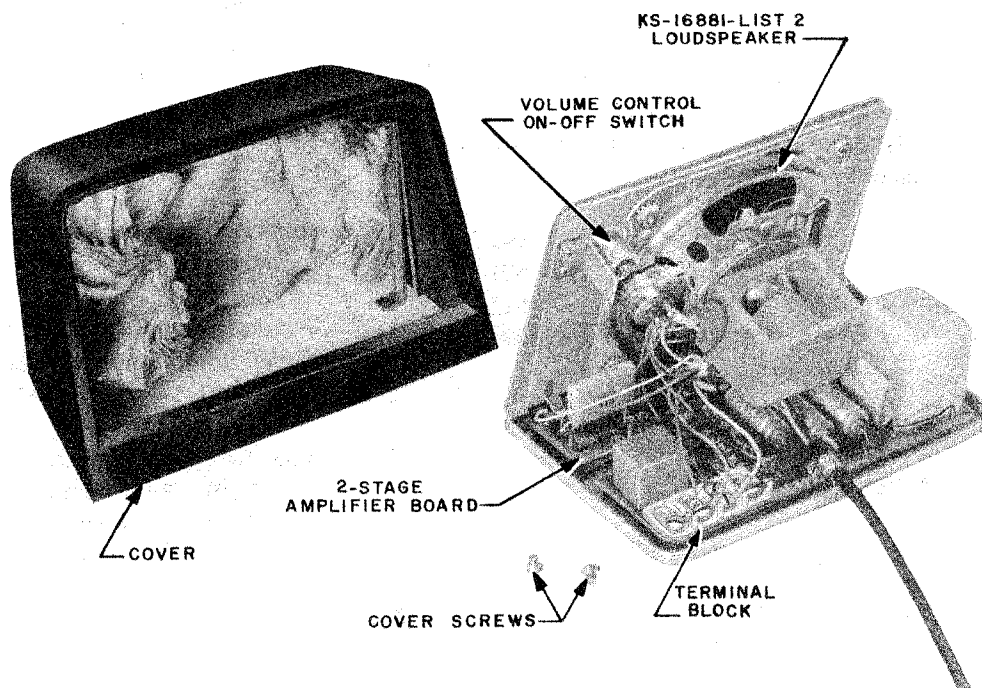
**4.01** Maintain a minimum separation of 3 feet to prevent feedback between the loudspeaker set and the associated telephone set. Greater separation will permit a higher volume adjustment without feedback.

**4.02** For maximum efficiency, the wire distance between the loudspeaker set and the associated telephone set should not exceed 100 feet of IW cable.

**4.03** The loudspeaker set is connected to the telephone set receiver circuit, which is under control of the switchhook and off-normal dial contacts (see Table A).

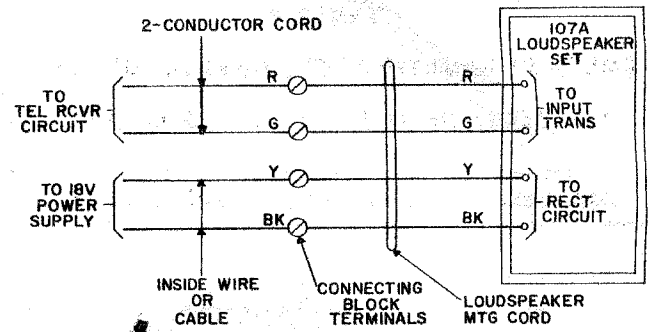
**TABLE A**  
**TELEPHONE SET CONNECTIONS**

Type Set	Telephone Set Terminals	
200 Series	W of Dial	R of Switch-hook
332, 334	BB of Dial	R of Ind Coil
302, 304, 305, 306, 354, 356, 401, 402, 410, 411, 412, and all 440 and 460 types	W of Dial	R of Ind Coil
500, 600, and 700 Series	R of Net-work	GN of Net-work



**Fig. 2 — 107A Loudspeaker, Cover Removed**

**4.04** Two spare conductors in the telephone set mounting cord or a separate 2-conductor mounting cord is required for connection to the receiver circuit of the telephone set. A 42A or 44A connecting block is used to connect the telephone set mounting cord conductors to the 4-conductor cord from the loudspeaker set. The IW cable is also terminated on the connecting block (Fig. 3 and 4).

