

NO. 9A ANNOUNCEMENT SYSTEM

EQUIPMENT DESIGN REQUIREMENTS

COMMON SYSTEMS

1. GENERAL

SCOPE

1.01 This specification, together with the supplementary information listed herein, covers the equipment design requirements for the framework, equipment, and circuits to be used in the manufacture of a heavy duty transcribed announcement system. The equipment includes some units of Western Electric Company manufacture and others made by outside suppliers. The system provides sponsored announcement service to calling parties by means of reproduced machine recordings dictated and controlled from a remote location.

1.02 This specification is reissued to incorporate previous appendix changes.

1.03 These requirements cover a customer operated announcement system capable of handling a large amount of traffic without adversely affecting the regular telephone plant. The system will be used primarily for sponsored telephone service such as news, weather, and similar announcements accompanied by an advertisement. However, the system may also be arranged for announcement service controlled by the telephone company. Furthermore, the recorder-reproducer equipment for this system may ultimately replace similar equipment in other announcement systems.

CAPACITY

1.04 The No. 9A announcement system is a network system capable of serving a large

number of customers determined by the number of distributing centers used. The distributing centers, located in various central offices and connected by interoffice trunks, are of two types. One is the main center which serves as the originating center and contains the recording and reproducing equipment and a network of announcement trunks to distribute announcements directly to calling customers and also to succeeding subcenters. The other is the subcenter which receives the announcements from the main center or a preceding subcenter, over one or two cable pairs and/or over single or dual carrier facilities. It then distributes them over its own network of trunks directly to the calling customers and also to succeeding subcenters as required. The maximum capacity of either type of distributing center is 1100 regular announcement trunks accessible to customers calling the proper central office. However, each outgoing cable pair used for interconnection with the succeeding subcenter is equivalent to seven regular announcement trunks and each carrier facility is equivalent to one regular announcement trunk and the trunk capacity is reduced accordingly. It is estimated that the majority of installations will not exceed 200-trunk capacity.

1.05 The extent to which distributing centers may be interconnected in tandem is limited by standard transmission requirements as follows.

(a) Where centers are interconnected over single cable pair or carrier facility, subcenters in tandem are limited to a maximum of four, preferably three, following a main center.

(b) Where centers are interconnected over dual cable pairs or carrier facilities, sub-centers in tandem are limited to a maximum of two, following a main center.

1.06 The area which may be served by the system is limited only by the availability of standard central office, outside plant, and station apparatus facilities. Commercial 115-volt, 60-cycle, ac power supply is also required on the sponsoring customer premises to operate remote-control equipment.

DESCRIPTION

1.07 The No. 9 announcement system is designed to give customers a predetermined number of complete announcements through regular telephone facilities. The sponsor operates the recording and reproducing mechanism by means of remote-control equipment, located on the sponsor premises, which enables the sponsor to dictate, monitor, and change the announcement at will. The announcement may vary in length from approximately 12 seconds to a preset maximum not exceeding 4 minutes. The variable cycle recorder-reproducer equipment will automatically conform with variations within the preset maximum.

1.08 The sponsor control equipment consists of a wall-mounted amplifier cabinet and a desk-mounted operator control unit together with a special handset for recording and monitoring. A headset for monitoring only is furnished on an optional basis. All other equipment is located in the central office.

1.09 This announcement system is available in single or dual channel arrangements employing single or duplicate sets of recorder-reproducer mechanisms and associated units which constitute the announcement machine. The choice between two arrangements depends upon the sponsor's need for the various features provided. For block diagram, see Fig. 1.

1.10 The single channel system has a single announcement machine which operates over the distributing network continuously, under normal conditions, with the result that the

sponsor's oral announcement will go out live to calling customers who are connected to the system when a recording is dictated. Voice failure, due to any cause, will bring in a central office alarm and busy the system. The system will remain in this state until the trouble is cleared and the alarm retired. The sponsor becomes aware of voice failure only when dictating or monitoring the announcement.

1.11 The dual channel system has two complete announcement machines and a coupling unit arranged to automatically transfer either machine on or off the distributing network. In normal operation, either machine may be on line with the other machine standing by. With this arrangement, all recordings are made on the standby machine thus eliminating live announcement while dictating. After dictation and monitoring, the standby machine is switched on line by the sponsor and the new announcement is simultaneously sent out over the distributing network and also dubbed in on the second machine which is now the standby unit. When voice failure occurs, the system brings in a central office alarm and automatically transfers to the standby machine and announcements continue as before. While the system remains in this alarm condition, any new announcement dictated will necessarily go out live as in a single channel system. Further reliability is provided in the dual channel system by duplicate sets of distributing relays associated with the respective announcement machines. A manually operated transfer key on the distributing unit may be used to place one set of relays in operation with either machine with the remaining set of relays available for testing and maintenance. In the event of an alarm condition during which both machines are out of service, the system is made busy and the sponsor receives visual live dictate and repeat dictate signals to indicate the condition. Where conditions are such that reliability and service continuity are of extreme importance, the dual channel system can be furnished with a third announcement machine as an emergency facility. A manually operated transfer switch, located in the main center, places this emergency machine in operation and takes the two regular machines out of service for testing and maintenance purposes.

