11A ANNOUNCEMENT SYSTEM

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1. GENERAL

1.01 This section discusses the features of the 11A Announcement System, a telephone company sponsored special purpose arrangement. It is designed to handle traffic usually associated with changed numbers, particularly PBX numbers and heavy vacant code traffic after occurrences, such as cutovers from manual to dial switching systems, conversions to 7-digit dialing, and changes in office designations. Recorded announcements, which can be a maximum of 2 minutes in duration, will inform the calling party of the correct exchange or line number.

1.02 A maximum of 20 calls can be handled simultaneously by the 11A Announcement System which can be used in step-by-step, panel, No. 1 crossbar, No. 5 crossbar, and crossbar tandem offices. The system, being completely self-contained, can be readily installed and removed when necessary. When fully equipped, the cabinet weighs approximately 120 pounds. However, this can be reduced 40 pounds by removing and transporting separately the KS-16765 L2 Announcement Set.

1.03 The use of the 11A Announcement System affords considerable savings because it eliminates the temporary heavy load on interept operator facilities. The system normally remains in service until the calling rate decreases to a point where it can be handled by regular intercept facilities without danger of overloading.

1.04 The system consists essentially of from 2 to 20 announcement trunk circuits, a control and alarm circuit, a busy tone circuit, a voice alarm circuit, a KS-16754 L4 Amplifier Circuit, and a KS-16765 L2 Announcement Set arranged as shown in Fig. 1. Options are provided so that the system can be used in the following offices: step-by-step, panel, No. 1 crossbar, No. 5 crossbar, and crossbar tandem. The system also contains arrangements which enable it to be used for either line intercept or vacant code and selector level intercept.

1.05 The calling party on dialing a number for which intercept service is provided by this system is routed to a recorded announcement which informs him of the correct central office code or line number. A maximum of 20 intercept calls can be handled simultaneously by the system. The system operates on the barge-in basis; ie, the first calling party starts the announcement and anyone calling while the first call is in progress will barge in on the recorded announcement without waiting for it to start over. The announcement is delivered continuously until all calling parties disconnect. A peg count register is provided which records the number of calls intercepted.

1.06 The equipment is covered by specification J99276 (Section 801-603-159) and the following schematic drawings:

SD-95281-01	KS-16754, L4 Amplifier Circuit
SD-95283-01	KS-16765, L2 Announcement Set
SD-95959-01	Voice Alarm Circuit
SD-95963-01	Busy Tone Circuit
SD-95966-01	Intercept Trunk Circuit
SD-95967-01	Control and Alarm Circuit

1.07 Recording of the message can be performed while the announcement set is connected to the rest of the system, or the set can be removed from the rest of the system and the recording can be made in some quiet location. The latter is the preferred method since it reduces the probability of room noise getting into the "background" of the recording. The system has been designed to permit ready removal and replacement of the set. Reproduction of the recorded announcement is

controlled by the control and alarm circuit. The control and alarm circuit provides a contact closure, which starts the announcement machine, upon receipt of the start pulse from the intercept trunk circuit. The KS-16765, L2 Announcement Set reproduces and amplifies the recorded message. Further amplification is provided by the KS-16754, L4 Amplifier Circuit. The announcement machine continues to provide recorded announcement until the contact closure supplied by the control and alarm circuit is removed.

2. EQUIPMENT DESCRIPTION

2.01 The 11A Announcement System is housed in a portable cabinet (ED-95135-01) measuring 10 inches by 25-3/4 inches by 49-9/16 inches high and made of reinforced aluminum sheet. The cabinet when fully equipped weighs approximately 120 pounds. Handles are provided on this cabinet for ease of moving and handling. The cabinet is provided with removable front and rear covers to facilitate installation and maintenance. When in use, the front cover may be left off or the cover door may be opened so that the alarm lamps and message register can be seen. The equipment arrangements are shown in Fig. 1 and Fig. 2. A block diagram is shown in Fig. 3.

2.02 A maximum of approximately five amperes from the central office 48-volts dc supply are required. This power is distributed through a 22A fuse block located within the cabinet. Commercial 115V 60-cycle ac is also required for the motor in the announcement set.

2.03 The intercept trunk circuit (SD-95966-01) provides options which enable the 11A Announcement System to be used with different types of switching systems. Arrangements can also be made on this circuit so that line intercept or vacant code and selector level intercept be handled by the system. From 1 to a maximum of 20 intercept trunk circuits are provided in the system, and therefore a maximum of 20 calls can be handled simultaneously. The circuits can be jacked in place in units of two. A unit is shown in Fig. 4.

