

5A AND 5B KEY EQUIPMENTS INSTALLATION AND MAINTENANCE

1.00 INTRODUCTION

1.01 This section covers the installation and maintenance information for 5A and 5B key equipments. The reasons for reissue are to:

- Add information on 106- and 107-type loudspeaker sets.
- Add information on 6017AM and AN keys.
- Remove information on 534BP subscriber set.
- Remove information on 6017K and L keys.

1.02 Due to extensive changes marginal arrows have been omitted.

2.00 GENERAL

2.01 The 5A key equipment provides two-way telephone service between a central office or PBX and a subscriber station, and loudspeaker service on a one-way telephone conversation to this subscriber station.

2.02 The 5B key equipment provides two-way telephone service between a central office or PBX and a subscriber station, and loudspeaker service on either a one-way or two-way telephone conversation to this subscriber station.

3.00 INSTALLATION

3.01 Refer to Fig. 1 for typical installation of 5A or 5B key equipment.

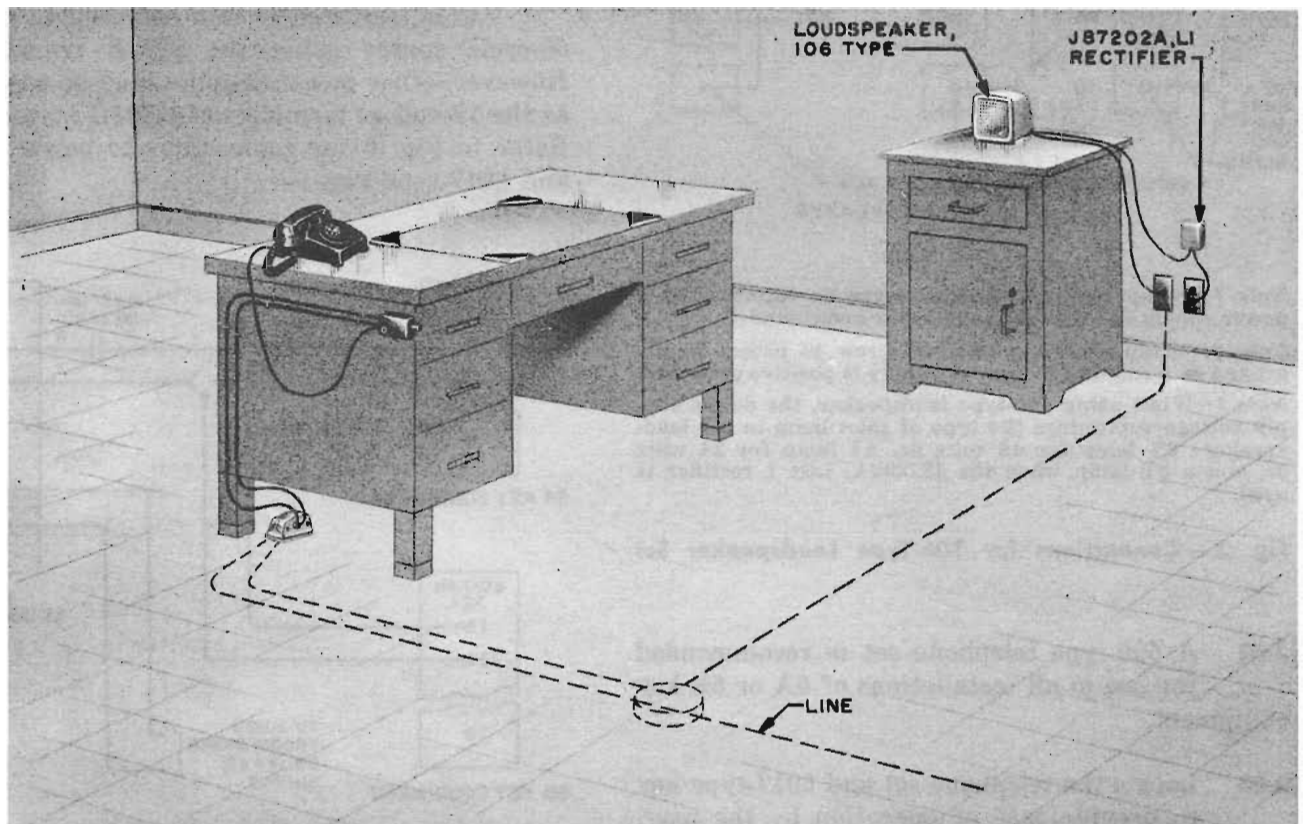
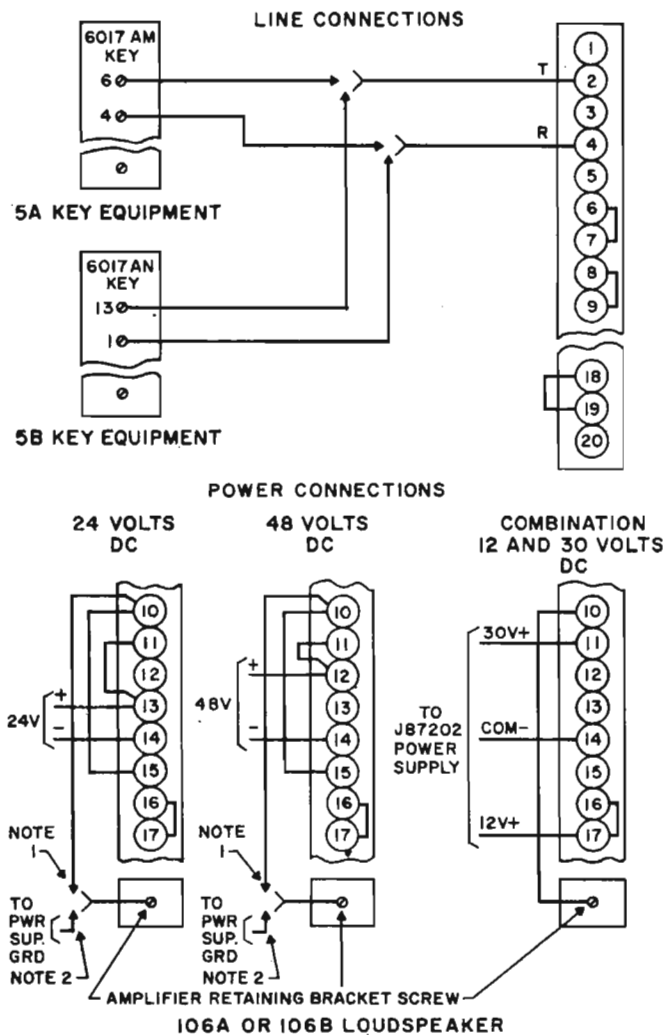


