

Figure 3 - Directional Pattern About Horizontal Axis

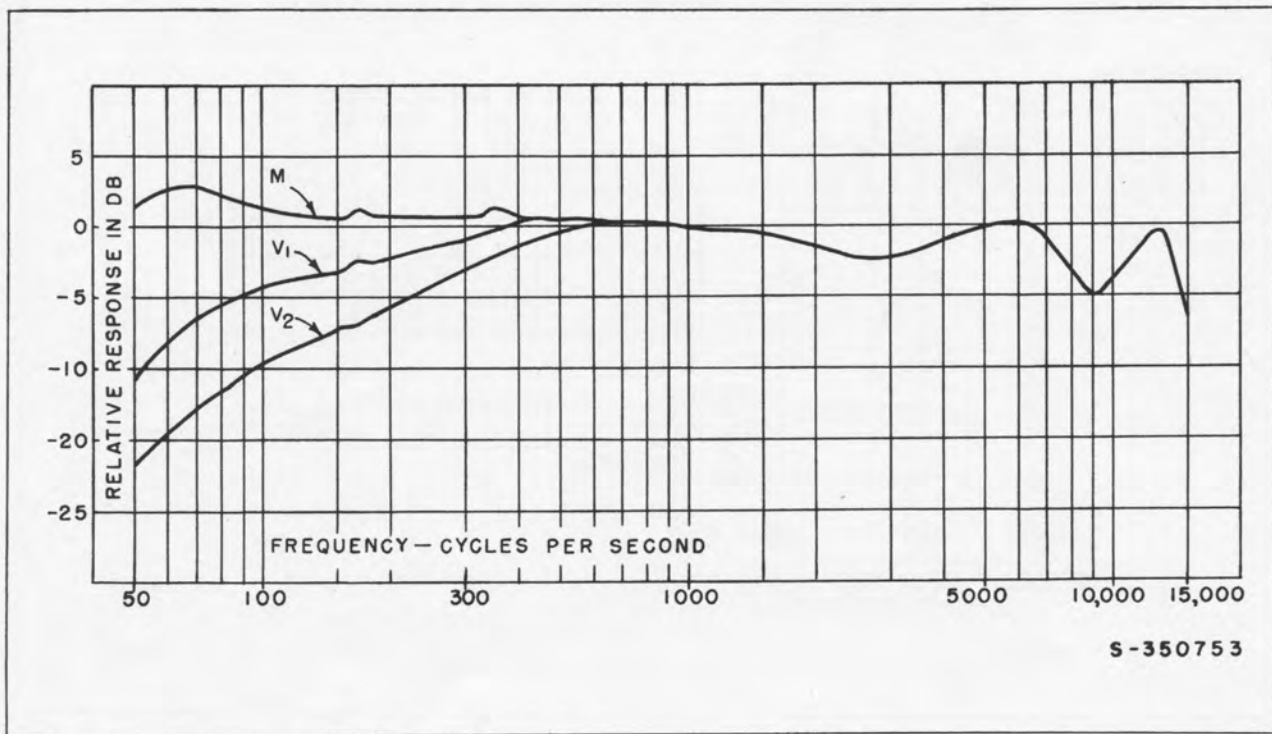


Figure 4 - Frequency Response

may move as close to the microphone as 12 inches when the jumper is in the V1 position, or seven inches when it is in the V2 position, without causing objectionable low-frequency boost.

The MI-4027-H and -J microphones have all three jumper positions, M, V1 and V2. The MI-4027-K microphone has only two positions M and V. See figure 7. The response-frequency characteristic for the V position on the MI-4027-K is equivalent to the V1 position on the MI-4027-H and 4027-J.

The frequency response to plane sound waves for the M, V1 and V2 positions is shown in figure 4. Approximately plane sound waves are obtained at the microphone when the source is more than three feet away.

NOTE: It is not intended that the voice-music connections be changed between numbers on a program. The microphone should be connected permanently for either the M, V1 or V2 response.

Mounting

Mount the microphone on any stand having a 1/2-inch pipe thread (see Table of Accessories).

Impedance Changes

The microphone is connected for a 250-ohm output impedance. To change the impedance to 30 or 150 ohms, proceed as follows:

a. Remove the four round-head screws and the plate from the bottom of the microphone case.

