

SPEAKERPHONE SYSTEM — 3 TYPE

OPERATION

1. GENERAL

- 1.01** This section covers operating instructions and information on speakerphone circuitry.
- 1.02** This section is reissued to add information on the 670- and 671-type transmitters.
- 1.03** When using the speakerphone, check procedures concerning:
- Location of transmitter and loudspeaker.
 - Loudspeaker volume.
 - Proper interval between received and transmitted speech.
 - Talking distance of approximately 3 feet from transmitter.



Place transmitter and loudspeaker 2 feet or more apart and not facing each other. There should be no obstructions in front of the instruments.

- 1.04** The telephone set associated with the speakerphone is used in the same manner as a regular telephone set.

2. MAKING AND RECEIVING CALLS ON SPEAKERPHONE

2.01 The 670A (master) transmitter (Fig. 1) may initiate and receive calls with or without the 671A auxiliary transmitters in the circuit. To operate with master transmitter and auxiliary transmitters, turn the ON button so the white line is parallel to the front of the transmitter. To operate the master independently, turn the ON button so the white line is perpendicular to the front of the transmitter.

2.02 To initiate a call, proceed as follows:

- (1) Press ON button momentarily (Fig. 1). Pilot lamp lights and dial tone or operator is heard in loudspeaker.
- (2) Dial or give desired number.
- (3) Adjust volume of loudspeaker.



Fig. 1 — 670-Type Transmitter

Terminating a Call

- 2.03** On completion of a call, momentarily press the OFF button (Fig. 1). This extinguishes the pilot lamp.
- 2.04** To answer a call using speakerphone:
- (1) Press ON button momentarily. Pilot lamp lights.
 - (2) Adjust loudspeaker volume.

SECTION 512-620-101

Transferring from Speakerphone to Handset

2.05 If, during the course of a hands-free conversation, it is desired to change to normal handset use, simply lift the handset. Pilot lamp extinguishes. On completion of call, replace handset.

Transferring from Handset to Speakerphone

2.06 If, during the course of a handset conversation, it is desired to transfer to speakerphone operation, press and hold ON button until the handset has been replaced. Pilot lamp then lights.

Muting Switch

2.07 If, when using the speakerphone, it is desired to prevent transmission over the line, depress and hold ON button for desired time. This operation does not release the line, but shorts out transmitter for local private conversation. The distant party still will be heard over the speakerphone. Release ON button to resume conversation.

2.08 The muting operation for the 670A transmitter also mutes the 671A transmitters if the auxiliary transmitters are connected to the master circuit (Fig. 1). (White line of the ON button is parallel to the front of the transmitter.)

3. 3-TYPE SPEAKERPHONE CIRCUITRY

3.01 The 3-type speakerphone incorporates a voice-switching circuit which permits a substantial increase in receiving volume, eliminates singing, and essentially eliminates far-end talker echo.

3.02 When there is no transmission of speech, gain is automatically removed from the transmitter circuit and added to the loudspeaker circuit. This avoids a singing condition while receiving.

3.03 When speech is transmitted, the gain of the transmitter circuit increases to normal. Simultaneously, the gain of the loudspeaker circuit lowers to avoid singing as a result of the increased transmitter gain. The amount of the gain change depends upon the setting of the receive volume control (Fig. 1). The gain change is smaller at the lower (counterclockwise) settings and greater at the higher (clockwise) settings.

3.04 A circuit, referred to as a switch guard, utilizes the voltage across the loudspeaker to reduce the possibility that surrounding room noise will cause false operation of the switching circuit while receiving speech.

3.05 A predetermined voice level is necessary to switch from the receiving to the transmitting condition. In the presence of steady room noise, a special circuit automatically raises the required threshold level to prevent operation of the switching control circuit by the noise. Talkers will still switch satisfactorily because they increase their levels under noisy conditions.