EQUIPMENT UNITS
RELAY RACK MOUNTED
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 and installation of the common systems relay rack unit equipment.

1.02 This specification is reissued to:

(a) Add new codes J99235EU, J99235EV, and J99235EW

(b) Revise list information for J99235BY, J99235EB, and J99235EF

(c) Rerate J99235EM to Mfr Disc.

DESCRIPTION

1.03 It is intended to include eventually in this specification all relay units that:

(a) are arranged on 2-inch wide mounting plates and

(b) are miscellaneous in character, with titles that do not fall into the classifications covered by other common systems engineering requirement specifications.

Such units were formerly covered by specification J99206, which this specification will ultimately replace.

1.04 These relay units consist of one or more mounting plates, usually 2 inches wide by 23 inches long. The apparatus for one or more circuits is mounted on the plates and surface-wired to one or more terminal strips, such as the cable-well type. The terminal strips facilitate shop testing of the circuit, provide a place for strapping used to obtain various circuit options, and serve as a convenient place for the installer to make the necessary external connections. Detailed information covering each unit may be found under **4. EQUIPMENT.**

1.05 Equipment included herein is normally located in available space on existing relay racks or added relay racks as specified by the telephone company.

Private Lines J99235C, J99235D, and J99235DV

1.06 The private line circuit is used between the two subscriber stations of a private line for establishing a direct telephone connection without the use of a switchboard or dial switching equipment. This circuit provides the transmitter battery to the stations and the means of signaling between them. There are three different private line circuits: one uses 24-volt battery for both signaling and talking; another uses 24-volt battery for signaling and 48-volt battery for talking; and the third uses 48-volt battery for both signaling and talking. The equipment may be located in any type of central office.

Coin Control Circuit Unit J99235L

1.07 The coin control circuit is used in the local dial central office end of a 2-wire toll connecting trunk arranged for connection to a coin box subscriber line. The operation of this circuit, which is controlled by the toll operator, controls the collection or return of coins deposited in the coin box. The equipment is located in the local office, which may be a step-by-step, panel, or crossbar office.

Auxiliary Line Unit for Automatic Cutoff of Main and Extension Stations J99235DY

1.08 This auxiliary line circuit is used with a single-party line, consisting of a main and one extension station, to cut off either station when the receiver is removed from the switchhook of the other station. The equipment is located in a manual or dial central office. It is necessary to run separate loops from the unit to the extension station.

Line Load Control Unit J99235B

1.09 When a panel or crossbar office is arranged for line load control, a common control unit per J99235B is required (except in crossbar offices where the common equipment may be located on the incoming trunk test frame). In addition, a wall-mounted cabinet per ED-91803-01 is required for the associated keys and lamps.

Voice-Controlled Amplifier J99235T

1.10 This amplifier is used with the operator telephone circuits of centralized intercepting positions at DSA boards or information desks. It provides increased transmitting and receiving gains without degradation of the sidetone balance. One amplifier is required for each position. The amplifier equipment is arranged for relay rack mounting and includes test jacks to facilitate maintenance. A typical bay arrangement of amplifiers and patching jacks is shown on J99235T-( ). The amplifier requires six 25L6GT/G electron tubes which are not provided with the equipment but which, when specified, are furnished separately. Although shock mountings are provided on the electron tube mounting plate, this unit should not be installed adjacent to or in the same lineup of bays that hold equipment with 200-type selectors or similar vibration—inducing apparatus. The microphonics may acoustically disturb the operator.

Voice-Controlled Amplifier Test J99253W

1.11 This test unit is used for the routine maintenance of the common systems amplifier, voice-controlled gain, and operator telephone sets. The test unit requires a 1-milliwatt, 600-ohm source of 1000-hertz tone and an auxiliary means of transmission measurements such as a 13C transmission measuring set or a 2B noise measuring set. This equipment should be located at a convenient height on the amplifier bay as shown on J99235T-( ). This test unit is connected to the desired common systems amplifier per SD-95396-01, as well as to the power source and transmission measuring set by means of patching cords.

Ringing Interrupter and Alarm Unit for 8-Party Semiselective Ringing J99235A

1.12 This unit is arranged to interrupt 8-party terminal-per-station auxiliary line circuits; also for reverting call trunks in a No. 1 crossbar office.

Interrupter Relay Unit for 8-Party Semiselective Ringing Auxiliary Lines J99235K

1.13 This unit is required in connection with ringing interrupter and alarm unit J99235A when the number of 8-party semiselective ringing auxiliary lines in the office exceeds 100. Ringing interrupter and alarm unit J99235A, together with interrupter relay unit J99235K, will serve a maximum of 400 8-party semiselective ringing auxiliary lines and 50 revertive call trunks.