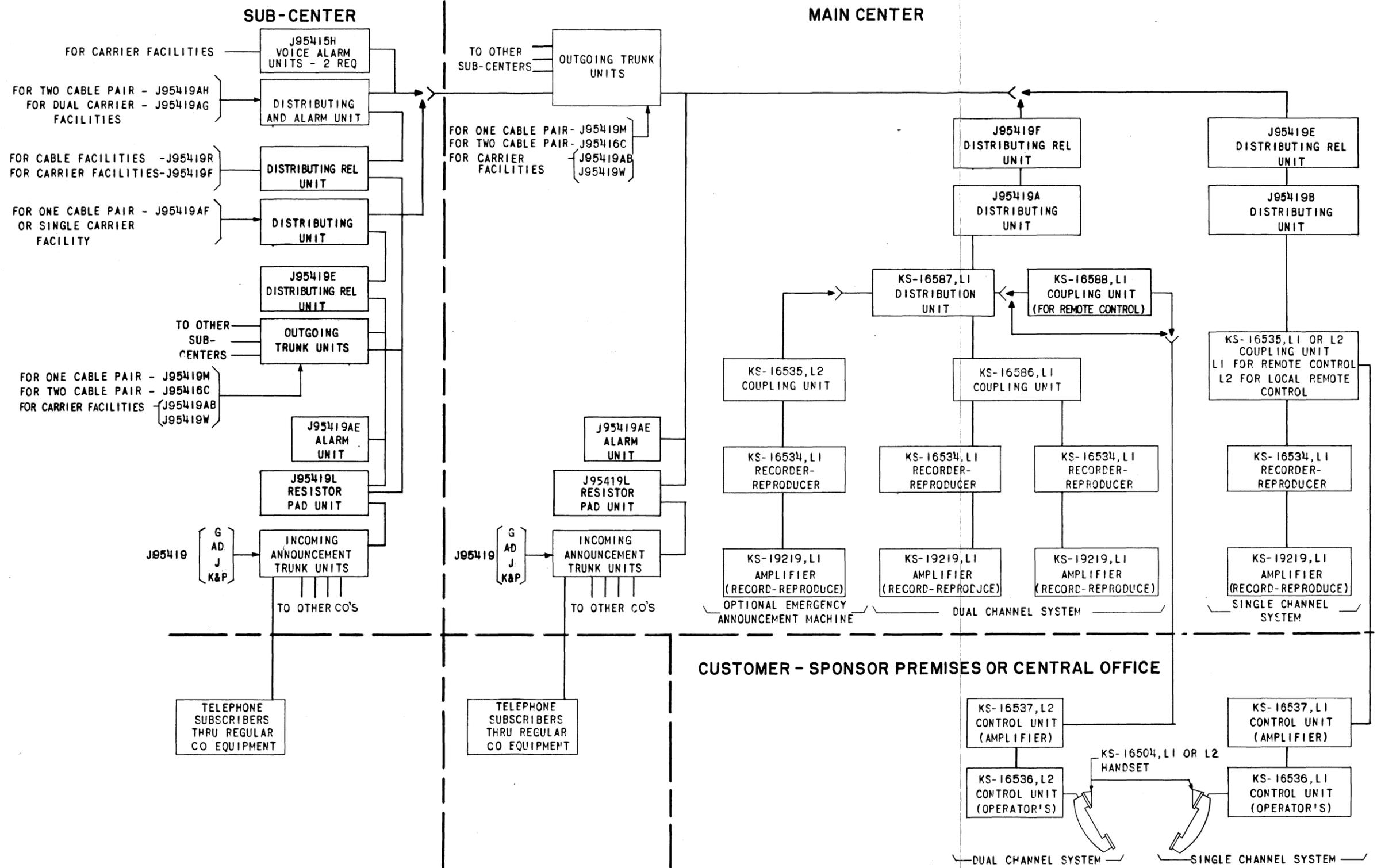


Fig. 1 - Connecting Diagram for Equipment Units in No. 9A Announcement System

- 1.12** In all systems, the main center equipment provides facilities to permit monitoring, dictation, control, and testing by maintenance personnel. A manually operated main center switch transfers the system from remote control by the sponsor to local control at the main center and vice versa.
- 1.13** A further variation in the control arrangement is provided where the telephone company sponsors the announcement service. When this occurs, the sponsor control equipment will be located on the same premises with the main center or in a nearby building. The use of this arrangement, identified as local remote control, is limited by circuit restrictions on the resistance of the interconnecting cable.
- 1.14** Connection between the remote-control equipment on the sponsor premises and the main center requires the use of two cable pairs for a single channel system, and three cable pairs for a dual channel system.
- 1.15** In the local remote-control arrangement, the connection between the main center and the sponsor control equipment requires nine conductors for the single channel system, and sixteen conductors for the dual channel system.
- 1.16** In a subcenter, the announcements received from the main center or a preceding subcenter are amplified and distributed over a network of announcement trunks and outgoing trunks similar to the main center network.
- 1.17** Interoffice connection between subcenters and to the main center can be maintained over one or two cable pairs or carrier facilities depending upon the degree of reliability required. Trunk units and distributing units are provided for either condition.
- 1.18** Announcement trunk units give the calling customers access to announcements at all distributing centers. Connection to the announcement machine in the main center or to the distributing unit of a subcenter is made via announcement distributing equipment which can accommodate simultaneously any number of calls up to the maximum trunk capacity of the particular center. Calls may be cut through immediately, regardless of whether or not an announcement is in progress, or they may be cut through to coincide with the start of an announcement. In any case, the customer will remain connected for the duration of either one or two complete announcements. These features are provided by optional external strapping at the announcement trunk unit terminal strips. Wiring and cabling for all of these options are provided on a standard basis in all installations.
- 1.19** Incoming announcement trunk units are provided for connection with various types of central offices and are arranged for cross connection to the respective traffic register circuits as required.
- 1.20** All central office equipment for this system is arranged to mount on standard 23-inch bulb-angle relay rack framework with a 10-inch base. However, the KS-16534, L1 recorder-reproducer exceeds the guardrail limitation by a considerable amount and special conditions apply to the announcement machine bay as further described under Floor Plan Arrangements.

Power Equipment

1.21 Regular 48-volt central office battery is used to operate the No. 9A announcement system circuits.

1.22 A 1000-cycle tone source is required for test and alignment of the announcement machine.

1.23 Either 130-volt plate or telegraph battery or 100-volt coin control or signal battery is required for the J95419AE alarm unit and a suitable existing battery supply may be used if available. Otherwise, it will be necessary to furnish a 130-volt supply for this announcement equipment, such as the 403B (J86592) power plant.

1.24 For subcenters with interconnection over two cable pairs, the J95419AH distributing and alarm unit requires a 22-volt, 60-cycle, ac power supply where the interrupter circuit per SD-95546-01, Fig. 6 is furnished.

1.25 The announcement machines in the main center are operated on commercial 115-volt, 60-cycle, ac supply. Where the announcement service is such that interruptions caused by power failure cannot be tolerated, the following battery-driven power plants are recommended for emergency use.

EQUIPMENT	POWER PLANT	CODE	RATING	TRANSFER ALARM EQUIPMENT
Single Channel Announcement Machine	504A	J86611C, List 1	312VA	J8611A, List 5
Dual Channel Announcement Machine*	504B	J86617A, List 1	500VA	Included

* May include a third machine for emergency announcement facility.

1.26 On the sponsor premises, the amplifier control unit is operated on commercial 115-volt, 60-cycle, ac supply. When power failure occurs, the sponsor can still monitor the announcement, but all other control functions are inoperative.