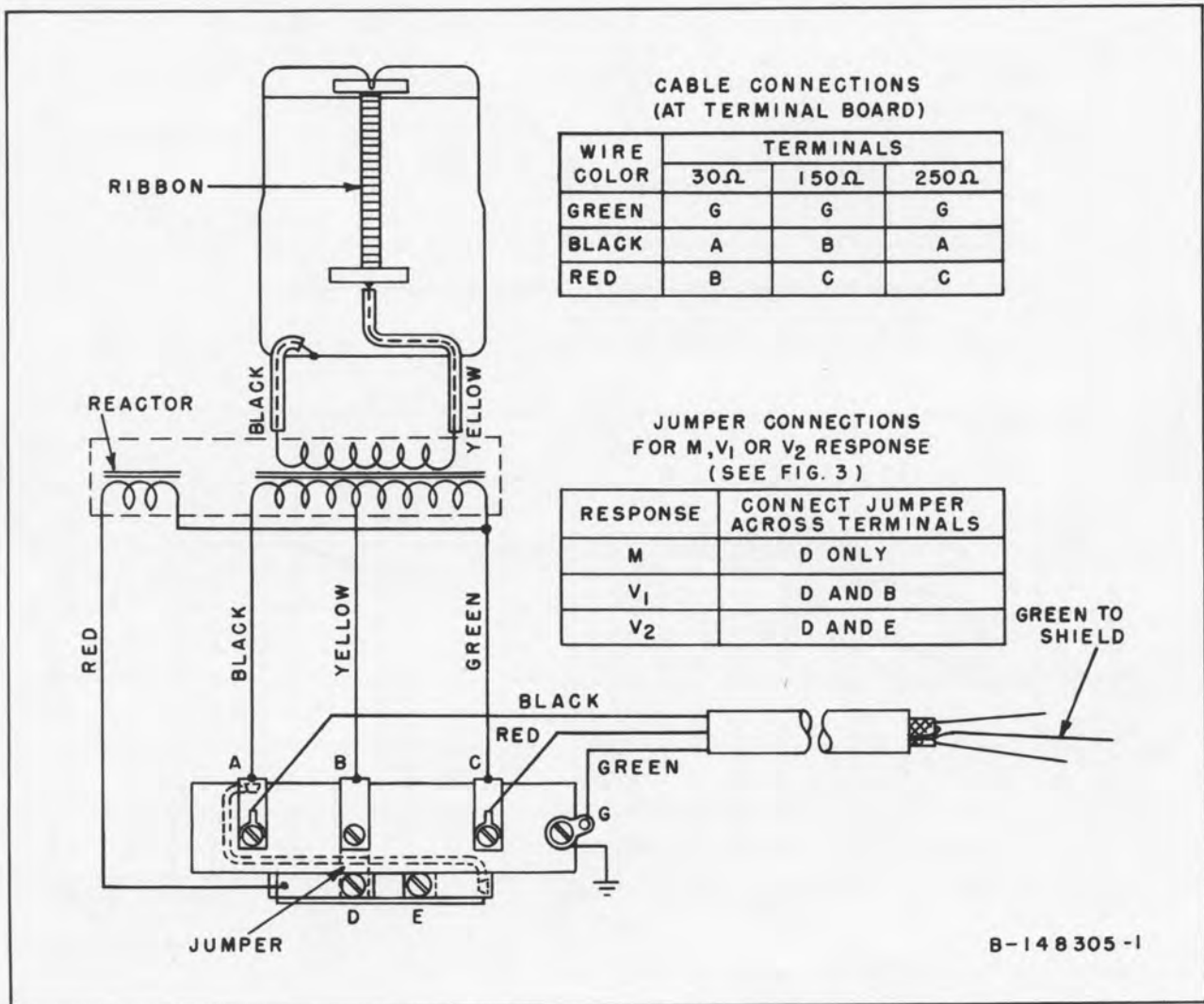


Figure 5 - Schematic Diagram for MI-4027-H Microphone

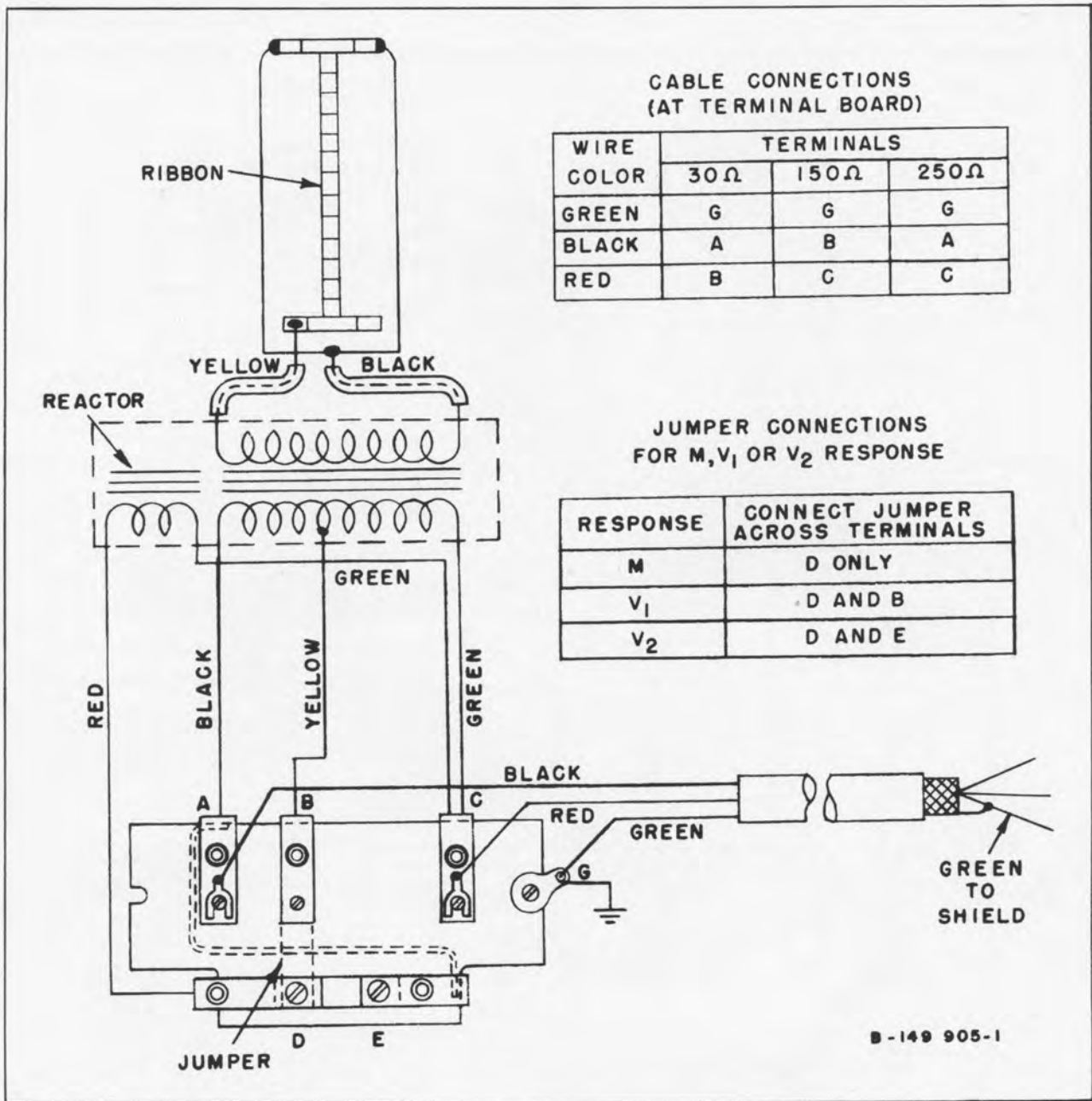


Figure 6 - Schematic Diagram for MI-4027-J Microphone

b. Connect the cable leads to the terminals for the desired impedance as shown in figures 5, 6 and 7, or the diagram attached to the cover of the transformer housing.

Voice-Music Connections

The position of the jumper for the M, V₁ or V₂ response can be observed through the hole in the bottom cover of the microphone. To change this connection, remove the bottom cover (as directed under *Impedance Changes*) and connect the jumper for the desired response as shown in figures 5, 6 and 7.

Phasing

The Type 44-BX (MI-4027-H, J and K) is phased so that when the sound pressure on the front of the microphone is in the positive half of the cycle the red cable lead is electrically positive.