Auxiliary Trunk CX Signaling Trunk Unit J99235M

1.14 This unit is used with CX trunks to regular incoming trunks at crossbar tandem for converting the CX pulsing to the loop pulsing required for the incoming trunks. It may be located at either the crossbar tandem office or the outlying office. Auxiliary trunks test set circuit per SD-96424-01 is arranged to test these trunks.

Emergency Ringback Unit J99235P

1.15 This circuit is used with recording, completing, special service, or permanent signal trunks or plugging-up lines. It allows the toll operator at a combined DSA-CLR position to ring back all parties on a subscriber line when an emergency call, such as to the police or fire department, has been originated and then abandoned before the line or person calling was identified. Since the toll operator has no means of identifying the line, this arrangement permits the operator to ring back all stations on the line in an attempt to locate the station making the call.

Auxiliary Line Unit Arranged for 10-Cent Initial Charge J99235F

1.16 This circuit is used on prepayment coin lines employing the 10-cent initial charge coin collector where irregular operation warrants its use. It

prevents irregular operation by applying coin return potential to the line at the end of each originating or terminating call. Coin return potential will also be applied on calls abandoned before dial tone to return the initial deposit. The circuit is used in panel, step-by-step, or No. 1 crossbar office.

Verification Request Trunk Circuit Arranged for Supervision J99235R

1.17 This circuit provides the outgoing end of a trunk from the subscriber line, line link, and controller circuit, or final multiple terminals to the centralized operator for verification request service. It may be used in panel and No. 1 crossbar offices or step-by-step No. 1 or 350A offices.

Local Frame Line Circuit J99235CW and J99235CY

1.18 These circuits are used for communication between frames, between frames and relay racks, and between the switchboards or testboards and the frames or relay racks. They are used in panel, No. 1 or No. 5 crossbar and crossbar tandem offices, and in the No. 4 or No. 4A toll switching system.

Selector Switch Unit for Selecting Permanent Signal Holding Trunks, Plugging Up Lines, and Line Insulation Test Control Circuit J99235H

1.19 This circuit provides the No. 14 local test desk with access to permanent signal holding trunks, plugging up lines, and the line insulation test control circuit. A clear tip and ring is extended through the selector for testing purposes. It is used in No. 1 and No. 5 crossbar, step-by-step, No. 350A, and panel offices.

Test Trunk Unit for Selecting Permanent Signal Holding Trunks, Plugging Up Lines, and Line Insulation Test Control Circuit J99235J

1.20 This trunk is used with the selector switch unit per J99235H to give the No. 14 local test desk access to permanent signal holding trunks, plugging up lines, and line insulation test control circuit. A clear tip and ring is extended through the trunk for testing purposes. It is used in No. 1 and No. 5 crossbar, step-by-step, No. 350A, and panel offices.

Dial Terminating Manual Line or Emergency Transfer Unit J99235G

1.21 This unit allows calls from a specific line to always be handled by an operator in a distant building. It also allows outgoing calls from a specific dial subscriber to be transferred under emergency conditions to a switchboard located in a distant building. Incoming calls from the dial equipment are either completed or routed to an intercepting operator at the local switchboard.

Emergency Line Unit for Completion of Calls to Police, Fire, and Ambulance Lines J99235S

1.22 This circuit is used to permit a distant operator to interrupt existing telephone conversations to police, fire, and hospital services and to complete emergency calls.

MF Signal Generator J99235AW

1.23 In buildings not equipped with an MF supply frame for J98609, an individual MF signal generator per unit may be furnished per J99235AW. This single-plate unit provides a set of six transistor oscillators for transmitting MF signals on frequency of 700, 900, 1100, 1300, 1500, and 1700 hertz. This individual generator unit is used for signal circuits such as the auxiliary sender (DDD) ANI outpulser and OGT test frame testboard. Generally, where 20 or more of these units would be required, a study should be made to determine whether a building MF supply per J98609 would be more suitable and economical.

Outgoing Trunk for Dial Coin Zone Service J99235BL

1.24 This trunk is used for extra dialed calls from coin stations in No. 1 crossbar and/or panel offices, via crossbar tandem or panel sender tandem. Operator supervision of coin deposit may be at a local or remote switchboard through directly connected or concentrated channels. Each ten trunks require a timed release and alarm unit per J99235BM.

Echo Suppressor and Amplifier Unit for Use With Trunk Circuits J99235BR

1.25 This unit provides the pads, amplifiers, and jacks to establish levels for the echo suppressor and to erase the inherent loss of the suppressor, which is about 1.8 dB. SPR and EQ jacks are provided to permit the echo suppressor to be patched in and out of the circuit. AMP jacks are provided to gain access to the input and output of the amplifiers.