FLOOR PLAN ARRANGEMENTS

1.27 The relay rack bays required in the main center will always include one bay per announcement machine and additional bays sufficient to mount any overflow of trunk units. Maintenance requirements and the projection of the recorder-reproducer mechanism into both front and rear aisles dictate that only one announcement machine may be mounted in a bay and that it be mounted at a specific height from the floor in order to provide clearance for track-

type rolling ladders. The machine occupies the bottom 5 feet 4 inches of the bay and mounting space above this level is available for the distributing unit, trunk units, and associated equipment. Any additional units are mounted on adjacent or nearby bays which may be located either to the right or left of the machine bay. However, the area over which the announcement system equipment may be distributed is limited by circuit restrictions affecting the length of the announcement distributing loop or speech bus.

1.28 With bay line-ups on standard spacing (3-foot 0-inch or 2-foot 6-inch maintenance aisle and 3 feet 8 inches overall between maintenance aisles), the front projection of the announcement machine beyond the guardrail does not interfere with passage of a standard 12- or 14-inch wide track-type rolling ladder. The rear projection is such that interference is possible and rear guardrail extensions are provided to protect the machine. It is also recommended that the ladder handrail be located on the side away from the machine bay in both front and rear aisles.

1.29 The direction of slant of the ladder and the addition of guardrail extensions and junction bars to adjacent bays in the line-up shall be in accordance with Section AA614.009, Part 2H. The necessary details are specified on ED-92987-().

1.30 The use of a narrow standard 12-inch wide ladder in the wiring aisle will permit easier handling in the reduced aisle space.

1.31 The inconvenience of reduced aisle space may be avoided, where other space is available, by locating the machine bays in a column line or an isolated area where aisle restrictions do not apply.

1.32 The overflow trunk bays in the main center and the bays in the subcenter have no projections beyond the guardrail. Except for the distributing loop length restrictions previously mentioned, no special requirements apply to the location of these bays.

SUBDIVISIONS OF EQUIPMENT AND DETAILED INDEX

WECO J drawings should be ordered by referring to the prefix and base number and requesting the current dash (—) number.

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	CKT PER UNIT	MTG PLT PER UNIT	SEE NOTES
J95419A	AT&TCo Std	Distributing Unit — For Dual Channel Announcement Machine	J95419A-()	SD-95855-01	1	3	
J95419B	AT&TCo Std	Distributing Unit — For Single Channel Announcement Machine	J95419B-()	SD-95854-01	1	3	
J95419E	AT&TCo Std	Distributing Relay Unit — For Single Channel or Sub-center Distributing Unit	J95419E-()	SD-95854-01 SD-95857-01	8	1	
J95419F	AT&TCo Std	Distributing Relay Unit — For Dual Channel Distributing Unit	J95419F-()	SD-95855-01 SD-95976-01	4	1	
J95419G	AT&TCo Std	Incoming Trunk Unit — From Selector Multiple of Local or Distant — Step-by-Step Office	J95419G-()	SD-31518-01 SD-95861-01	2	3	
J95419J	AT&TCo Std	Incoming Trunk Unit — From Local Manual Switchboard or No. 1 Manual Tandem Switchboard	J95419J-()	SD-95863-01	1	1	
J95419K	AT&TCo Std	Incoming Trunk Unit — From Panel, Panel Tandem, or No. 1 Crossbar Office — In Same or Distant Building	J95419K-()	SD-95859-01	2	3	
J95419L	AT&TCo Std	Compensating Resistor Pad Unit — For Use With Incoming Announcement Trunks	J95419L-()	SD-95859-01 SD-95861-01 SD-95862-01 SD-95863-01	28	3	
J95419M	AT&TCo Std	Announcement Trunk Unit — Outgoing to Subcenter	J95419M-()	SD-95858-01	1	1	A

SECTION 801-603-158

J95419, ISSUE 5

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	CKT PER UNIT	MTG PLT PER UNIT	SEE NOTES
J95419P	AT&TCo Std	Interrupter Relay Unit	J95419P-()	SD-95859-01	2	1	
J95419R	AT&TCo Std	Distributing Relay Unit — For Subcenter	J95419R-()	SD-95546-01	5	1	
J95419S	AT&TCo Std	1000-Cycle Supply Attenuator Unit	J95419S-()	SD-95254-01 SD-95255-01	1	1	
J95419W	AT&TCo Std	Cut-Through Pulse Repeater — E&M Lead Signaling	J95419W-()	SD-95974-01	1	1	C,D
J95419AB	AT&TCo Std	Announcement Trunk Unit — With Cut-Through Pulsing — Outgoing to Subcenter — E&M Lead Signaling	J95419AB-()	SD-95974-01	1 or 2	1	C,D
J95419AD	AT&TCo Std	Incoming Trunk Unit — From Panel, No. 1 or No. 5 Crossbar, or Crossbar Tandem Office — For Use With Operator Class Code	J95419AD-()	SD-95862-01 SD-95546-01 SD-95865-01	1	1	
J95419AE	AT&TCo Std	Alarm Unit	J95419AE-()	SD-95865-01	1	7	
J95419AF	AT&TCo Std	Distributing Unit — For Subcenter	J95419AF-()	SD-95857-01 SD-99360-01	1	7	A,D
J95419AG	AT&TCo Std	Trunk Distributing and Alarm Unit — For Subcenter — E&M Lead Signaling — Dual Carrier Facilities	J95419AG-()	SD-95976-01 SD-96570-01 SD-99360-01	1	11	C
J95419AH	AT&TCo Std	Distributing and Alarm Unit — For Subcenter	J95419AH-()	SD-95546-01 SD-96570-01 SD-99360-01	1	17	B

Notes

- A. These units provide for interconnection between centers over one cable pair.
- B. This unit and the J95416C unit provide for interconnection between centers over two cable pairs.
- C. This unit provides for interconnection between centers over dual carrier facilities.
- D. This unit provides for interconnection between centers over single carrier facility.