2.04 The calling party, on dialing a number for which intercept facilities are provided by this system seizes a trunk circuit, if any are available. If all the trunk circuits are in use at the time of this call, the calling party receives a busy tone. On line intercept, audible ringing is returned to the calling party when a trunk circuit is seized. After a certain length of time the ringing is tripped by the intercept trunk circuit, and the calling party starts to receive the recorded announcement. No ringing is provided on vacant code and selector level intercept. If the announcement machine is already operating when a calling party seizes an idle trunk, the trunk circuit will allow the calling party to barge in on the announcement without waiting for the beginning of the announcement. If, however, there is no other call in progress when a calling party seizes a trunk circuit, then the trunk circuit will provide and maintain a continuous start signal to the control and alarm circuit. The control and alarm circuit will then start the announcement machine, and the calling party will receive the recorded announcement from the beginning. The announcement machine will continue to reproduce the recorded announcement as long as at least one calling party is connected to an intercept trunk circuit. At the end of each call, the trunk circuit will operate a count register which keeps a count of the calls intercepted. The intercept trunk circuit does not establish a charge condition. Facilities are also provided which prevent calling parties connected to the trunk circuits from conversing with each other.

2.05 The control and alarm circuit (SD-95967-01) provides means for controlling the recorded announcement and operating alarms in case of voice or fuse failure. The circuit receives a start signal from the intercept trunk circuit and provides means for starting the announcement machine. It receives the recorded announcement from the announcement machine and transmits it to the calling party through the intercept trunk circuit. In case of voice failure, the circuit provides means for supplying busy tone to calling parties and giving visual and audible alarms. If for any reason voice fails, a pilot lamp will light and this circuit, in conjunction with the voice and alarm circuit, will cause an office alarm to operate. The circuit also provides means to transmit busy tone from the busy tone circuit to the calling party in case of voice failure. All of the trunks can be made to appear busy by operating a switch in the control and alarm circuit which causes busy tone from the busy tone circuit to be connected to all the trunks. This circuit also

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provides means for operating alarms should there be a fuse failure.

2.06 The voice alarm circuit (SD-95959-01) provides means for determining when voice failure occurs; whereupon, this circuit will cause a relay in the control and alarm circuit to operate which actuates the central office alarm system.

2.07 The busy tone circuit (SD-95963-01) is a transistorized circuit capable of supplying 120 IPM busy tone to the calling party when seized by the control and alarm circuit.

2.08 The KS-16754, L4 Amplifier Circuit (SD-95281-01) is a moderately powered transistor amplifier. It is used in the 11A Announcement System to amplify the voice announcement coming from the announcement set.

2.09 The KS-16765, L2 Announcement Set (SD-95283-01) provides facilities for magnetic recording and reproducing of audio frequency signals. It has a variable cycle feature which automatically adjusts the length of the cycle to correspond with the length of the announcement. The maximum recording time is 2 minutes. The set also provides a key, a twin jack, and lamp to facilitate local control of recording and reproducing of announcements by means of a 52-type head telephone set.

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3. TRANSMISSION DESIGN

3.01 The announcement system should be adjusted to provide a voice level of −12 vu on each line at the serving central office line appearance when the announcement system is installed at the office. When the equipment is installed on the subscribers' premises, and the 1000-cycle line loss is known, the output levels should be adjusted to meet the requirement of −12 vu at the serving central office. If the line loss is not known, transmitted voice level to the line at the customer's premises should be set at −8 vu.

3.02 Idle circuit terminations are not provided. The internal impedance of the amplifier is so low, however, that the output varies less than 0.5 db from no load to all trunks busy (20 trunks).

3.03 Talk-through suppression is on the order of 60 db. There should therefore be no trouble due to noise or conversation between two simultaneously connected circuits.