When several microphones are to feed to the same system, connect them so that their outputs are in phase. To check the phasing of two microphones, connect one microphone to the amplifier, speak into the microphone, and adjust the volume control until the output is

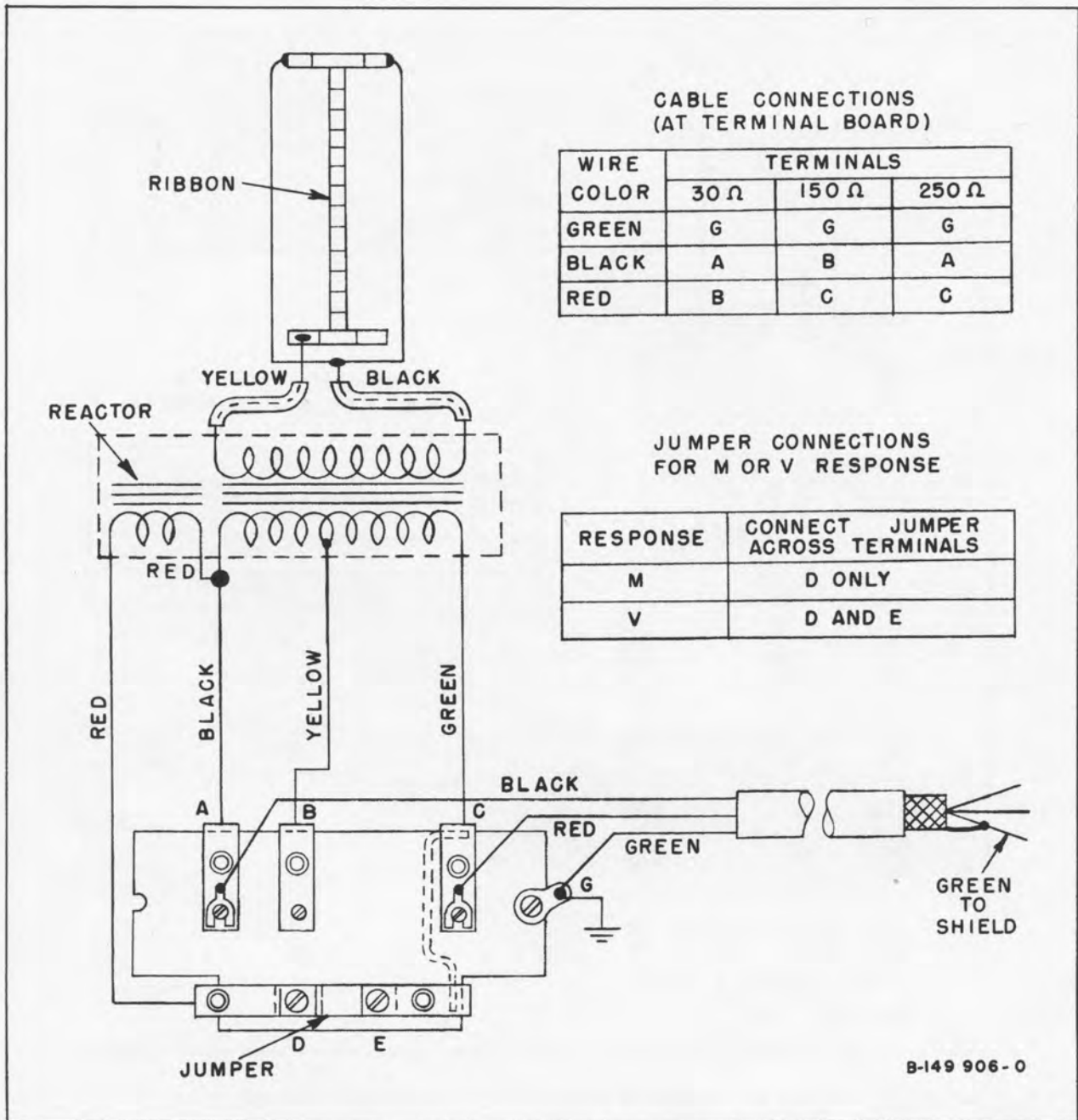


Figure 7 - Schematic Diagram for MI-4027-K Microphone

at the desired level. Then connect the other microphone to the amplifier, hold both microphones together and speak into them. Do not change the volume-control setting. If the volume has decreased, reverse the connections of one of the microphone cables at the amplifier.

CAUTION: Rotating a velocity microphone 180 degrees reverses the phase.