Circuit Schematic Index

CIRCUIT DRAWING	J95419 EQPT CODE
SD-31518-01	G
SD-95254-01	S
SD-95255-01	S
SD-95546-01	R, AD, AH
SD-95854-01	B,E
SD-95855-01	A,F
SD-95857-01	E,AF
SD-95858-01	M
SD-95859-01	K,L,P
SD-95861-01	G,L
SD-95862-01	L,AD
SD-95863-01	J,L
SD-95865-01	AD,AE
SD-95974-01	W,AB
SD-95976-01	F,AG
SD-96570-01	AG,AH
SD-99360-01	AF,AG,AH

2. SUPPLEMENTARY INFORMATION

- 800-600-000 — List of General Equipment Requirement Sections
- 801-000-000 — Equipment Design and General Equipment Requirements and Engineering Information — Common Systems
- 951.009.01 — General Description. — No. 9A Announcement System
- 953.604.01 — KS-16534 — Recorder-Reproducer and Associated Amplifier and Control Facilities
- 800-614-159 — Rolling Ladders — Installing
- A204.567 — Tests and Inspection — Heavy Duty Transcribed Announcement Equipment — Control Circuit
- A438.928 — Apparatus Requirements and Adjusting Procedures — Heavy Duty Transcribed Announcement Equipment
- A493.261 — KS-16534 Recorder-Reproducer and Associated Audio Facilities Adjusting Procedures
- A509.928 — Piece-Part Data and Replacement Procedures — Heavy Duty Transcriber Announcement Equipment
- 514-615-200 — No. 9A Announcement System — Station Installation
- J86611 — 802-802-160 — 504A Power Plant

- J86617 — 802-802-161 — 504B Power Plant
- J95416 — 801-603-155 — 4A Announcement System
- KS-16504 — Handset
- KS-16534 — Recorder-Reproducer
- KS-16535 — Coupling Unit (Single Channel)
- KS-16536 — Control Unit (Operator)
- KS-16537 — Control Unit (Amplifier)
- KS-16586 — Coupling Unit (Dual Channel)
- KS-16587 — Distribution Unit
- KS-16588 — Coupling Unit (Remote Control)
- KS-19219 — Amplifier (Record Reproduce)
- KS-19739 — Amplifier (Subcenter)
- Floor Plan Data — Section 7.1, Sheet 44
Section 9.2, Sheet 7
- Current Drain Data — SD-95885-02

3. DRAWINGS

For additional drawings forming a part of this specification, see listings under Subdivisions of Equipment and Detailed Index.

Circuits

- SD-95254-01 — Application Schematic — Single Channel System
- SD-95255-01 — Application Schematic — Dual Channel System
- SD-95261-01 — KS-16535 Coupling Unit Schematic
- SD-95262-01 — KS-16586 Coupling Unit Schematic
- SD-95263-01 — KS-16587 Distribution Unit Schematic
- SD-95264-01 — KS-16588 Coupling Unit Schematic
- SD-95265-01 — KS-16536 Control Unit Schematic
- SD-95266-01 — KS-16537 Control Unit Schematic
- SD-95267-01 — KS-16534 Recorder-Reproducer Schematic
- SD-99360-01 — KS-19739, L1 Amplifier Schematic
- SD-99723-01 — KS-19219, L1 Amplifier Schematic

Equipment

- ED-92987-10 — Typical Bay Layout — Main Center — Single Channel Machine
- ED-92987-11 — Typical Bay Layout — Main Center — Dual Channel Machines

- ED-92987-12 — Typical Bay Layout — Subcenter
- ED-92987-13 — Junction Plate Assembly for Subcenter

Keysheet

- SD-95885-01 — No. 9A Announcement System — Keysheet

4. EQUIPMENT

J95419A (AT&T Co Std) — Distributing Unit — For Dual Channel Announcement Machine

Equipment — J95419A-()

- List 1** — Framework, assembly, local cable, and common equipment for distributing unit arranged for maximum capacity of 1100 announcement trunks.

	WIRE	EQUIP	SEE NOTES
Distributing Circuit for Dual Channel Announcement Machine, SD-95855-01:			
Control Circuit, Fig. 1	1	1	
Barge-In Relays, Fig. 3	3	0	A
Checking Relay, Fig. 4	5	0	
Contact Protection Networks, Fig. 5	10	0	

- List 2** — Wiring and equipment per SD-95855-01, Fig. 3, required in addition to list 1 for each 380 announcement trunks or less. (See Note A.)

- List 3** — Equipment per SD-95855-01, Fig. 4 and two Fig. 5, required in addition to list 1 for each 220 announcement trunks or less.

Notes

- A. The ALM leads from the announcement trunk units shall be wired by the installer directly to the CA relay.
- B. For associated distributing relays, see the J95419F unit.

J95419B (AT&T Co Std) — Distributing Unit — For Single Channel Announcement Machine

Equipment — J95419B-()

- List 1** — Framework, assembly, local cable, and common equipment for distributing unit arranged for maximum capacity of 1100 announcement trunks.

	WIRE	EQUIP	SEE NOTES
Distributing Circuit for Single Channel Announcement Machine, SD-95854-01:			
Control Circuit, Fig. 1	1	1	
Barge-In Relays, Fig. 3	3	0	A
Checking Relays, Fig. 4	5	0	
Contact Protection Network, Fig. 5	10	0	

- List 2** — Wiring and equipment per SD-95854-01, Fig. 3, required in addition to list 1 for each 380 announcement trunks or less. (See Note A.)

- List 3** — Equipment per SD-95854-01, Fig. 4, required in addition to list 1 for each 220 announcement trunks or less.

- List 4** — Equipment per SD-95854-01, Fig. 5, required in addition to list 1 for each five relays or less on the J95419E distributing relay unit.

Notes

- A. The ALM leads from the announcement trunk units shall be wired by the installer directly to the CA relay.
- B. For associated distributing relays, see the J95419E unit.

J95419E (AT&T Co Std) — Distributing Relay Unit — For Single Channel or Subcenter Distributing Unit — Surface Wired

Equipment — J95419E-()

- List 1** — Assembly and common equipment for distributing relay unit arranged for eight relays.

List 2 — Wiring and equipment per SD-95854-01, Fig. 2, required in addition to list 1 for each 22 announcement trunks or less in single channel main center. (See Note A.)

List 3 — Wiring and equipment per SD-95857-01, Fig. 2, required in addition to list 1 for each 22 announcement trunks or less in subcenter. (See Note A.)

Notes

- A. One network per J95419B-1, List 4 or J95419N-1, List 5 is required for each five relays or less.
- B. This unit shall be mounted directly above the distributing unit as shown on ED-92987-10 and ED-92987-12.
- C. The CT or CP leads from the announcement trunk units shall be wired by the installer directly to the R relay.
- D. Leads from the J95419B distributing unit and to succeeding J95419E units shall be wired by the installer directly to the R relays.