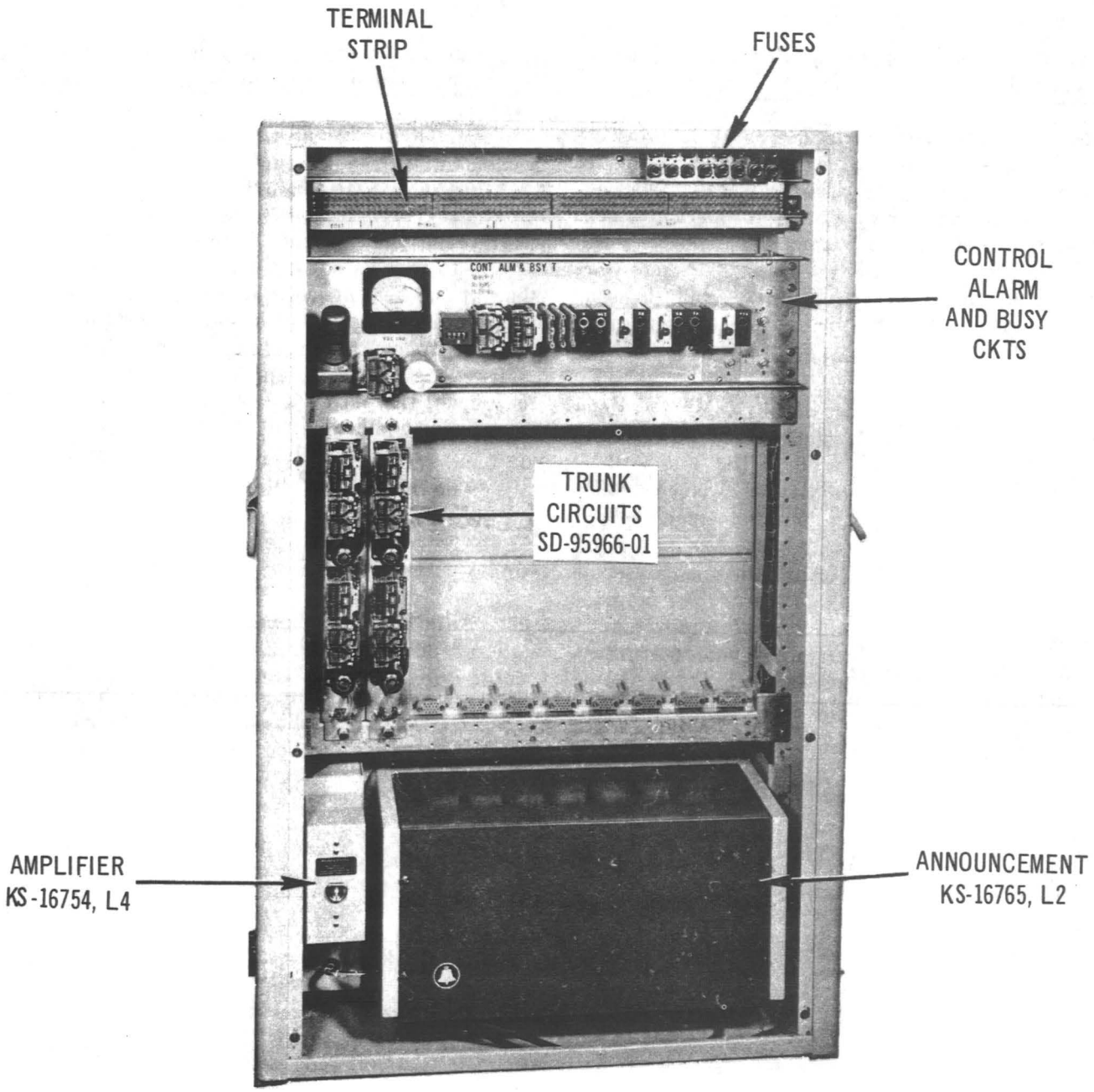

Fig. 1—11A Announcement System (Front View with Cover Removed)