Fig. 1 — 5A or 5B Key Equipment, Installation



Note 1: Strap retaining bracket screw to terminal 10 if power supply is negative grounded or nongrounded.

Note 2: Strap retaining bracket screw to power supply ground or terminal 11 if power supply is positive grounded.

Note 3: When using 106-type loudspeaker, the power supply voltage determines the type of pilot lamp in the loudspeaker: 2Y lamp for 48 volts dc, A1 lamp for 24 volts dc, and a 2T lamp when the J87202A, List 1 rectifier is used.

Fig. 2 - Connections for 106-Type Loudspeaker Set

3.02 A 500-type telephone set is recommended for use in all installations of 5A or 5B key equipment.

3.03 Locate the telephone set and 6017-type key to provide ease of operation by the user. Where possible, avoid locating the 6017 key in the kneewell of a desk where it might be struck by the subscriber's knee, chair, etc.

3.04 Locate the loudspeaker set to provide the following:

- Accessibility of controls
- Adequate separation between loudspeaker and telephone (on 5B key equipment minimum distance is 3 feet).

3.05 Install the components of the equipment to provide the best service and meet the customer's requirements. Wall surface, floor covering, and furniture arrangement will affect the quality of reception from the loudspeaker.

4.00 CONNECTIONS

4.01 The 106-type loudspeaker sets will operate on either a 24- or 48-volt dc supply or may be operated from a 115-volt 60-cycle source using the J87202A, List 1 rectifier. The 24- and 48-volt dc power may be obtained from a PBX or station power supply if available. Refer to Fig. 2 for connections to power supply and 6017-type key.

4.02 The 107A-type loudspeaker was designed to be operated from a commercial 115-volt 60-cycle source using the 2012B transformer. However, other power supplies may be used, such as the 18-volt ac terminals of a 101G power plant. Refer to Fig. 3 for connections to power supply and 6017-type key.

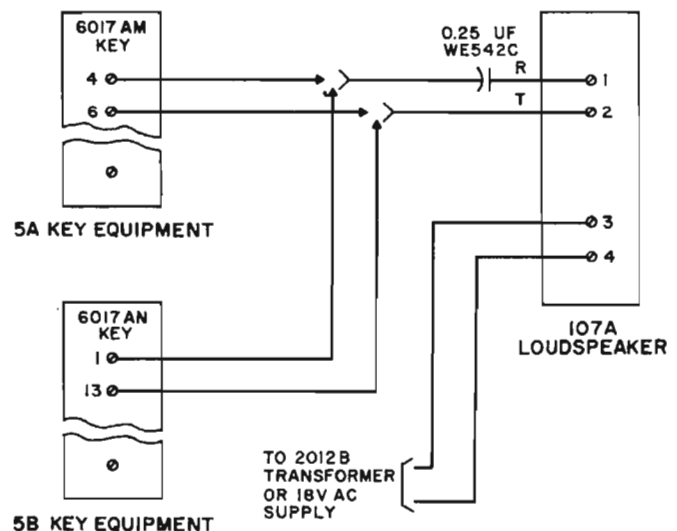


Fig. 3 - Connections for 107A Loudspeaker Set

4.03 The 100-type loudspeaker set requires a 115-volt 60-cycle ac or 115-volt dc power receptacle located near the loudspeaker. Connections from 6017-type key to the loudspeaker are the same as those shown in Fig. 2 for 106-type loudspeaker except for:

- Disconnecting KS-14603, List 1A resistor at terminal 6 in 6017AM key (5A key equipment).
- Disconnecting KS-14603, List 1A resistor at terminal 5 in 6017AN key (5B key equipment).

5.00 ADJUSTMENT OF LOUDSPEAKER

5.01 Adjustment of 5A key equipment using 106A-, 106B-, 107A-, or 100-type loudspeaker sets with 6017AM control key is as follows.

106A Loudspeaker

1. With 6017AM key in normal telephone position, place call to test center to terminate line.
2. Operate 6017AM key to loudspeaker position.
3. Remove cover on 106A and turn chassis gain control completely counterclockwise to obtain minimum gain.
4. Turn volume control on front of unit completely clockwise to obtain maximum gain.
5. Turn chassis gain control on bottom of unit clockwise up to a point just before crosstalk or noise is heard.
6. Turn volume control on front of unit counterclockwise to minimum gain position.
7. Operate control key to telephone position and request a talking test.
8. Operate control key to loudspeaker position.
 - Loudness of signal can now be adjusted by the volume control on front of unit as desired.

106B Loudspeaker

1. Repeat Steps 1, 2, 3, and 4 in 5.01 under 106A loudspeaker.

2. Turn output level control located on side of unit completely clockwise.
3. Turn chassis gain control on bottom of unit clockwise up to a point just before crosstalk or noise is heard.
4. Turn volume control on front of unit counterclockwise to minimum gain position.
5. Operate 6017AM key to telephone position and request a talking test.
6. Operate 6017AM key to loudspeaker position.
7. With signal applied to line, turn volume control on front of unit clockwise until no appreciable increase in volume is noticed.
8. Adjust output level control on side of unit counterclockwise to give loudness desired.
 - Volume control on front of unit may be used to raise a very weak input signal if needed.