J95419F (AT&TCo Std) — Distributing Relay Unit — For Dual Channel Distributing Unit — Surface Wired

Equipment — J95419F-()

List 1 — Assembly and equipment for one unit arranged for four pairs of distributing relays and equipped with one pair of distributing relays per SD-95855-01, Fig. 2, or SD-95976-01, Fig. 6.

List 2 — Equipment required in addition to list 1 for one additional pair of distributing relays per SD-95855-01, Fig. 2, or SD-95976-01, Fig. 6.

Notes

- A. One pair of relays is required for each 22 announcement trunks or less.
- B. One pair of networks A and B per J95419A, List 4 is required for each five or less pairs of relays per SD-95855-01, Fig. 2.
- C. One pair of Networks CA and CB per J95419AG List 4 is required for each ten or less pairs of relays per SD-95976-01, Fig. 6.

D. This unit shall be mounted directly above the distributing unit as shown on ED-92987-11.

E. The CT or CP leads from announcement trunks shall be wired by the installer directly to the RB or the CB relays as required.

F. Leads from the J95419A or the J95419AG distributing unit and to succeeding J95419F distributing relay units shall be wired by the installer directly to the RA and RB relays or to the CA and CB relays as required.

G. Provide optional wiring as required.

J95419G (AT&TCo Std) — Incoming Trunk Unit — From Selector Multiple of Local or Distant — Step-By-Step Office — Surface Wired

Equipment — J95419G-()

List 1 — Framework, assembly, and common equipment for a 2-trunk unit with wiring and equipment for two trunks per SD-95861-01, Fig. 1. (See 5.04.)

List 2 — Wiring and equipment per SD-31518-01, Fig. 12, PS lamps and A resistor only, required in addition to list 1 on first trunk only in each trunk group.

List 3 — Wiring and equipment for two trunks per SD-95861-01, J or K apparatus only, required in addition to list 1 when five or six digits must be absorbed.

Note

A. Furnish optional wiring as required.

J95419J (AT&TCo Std) — Incoming Trunk Unit — From Local Manual Switchboard or No. 1 Manual Tandem Switchboard — Surface Wired

Equipment — J95419J-()

List 1 — Assembly, wiring, and common equipment per SD-95863-01, Fig. 1, less all options, for a single trunk unit. (See 5.04.)

List 2 — Wiring and equipment per SD-95863-01, S option only, required in addition to list 1 when trunk unit is arranged to operate with a local manual switchboard.

List 3 — Wiring and equipment per SD-95863-01, Q option only, required in addition to list 1 when trunk unit is arranged to operate with a No. 1 manual tandem switchboard.

Note

A. Furnish optional wiring as required.

J95419K (AT&TCo Std) — Incoming Trunk Unit — From Panel, Panel Tandem, or No. 1 Crossbar Office — In Same or Distant Building — Surface Wired

Equipment — J95419K-()

List 1 — Framework, assembly, and common equipment for a 2-trunk unit with wiring and equipment for two trunks per SD-95859-01, Fig. 1. (See 5.04.)

Notes

A. Furnish optional wiring as required.

B. For associated interrupter relays, see the J95419P unit.

J95419L (AT&TCo Std) — Compensating Resistor Pad Unit — For Use With Incoming Announcement Trunks — Surface Wired

Equipment — J95419L-()

List 1 — Framework, assembly, wiring, and equipment for one distributing resistance unit arranged for 28 resistor pads and equipped with four resistor pads per SD-95859-01, Fig. 3; or SD-95861-01, Fig. 2; or SD-95862-01, Fig. 2; or SD-95863-01, Fig. 2.

List 2 — Wiring and equipment required in addition to list 1 for one additional resistor pad per SD-95859-01, Fig. 3; or SD-95861-01, Fig. 2; or SD-95862-01, Fig. 2, or SD-95863-01, Fig. 2.

Notes

A. One resistor pad is required for each announcement trunk.

B. Furnish bracket and connector as required where announcement supply leads are run in armored cable.

C. This unit shall be mounted at the top of the relay rack bay as shown on ED-92987-10, ED-92987-11, and ED-92987-12.

J95419M (AT&TCo Std) — Announcement Trunk Unit — Outgoing to Sub-center — Surface Wired

Equipment — J95419M-()

List 1 — Assembly, wiring, and equipment per SD-95858-01, Fig. 1, for one trunk.

Note

A. Furnish optional wiring as required.

J95419P (AT&TCo Std) — Interrupter Relay Unit — Surface Wired

Equipment — J95419P-()

List 1 — Assembly, wiring, and equipment for one relay unit arranged for two relays and 24 double networks and equipped with one relay and one double network per SD-95859-01, Fig. 2.

List 2 — Wiring and equipment required in addition to list 1 for one additional relay per SD-95859-01, Fig. 2.

List 3 — Wiring and equipment required in addition to list 1 for one additional double network per SD-95859-01, Fig. 2.

Notes

A. One relay is required for each 120 trunks or less.

B. One double network is required for each ten announcement trunks or less.

C. This unit shall be mounted directly above the associated J95419K trunk units.

D. The FL leads from the J95419K trunk units shall be run by the installer directly to the FL relay and FL network as required.

J95419R (AT&TCo Std) — Distributing Relay Unit — For Subcenter — Surface Wired

Equipment — J95419R-()

List 1 — Assembly, wiring, and equipment for one relay unit arranged for five pairs of relays and equipped with one pair of relays per SD-95546-01, Fig. 14.

List 2 — Wiring and equipment required in addition to list 1 for one additional pair of relays per SD-95546-01, Fig. 14.

Notes

- A. One pair of relays is required for each ten announcement trunks or less.
- B. This unit shall be mounted directly above the J95419AH distributing and alarm unit as shown on ED-92987-12.
- C. The CT leads from the announcement trunk units shall be wired by the installer directly to the CTB relays.
- D. One pair of networks per J95419AH List 6 is required for each 20 or less pairs of relays.

J95419S (AT&TCo Std) — 1000-Cycle Supply Attenuator Unit — Surface Wired

Equipment — J95419S-()

List 1 — Assembly, wiring, and equipment per SD-95254-01, Fig. 12, or SD-95255-01, Fig. 13, for one attenuator circuit.