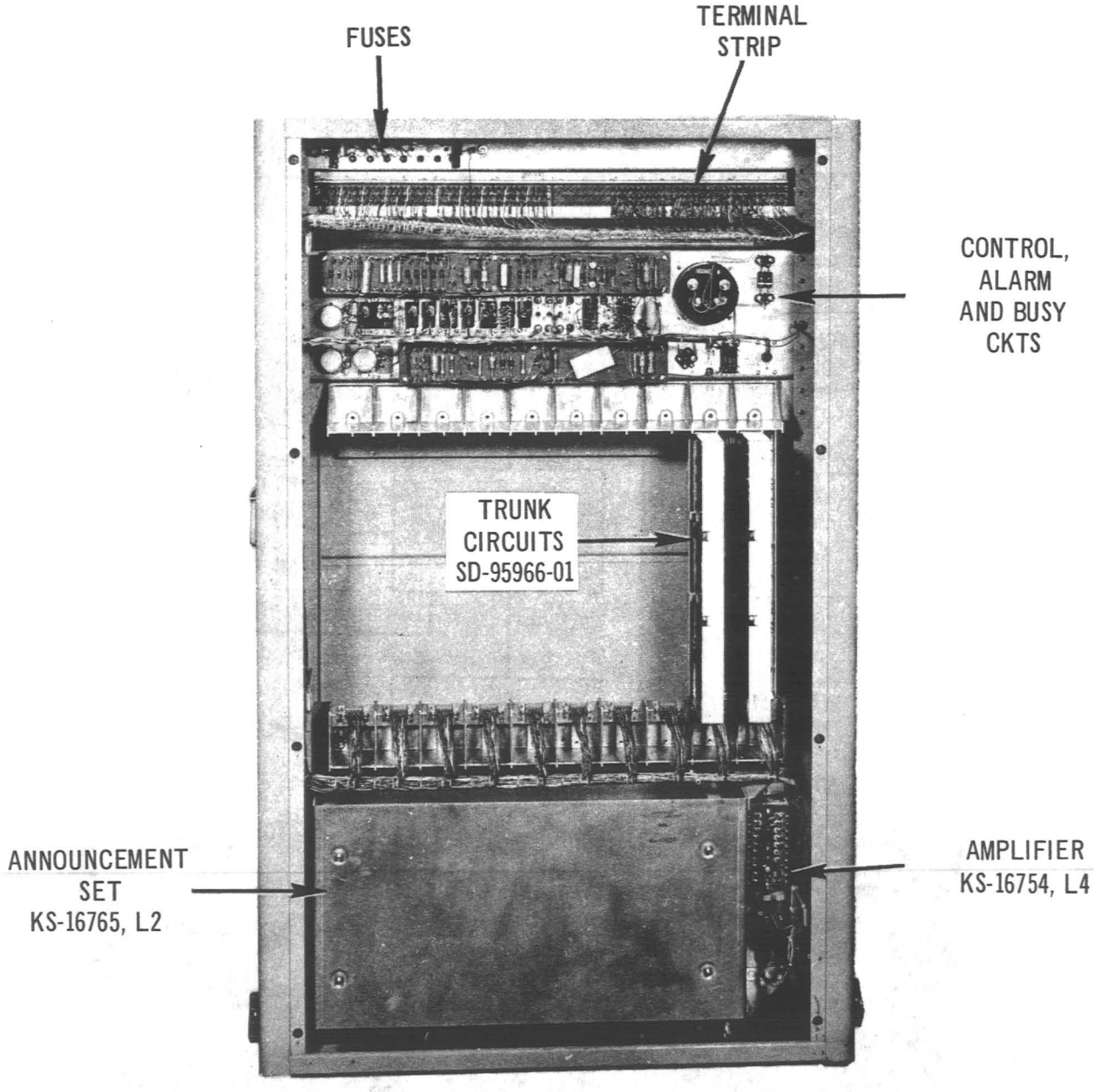

Fig. 2—11A Announcement System (Rear View With Cover Removed)