OPERATION

Program quality depends to a great extent on placement of the microphone. Since the microphone position for which the best quality is obtained varies with such factors as the number of performers, types of musical instruments, and construction of the studio, it should be found by experimental placement, and by monitoring the program with a high-fidelity loudspeaker such as the RCA Type LC-1A.

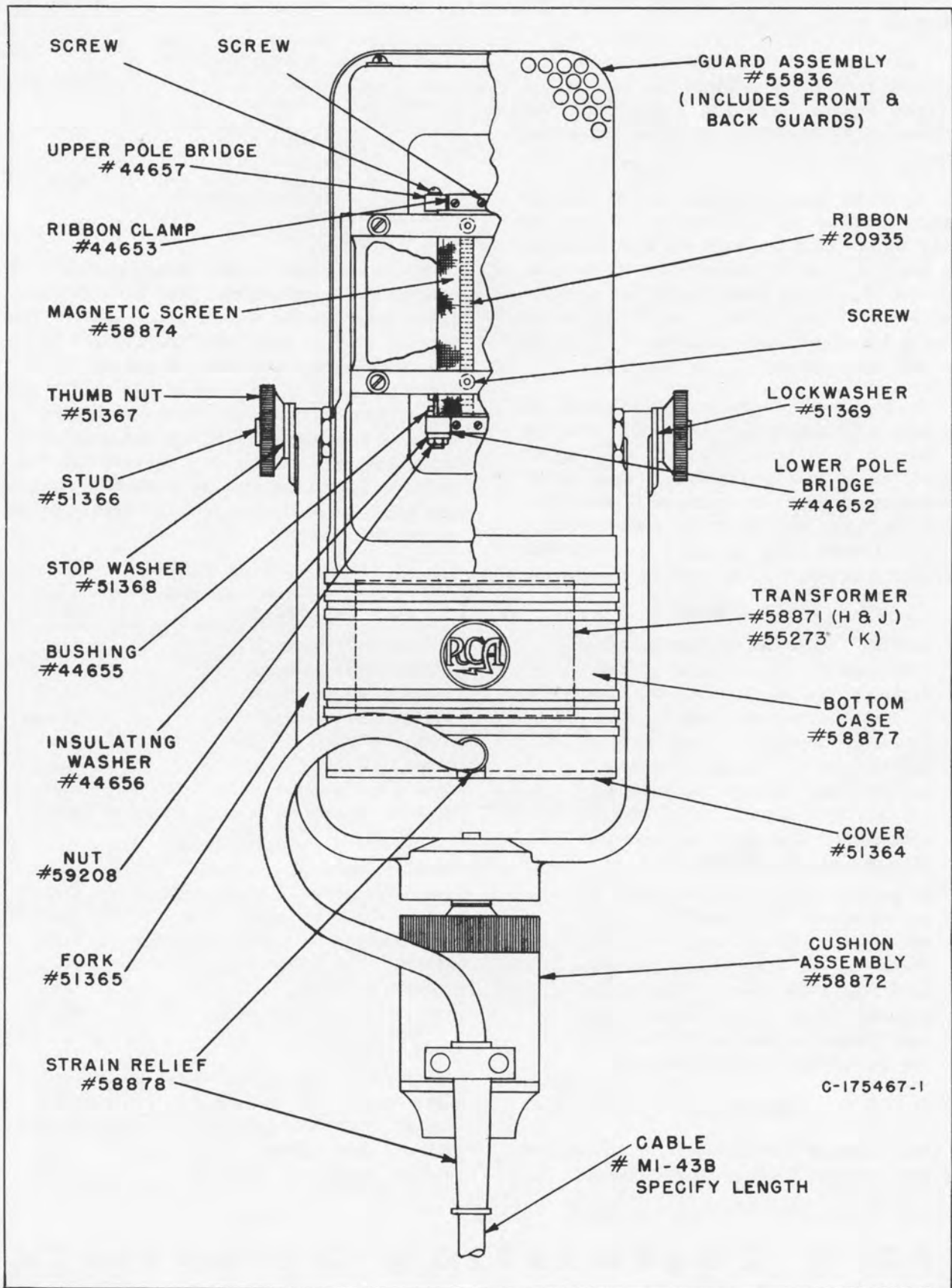


Figure 8 - Parts Location Diagram