Note

- A. One patching cord per SD-95254-01, Fig. 13, or SD-95255-01, Fig. 14, is required for each central office equipped with this unit.

J95419W (AT&TCo Std) — Cut-Through Pulse Repeater — E&M Lead Signaling — Surface Wired

Equipment — J95419W-()

List 1 — Assembly, wiring, and equipment per SD-95974-01, Fig. 10 and two Fig. 4 and 11, arranged for fourteen A- networks and equipped with two A- networks with capacity for seven outgoing

announcement trunks using carrier facilities.

List 2 — Wiring and equipment for two networks per SD-95974-01, Fig. 4 and 11, required in addition to list 1 for each seven or less additional outgoing announcement trunks using carrier facilities.

J95419AB (AT&TCo Std) — Announcement Trunk Unit — With Cut-Through Pulsing — Outgoing to Subcenter — E&M Lead Signaling

Equipment — J95419AB-()

List 1 — Assembly, wiring, and equipment per SD-95974-01, Fig. 2, for a single circuit outgoing to announcement trunk unit using carrier facilities and arranged for two pad circuits per SD-95974-01, Fig. 5, 6, 7, 8, or 9.

List 4 — Wiring and equipment per SD-95974-01, two Fig. 7, required in addition to list 1 for use in the No. 4A announcement system.

List 5 — Wiring and equipment per SD-95974-01, two Fig. 8, required in addition to list 1 for use in the No. 6A announcement system.

List 6 — Wiring and equipment per SD-95974-01, two Fig. 9, required in addition to list 1 for use in the No. 9A announcement system.

List 7 — Assembly, wiring, and equipment per SD-95974-01, two Fig. 3, and two Fig. 9, for a 2-trunk unit for use in the No. 9A announcement system.

List 8 — Wiring and equipment per two SD-95974-01, Fig. 12, required in addition to list 1 for use in the No. 3A Announcement System.

Notes

- A. Lists 1, 4, 5, 6, and 8 are for use with dual carrier facilities.
- B. List 7 is for use with single carrier facilities.

J95419AD (AT&TCo Std) — Incoming Trunk Unit — From Panel, No. 1 or No. 5 Crossbar, or Crossbar Tandem Office — For Use With Operator Class Code — Surface Wired

Equipment — J95419AD-()

List 1 — Assembly, wiring, and common equipment per SD-95862-01, Fig. 4, for a single trunk unit. (See 5.04.)

List 2 — Wiring and equipment per SD-95865-01, Fig. 8, or SD-95546-01, Fig. 28, required in addition to list 1 on highest trunk only in each relay rack to indicate a falsely grounded ring conductor.

Note

A. Furnish optional wiring as required.

J95419AE (AT&TCo Std) — Alarm Unit — Surface Wired

Equipment — J95419AE-()

List 1 — Assembly, wiring, and equipment per SD-95865-01, Fig. 1, 6, and F option, and one KS-19739, L1 amplifier (SD-99360-01) for one alarm unit.

List 2 — Wiring and equipment per SD-95865-01, Fig. 2 and W option, required in addition to list 1 for dual channel system.

List 3 — Wiring and equipment per SD-95865-01, Fig. 3, required in addition to list 1 when office interrupter or timing unit is not available.

List 4 — Wiring and equipment per SD-95865-01, X option only, required in addition to list 1 when alarm unit is located in a No. 5 crossbar office.

List 5 — Wiring and equipment per SD-95865-01, Fig. 10 and H option, required in addition to list 1 when trunk alarm for false grounded ring is required.

List 6 — Wiring and equipment per SD-95865-01, two Fig. 7 and one Fig. 9, H option required in addition to list 5 when trunk alarm for false grounded ring is required for one to four frames.

List 7 — Wiring and equipment per SD-95865-01, ZC option only, required in addition to list 2 to provide remote release of alarms. (See Note C.)

Notes

A. Furnish optional wiring as required.

B. When alarm unit is located in a panel or No. 1 crossbar office, equipment per SD-95865-01, Fig. 4, required in addition to list 1, shall be located on the fuse panel.

C. Furnish ZB wiring when list 7 is not furnished.

J95419AF (AT&TCo Std) — Distributing Unit — For Subcenter

Equipment — J95419AF-()

List 1 — Framework, assembly, local cable, and equipment for one single circuit distributing unit arranged for maximum capacity of 1100 announcement trunks.

	WIRE	EQUIP	SEE NOTES
Distributing Circuit for Subcenter, SD-95857-01 Control Ckt, Fig. 1 With Q, R, and S Wiring, less Q, R, and S Apparatus	1	1	B
Barge-In Relays, Fig. 3	3	0	A
Checking Relay, Fig. 4	5	0	
Contact Protection Network, Fig. 6	10	0	
KS-19739, L1 Amplifier (SD-99360-01)	1	1	

List 2 — Wiring and equipment per SD-95857-01, Fig. 3, required in addition to list 1 for each 380 announcement trunks or less.

List 3 — Wiring and equipment per SD-95857-01, Fig. 4, required in addition to list 1 for each 220 announcement trunks or less.

List 4 — Equipment per SD-95857-01, Fig. 5, required in addition to list 1 to provide a monitoring receiver.

List 5 — Equipment per SD-95857-01, Fig. 6, required in addition to list 1 for each five relays or less on the J95419E distributing relay unit.

List 6 — Wiring and equipment per SD-95857-01, Fig. 1, S option only, required in addition to list 1 when used with E&M lead signaling.

List 7 — Wiring and equipment per SD-95857-01, Fig. 1, R option only, required in addition to list 1 when used with loop signaling with nonloaded cable.

List 8 — Wiring and equipment per SD-95857-01, Fig. 1, Q option only, required in addition to list 1 when used with loop signaling with B-88, B-135, D-88, H-44, or H-88 loading.

Notes

- A. The ALM leads from the announcement trunk units shall be wired by the installer directly to the CA relay.
- B. For associated distributing relays, see the J95419E unit.
- C. Furnish optional wiring as required.

J95419AG (AT&T Co Std) — Trunk Distributing and Alarm Unit — For Sub-center — E&M Lead Signaling — Dual Carrier Facilities

Equipment — J95419AG-()

List 1 — Framework, assembly, local cable, and common equipment for one single circuit trunk distributing and alarm unit.