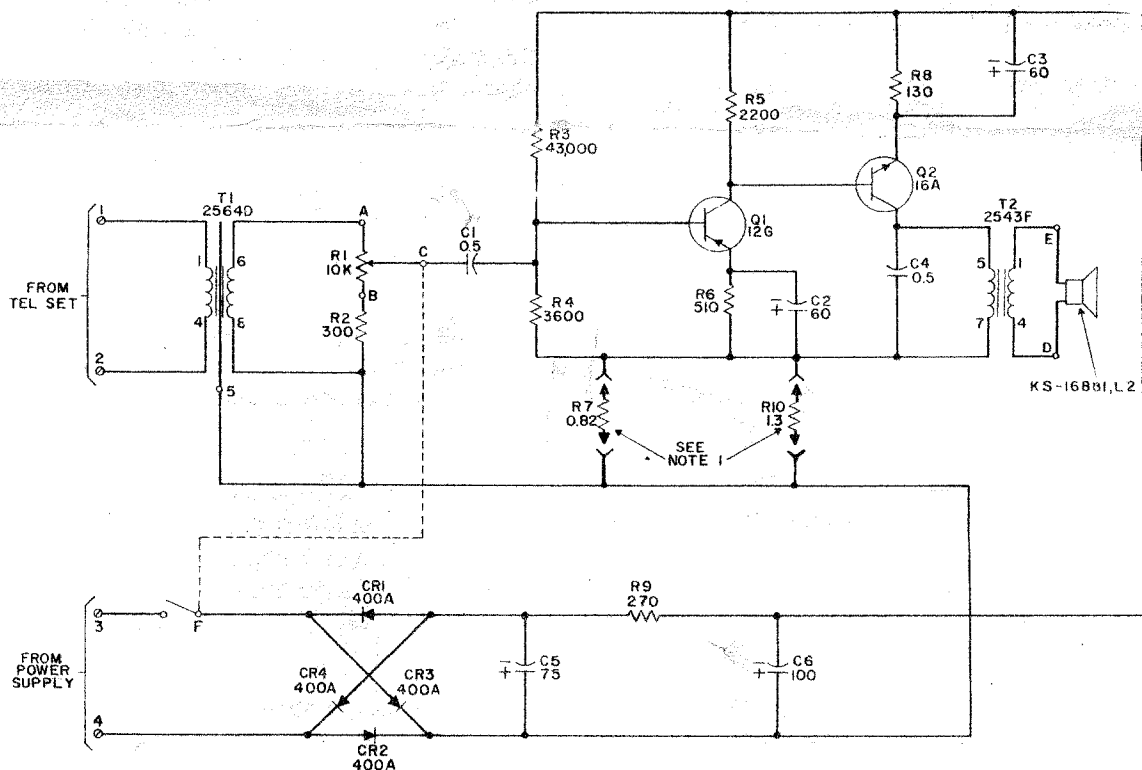


**Fig. 3 - Loudspeaker Set, Connections**

**4.05** When the loudspeaker set is to be used with a key button set or Call Director set, the loudspeaker cord may be brought directly into the telephone set. The receiver circuit leads are connected to the proper terminals of the induction coil or network (Table A). The power supply may be brought into the telephone set over spare cord conductors and connected to the loudspeaker set

cord with D-161488 connectors. Insulate the connectors and the wing band of the cord with tape and store.

**4.06** Table A shows connections for various types of telephone sets.



Note 1: Resistor R7 or R10 may have been removed at the factory to adjust gain. (This is a factory option).

Note 2: Resistance values are given in ohms and capacitance in microfarads unless otherwise specified.

**Fig. 4 - 107A Loudspeaker Set, Schematic**

TABLE B

**COLOR OF MOUNTING CORD CONDUCTORS TO  
TERMINALS ON TERMINAL BLOCK IN SET**

Cord Color	Red	Green	Yellow	Black
Terminals	1	2	3	4

## 5. OPERATION

**5.01** The telephone set used in conjunction with the 107A loudspeaker set is used in the normal manner. The handset of the telephone set must be off hook to use the loudspeaker.

**5.02** Operate loudspeaker as follows:

- (1) Turn the ON-OFF switch on the face of the 107A loudspeaker clockwise. This connects the power supply to the set.
- (2) Adjust the volume to a satisfactory level.

**5.03** Turn the loudspeaker set off when not in use.

**5.04** The telephone set is used in the normal manner with the loudspeaker set off.

## 6. MAINTENANCE

**6.01** For maintenance of the associated telephone set, refer to the section covering the type of set involved.

**6.02** Maintenance of the 107A loudspeaker set is limited to replacement of the 9-foot D4BM mounting cord.

**6.03** To replace the cord, remove the housing by removing two screws in base of set. Carefully lift the housing up and off. Table B shows internal connections of the mounting cord.