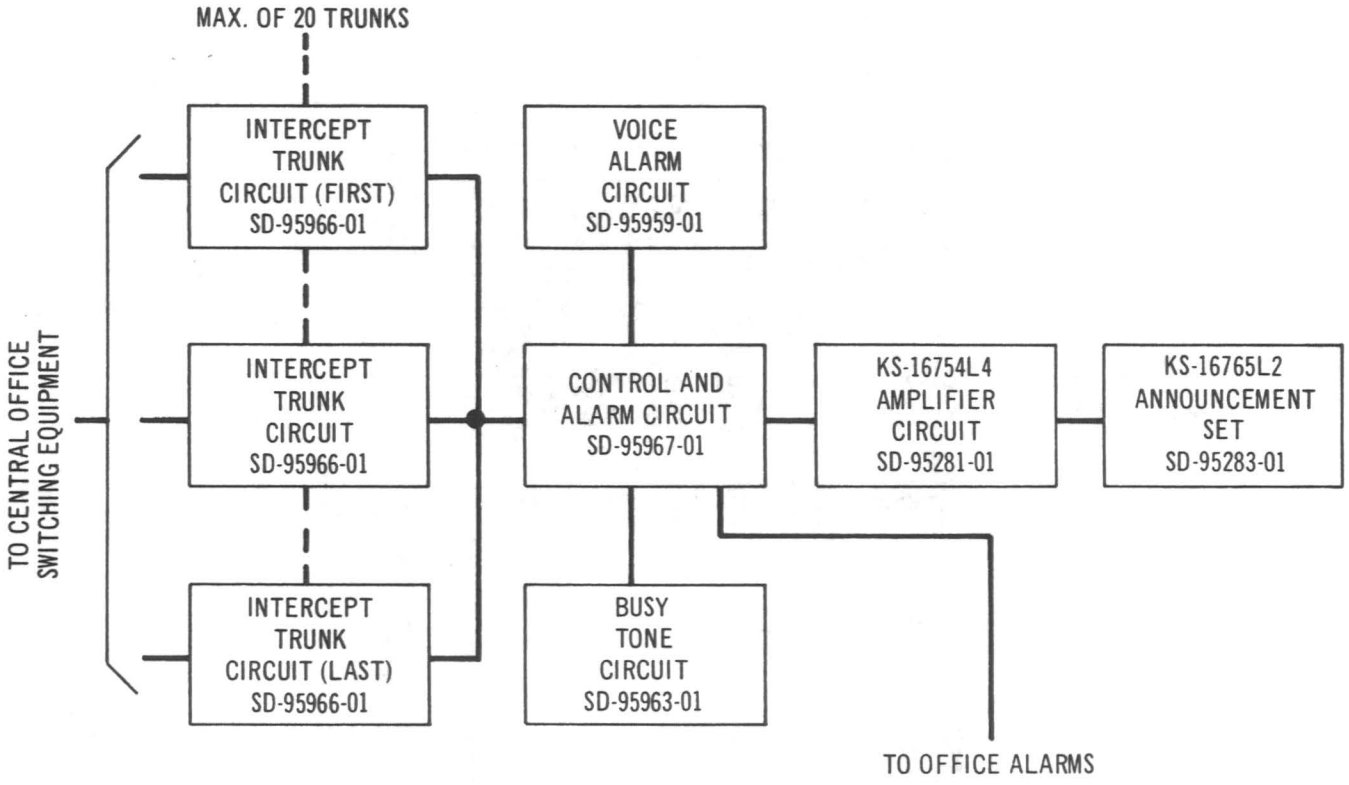

Fig. 3—11A Announcement System Block Diagram

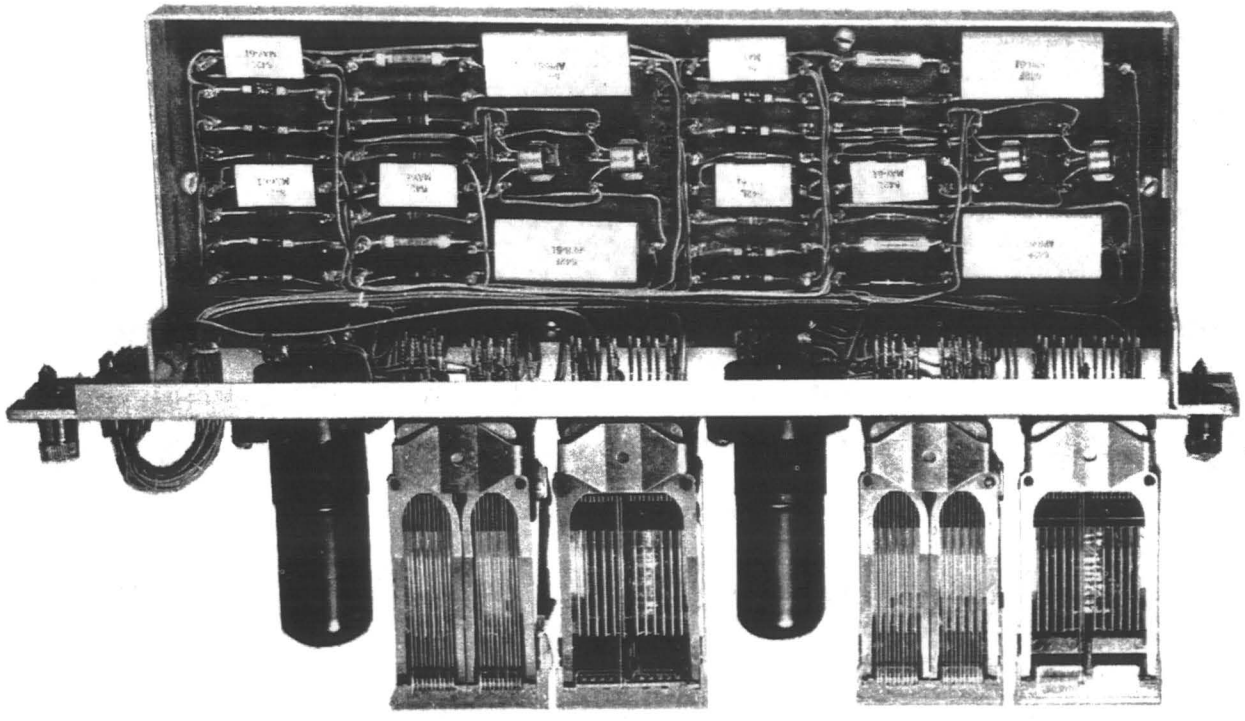

Fig. 4—Announcement System Trunk Circuit SD-95966-01 (Two Circuits per Unit)