	WIRE	EQUIP	SEE NOTES
Trunk Distributing and Alarm Circuit for Sub-center, SD-95976-01:			
Alarm and Control Circuit, Fig. 1 With ZB Apparatus and A, B, ZA, and ZB Wiring	1	1	A
Load Impedance Circuit, Fig. 2	1	0	B
Load Impedance Circuit, Fig. 3	1	0	C
Alarm Tone Circuit, Fig. 5, With E and F Wiring and Busy Tone Amplifier Circuit, SD-96570-01, Fig. 1	1	0	D
Distributing Circuit Contact Protection Network, Fig. 7	5	0	
End Relay Circuit, Fig. 8	5	0	
Barge-In Relay Circuit, Fig. 9	3	0	
KS-19739, L1 Amplifier, (SD-99360-01)	2	2	

List 2 — Equipment per SD-95976-01, one Fig. 2 and Z option, required in addition to list 1 for No. 4A and 6A announcement systems.

List 3 — Equipment per SD-95976-01, one Fig. 3, one Fig. 5 and Y option, and SD-96570-01, one Fig. 1 required in addition to list 1 for No. 9A announcement system.

List 4 — Equipment per SD-95976-01, one Fig. 7 and one Fig. 8, required in addition to list 1 for each 220 announcement trunks or less.

List 5 — Equipment per SD-95976-01, one Fig. 9, required in addition to lists 1 and 3 for each 380 announcement trunks or less for No. 9A announcement system. (See Note E.)

List 6 — Equipment per SD-95976-01, one Fig. 10, required in addition to list 1 to provide a monitoring receiver.

Notes

- A. Furnish A, B, ZA, and ZB wiring as required.
- B. Installer shall provide K, M, N, Q, R, S, T, V, W, and X wiring as required.
- C. Installer shall provide G, H, and J wiring as required.
- D. Furnish E or F wiring as required.
- E. The ALM leads from the announcement trunk units shall be wired by the installer directly to the BA relays.
- F. For associated distributing relays, see the J95419F unit.
- G. For a No. 9A announcement system located in other than a No. 5 crossbar office, equipment per SD-95976-01, Fig. 4 required in addition to lists 1, 3, and 5 shall be located on the fuse panel.
- H. Junction plate assembly per ED-92987-13, Fig. 13 is used to junction the twisted pair and armored cable or shielded T and R distributing loops associated with the J95419AG distributing and alarm unit. The junction plate is mounted at the top of the bay as shown in ED-92987-12, Fig. 2.

J. Installer shall provide ZA, ZB, ZC, and ZD wiring as required.

J95419AH (AT&T Co Std) — Distributing and Alarm Unit — For Subcenter

Equipment — J95419AH-()

List 1 — Framework, assembly, local cable, and common equipment with two KS-19739, L1 amplifiers for one single circuit distributing and alarm unit arranged for maximum capacity of 1100 announcement trunks.

	WIRE	EQUIP	SEE NOTES
Distributing and Alarm Circuit for Subcenter, SD-95546-01:			
Alarm and Control Circuit, Fig. 1 With H, P, ZJ, ZL, ZN, ZP, and ZQ Apparatus; M, K, H, ZN, ZP, and YA Wiring, Fig. B, E, and K	1	1	A,C
Fig. G, H, M, and N	1	0	
Trouble Release Key, Fig. 11 With ZD and ZE Wiring	1	1	B
Distributing Relay Alarm Circuit, Fig. 16	1	1	
Alarm Relay Multiplier Circuit, Fig. 18	1	1	
Signal Multiplier Circuit, Fig. 19	1	1	
Load Impedance Circuit, Fig. 20	1	1	D
Interrupter Circuit, Fig. 6	1	0	
Timing Circuit, Fig. 7	2	0	
Timing Circuit, Fig. 8	2	0	
Group of 10 Relay Circuits, Fig. 15	11	0	E
Alarm Relay Circuit for Barge-In Feature, Fig. 17	5	0	
Contact Protection Network, Fig. 21	6	0	
Distributing Relay Transfer Circuit, Fig. 22 With ZD and ZE Wiring	1	1	B

	WIRE	EQUIP	SEE NOTES
Transfer Relay Circuit, Fig. 23	1	1	
Busy Tone Distributing Circuit, Fig. 24	1	1	K,L
Trunk Alarm Relay Circuit, Fig. 26	10	0	
Trunk Alarm Reset Key Circuit, Fig. 27	5	0	
Trunk Alarm Audible Release Key Circuit, Fig. 29	1	0	
Remote Release of Alarm Relay Circuit, Fig. 30	1	0	
Busy Tone Amplifier Circuit, SD-96570-01, Fig. 1	1	1	M
KS-19739, L1 Amplifier (SD-99360-01)	2	2	

List 2 — Equipment per SD-95546-01, one Fig. 6 and two Fig. 8, required in addition to list 1 for interrupter and timing circuits in offices other than panel or No. 1 crossbar.

List 3 — Equipment per SD-95546-01, two Fig. 7, required in addition to list 1 for a timing circuit in a panel or No. 1 crossbar office. (See Note F.)

List 4 — Equipment per SD-95546-01, Fig. 15, required in addition to list 1 for each 100 announcement trunks or less.

List 5 — Equipment per SD-95546-01, Fig. 17, required in addition to list 1 for each 240 announcement trunks or less. (See Note G.)

List 6 — Equipment per SD-95546-01, Fig. 21, required in addition to list 1 for each 200 announcement trunks or less.

List 7 — Equipment per SD-95546-01, Fig. 22, ZD option only, required in addition to list 1 when remote release of alarms is required.

List 8 — Equipment per SD-95546-01, Fig. G and M, with ZU option, required in addition to list 1 for an office with non-loaded cable.

List 9 — Equipment per SD-95546-01, Fig. H and N, with ZU option, required in addition to list 1 for an office with B-88, B-135, D-88, H-44, or H-88 loading.

List 10 — Equipment per SD-95546-01, Fig. 29, required in addition to list 1 when trunk alarm for false grounded ring is required.

List 11 — Equipment per SD-95546-01, two Fig. 26 and one Fig. 27, required in addition to list 1 and 10 for each four or less relay rack frames when trunk alarm for false grounded ring is required.

List 12 — Equipment per SD-95546-01, Fig. 30, required in addition to list 1, 10, and 11 when remote release of trunk alarm for false grounded ring is required.