107A- or 100-Type Loudspeaker

5.02 When either 107A- or 100-type loudspeaker is used with 6017AM control key, the only means of controlling the volume is the volume control on front of the unit.

5.03 Adjustment of 5B key equipment using 106A-, 106B-, 107A-, or 100-type loudspeaker sets with 6017AN control key is as follows.

106A Loudspeaker

1. With 6017AN key in normal telephone position, place call to test center to terminate line.
2. Operate 6017AN key to the one-way telephone conversation position.
3. Remove cover on 106A and turn chassis gain control completely counterclockwise to obtain minimum gain.
4. Turn volume control on front of unit completely clockwise to obtain maximum gain.

5. Turn chassis gain control on bottom of unit clockwise up to a point just before crosstalk or noise is heard.
6. Turn volume control on front of unit counterclockwise to minimum gain position.
7. Operate control key to normal telephone position and request a talking test.
8. Operate key to the one-way telephone conversation position.
 - Loudness of signal can now be adjusted by the volume control on front of unit as desired.
9. With volume control on front of 106A turned completely clockwise for maximum gain, operate 6017AN key to 2-way telephone conversation position, and adjust KS-14786, List 1, 5000-ohm potentiometer located in 6017AN key to allow no acoustic coupling to the telephone set transmitter and loudspeaker.

106B Loudspeaker

1. Repeat Steps 1, 2, 3, and 4 in 5.03 under 106A loudspeaker.
2. Turn output level control located on side of unit completely clockwise to maximum gain.
3. Turn chassis gain control on bottom of unit clockwise up to a point just before crosstalk or noise is heard.
4. Turn volume control on front of unit counterclockwise to minimum gain position.
5. Operate 6017AN key to normal telephone position and request a talking test.
6. Operate 6017AN key to one-way telephone conversation position.

7. With signal applied to line, turn volume control on front of unit clockwise until no appreciable increase in volume is noticed.
8. Adjust output level control on side of unit counterclockwise to give loudness desired.
 - Volume control on front of unit may be used to raise a very weak input signal if needed.
9. With the volume control on front of 106B turned completely clockwise for maximum input, operate 6017AN key to 2-way telephone conversation position, and adjust KS-14786, List 1, 5000-ohm potentiometer located in 6017AN key to allow no acoustic coupling to the telephone set transmitter and loudspeaker.

107A- and 100-Type Loudspeakers

1. With 6017AN key in normal telephone position, place call to test center and request a talking test.
2. Operate 6017AN key to one-way telephone position and check to see if volume is satisfactory. The only adjustment is in the volume control on front of unit.
3. Operate 6017AN key to 2-way telephone conversation.
4. Adjust KS-14786, List 1, 5000-ohm potentiometer located in 6017AN key to allow no acoustic coupling to telephone set transmitter and loudspeaker. The volume control on front of unit should be turned completely clockwise for maximum gain.

6.00 TEST

After all adjustments have been made:

- Check all positions of control key for proper operation.

- Check loudspeaker for tendency to howl in any key position.
- Check proper operation of telephone set.

7.00 MAINTENANCE OF LOUDSPEAKERS

7.01 If customer complains of low volume, howling, or poor quality, recheck adjustments of control key and loudspeaker. If adjustments fail to clear trouble, refer to maintenance section for type of loudspeaker used (see below).

106A and 106B Loudspeakers

7.02 See section entitled Loudspeaker Sets, 106A and 106B, Identification, Installation, Connections, and Maintenance.

107-Type Loudspeakers

7.03 See section entitled 107A-Type Loudspeaker Set, Identification, Installation, and Maintenance.

100-Type Loudspeaker

7.04 See section entitled Loudspeaker Sets, 100 Type.