Notes

- A. Furnish K or M wiring as required.
- B. Furnish ZD or ZE wiring as required.
- C. One monitoring receiver per SD-95546-01, Fig. 4, shall be furnished with each unit.
- D. Installer shall provide ZF, ZG, and ZH wiring as required.
- E. Provide ZC wiring on first Fig. 15.
- F. In a panel or No. 1 crossbar office timing is obtained from the interrupter frames in accordance with SD-95546-01, Fig. 5.
- G. The ALM leads from the announcement trunk units shall be wired by the installer directly to the CA relay.
- H. For associated distributing relays, see the J95419R unit.
- J. Junction plate assembly per ED-92987-13, Fig. 13, is used to junction the twisted pair and armored cable T and R distributing loops associated with the J95419AH distributing and alarm unit. The junction plate is mounted at the top of the bay as shown on ED-92987-12, Fig. 2.
- K. Where distributing and alarm unit is located in other than No. 5 crossbar office, equipment per SD-95546-01, Fig. 25, ZZ option, required in addition to list 1 shall be located on the fuse panel.
- L. Installer shall provide ZZ or ZY wiring as required.
- M. Furnish Y or Z wiring as required.

Miscellaneous Equipment

J95415H — *Voice Alarm Unit for Announcement System*

J95416C — *Announcement Trunk Unit — Outgoing to Subcenter*

Announcement Machines

4.01 The component units of the single channel announcement machine, which are interconnected in accordance with SD-95254-01, are as follows.

Central Office Equipment

- One — KS-19219, L1 Amplifier (record reproduce)
- One — KS-16534, L1 Recorder-Reproducer
- One — KS-16535, L1 or L2 Coupling Unit (L1 — remote control) (L2 — local-remote control)
- One — Record and Monitor Headset per SD-95254-01, Fig. 6

Sponsor-Customer Equipment

- One — KS-16504, L1 or L2 Handset (L1 — with cord and terminal lugs) (L2 — with cord and plug)
- One — KS-16536, L1 Control Unit (operator)
- One — KS-16537, L1 Control Unit (amplifier)

Optional Equipment

Monitoring headset per SD-95254-01, Fig. 8.

4.02 The component units of the dual channel announcement machine, which are interconnected in accordance with SD-95255-01, are as follows.

Central Office Equipment

Two — KS-19219, L1 Amplifier (record reproduce)

Two — KS-16534, L1 Recorder-Reproducer

One — KS-16586, L1 Coupling Unit

One — KS-16587, L1 Distribution Unit

*One — KS-16588, L1 Coupling Unit (remote control)

One — Record and Monitor Headset per SD-95255-01, Fig. 8

* Required for remote-control arrangement only.

Sponsor-Customer Equipment

One — KS-16504, L1 or L2 Handset (L1 — with cord and terminal lugs) (L2 — with cord and plug)

One — KS-16536, L2 Control Unit (operator)

One — KS-16537, L2 Control Unit (amplifier)

Optional Equipment

Monitoring headset per SD-95255-01, Fig. 9.

4.03 The emergency announcement machine (that is, the optional third machine for a dual channel system) consists of a complete single channel machine arranged for local remote control. The interconnection information is shown in SD-95255-01.

4.04 The arrangement and mounting information for the announcement machine components are specified in the typical announcement system bay layouts shown in ED-92987-().

4.05 The installation and maintenance information for the equipment on the sponsor-customer premises is covered in Section 514-615-200.

5. GENERAL NOTES

5.01 Unless otherwise indicated, general requirements for wiring shall be as follows.

(a) Surface wiring to be No. 24 gauge type BW wire.

(b) Local cable to be No. 24 gauge type BU wire.

(c) Wiring between units on same bay to be No. 24 gauge type BU loose wiring.

(d) External wiring on cable rack to be No. 24 gauge type C or A in cable and No. 22 gauge type BH wire for four leads or less.

(e) Battery and ground leads shall be No. 24 gauge wire fused up to and including 1-1/3 amperes and No. 22 gauge wire fused up to and including 2 amperes.

5.02 Where the T and R announcement distributing loop is run on cable rack together with regular central office switching leads, 2-conductor armored cable is specified in order to provide magnetic shielding. However, the magnetic interference may also be prevented by maintaining 1/4-inch minimum spacing from the switching leads involved. Where the latter method is feasible, the use of armored cable becomes unnecessary.

5.03 Where distributing loops for different announcement systems are run adjacent to each other, but not in common with regular central office switching leads, it is considered unlikely that magnetic interference will occur.

5.04 To keep the heavy gauge T and R loop length to a minimum, the resistor pads per J95419L for all trunk units are mounted at the top of the announcement equipment bays and connected by standard gauge wiring to the respective trunk units.

5.05 No provision has been made to mount the KS-16534, L1 recorder-reproducer and associated audio equipment units on sheet metal frames because the projection of the announcement machine beyond the frame guardrail proved unacceptable for use in the standard floor plan arrangement for No. 5 crossbar offices. Consequently, the bulb-angle announcement machine bays as shown in ED-92987-10 and ED-92987-11 must be located in No. 5 crossbar

offices, either in a column row or an isolated area where the aisle projections can be tolerated.

5.06 No replacement for the J95419T unit is provided. All teletype facilities associated with the No. 9A announcement system in weather installations will be furnished by the telephone company per teletype circuits and specifications.

List of A&M Only and Mfr Disc. Equipment

EQUIPMENT	RATING	DETAILS LAST SHOWN IN ISSUE	REPLACING EQUIPMENT
J95419C	Mfr Disc.	4	J95419AE
J95419D	Mfr Disc.	1	{ J95419U J95419R
J95419H	Mfr Disc.	3	J95419AD

EQUIPMENT	RATING	DETAILS LAST SHOWN IN ISSUE	REPLACING EQUIPMENT
J95419N	Mfr Disc.	4	J95419AF
J95419T	Mfr Disc.	3	—
J95419U	Mfr Disc.	2	J95419AA
J95419Y	Mfr Disc.	2	J95419AG
J95419AA	Mfr Disc.	3	J95419AC
J95419AB,L2 & L3	Mfr Disc.	3	—
J95419AC	A&M Only	3	J95419AH
J95419AB,L2 L3	Mfr Disc.	4	—

The above equipment has been replaced as indicated. Where A&M Only items appear, the issue numbers shown are those of the issue in which the rating was first applied.

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