Subscriber Loop Bridge-Lifting Equipment

1.26 This equipment is used to reduce transmission impairment on subscriber lines. Impairments may be caused by central office bridges applied to supply secretarial service of combining lines for improving utilization of central office equipment. Equipment per ED-95144-10 and ED-95163-10 employ 1574A and 1574B inductors, respectively, as bridge lifters. The 1574A inductor has preferred transmission characteristics, but the 1574B is required where interference from 60-hertz power induction is present.

TOUCH-TONE® Frequency Test Unit J99235BS

1.27 This equipment provides a means of testing installed TOUCH-TONE station sets to ensure that the proper frequencies and tone levels are generated. This equipment will test station sets for the following systems: No. 5 Crossbar, Step-by-Step, Panel, and No. 1 Crossbar. This equipment is accessible to the installer via the station ringer test circuit. A verification or rejection tone signal is returned to the installer upon completion of the test. A TOUCH-TONE frequency test receiver, J99235BS, shall be associated with each station ringer test unit J99297A.

TOUCH-TONE Frequency Test Connection Unit J99235BT (Arranged for Ten Inputs and Four Outputs)

1.28 This connector unit provides a means of connecting any one of a maximum of four TOUCH-TONE frequency test circuits to any one of a maximum of ten ringer test circuits or frequency test applique circuits. Each ringer test or applique circuit requires a separate appearance in the connector. A 100-point crossbar switch is employed as a connector relay.

TOUCH-TONE Frequency Test Connector J99235BU (Arranged for Three Inputs and One Output)

1.29 This connector unit provides a means of connecting a maximum of three ringer test circuits or frequency test applique circuits to one TOUCH-TONE frequency test circuit. This connector circuit is available for use in small offices where not more than three ringer test or test applique circuits require access to a single TOUCH-TONE frequency test circuit.

Signal Generator Unit for Supplying Frequencies to Keysets Arranged To Pulse 2/6 and 4 by 4 Frequencies J99235BK

1.30 This unit has a set of eight transistor oscillators that furnish the signal frequencies for transmitting 2/6 or 4 by 4 signaling. A set of eight frequencies (4 by 4), or six frequencies (2/6) from 697 to 1477 or 700 to 1700 hertz, respectively, are generated. This unit is presently used with the No. 19A testboard and the No. 5D switchboard.

PBX-AIOD Signaling Converter J99235CK

1.31 This unit provides for signaling conversion on data trunks from PBXs that are remotely located from units that provide for automatic identified outward dialing.

Auxiliary Line Unit for Measured Rate INWATS Service

1.32 This unit provides a terminating line circuit for measured rate incoming WATS service. A timing meter is started on answer by the called party and measures elapsed time until either party is disconnected. The meter is mounted on an applique unit, J99235EB, consisting of 12 meters, each terminating on the unit terminal strip.

2. SUPPLEMENTARY INFORMATION

800-600-000—List of General Equipment Requirements Section
J97025—801-006-155—Relay Rack—Angle-Type
Current Drain Data—SD-31359-02—Step-by-Step No. 1—SD-25760-02—Crossbar No. 5

3. DRAWINGS

For additional drawings forming a part of this specification, see listings under **SUBDIVISIONS OF EQUIPMENT AND DETAILED INDEX.**

Keysheets

SD-25760-01—Crossbar No. 5
SD-31359-01—Step-by-Step No. 1

Framework

ED-92243-01—Relay Rack Unit—Framework Assembly

Equipment

ED-10837-01—Manual Systems — Operating Training Equipment No. 4A — Miscellaneous Equipment

ED-26891-01—Crossbar No. 5—Line Load Control and Dial Tone Speed Indicating—Panel Equipment

ED-27683-( )—Crossbar No. 5—Line Load Control Panel—Mounted on Miscellaneous Relay Rack Frame

ED-62269-10—Toll Systems—Operators Training Equipment No. 4A — Miscellaneous Equipment

ED-68737-( )—Toll Testboard No. 17C—Typical Front Equipment and Bay Layouts

ED-91803-01—Line Load Control Wall-Mounted Cabinet Equipment

ED-91813-01—Operators Training Equipment—No. 4A Miscellaneous Equipment

ED-92924-30—Common Systems—Announcement System No. 6A—Miscellaneous Equipment—Incoming and Intercept Trunks

ED-92970-30—Common Systems—Manual Switchboard No. 12, Switchboard No. 15C or 15D, Toll Switchboard No. 1, 3, 3C, or 3CL Interrupter and Busy Lamp Equipment for Timing Unit, for Initial Charge Reminding on Originating Calls

ED-99365-10—Common Systems—Coin Signal Binary Counter Unit Mechanized System for Operator Training—Traffic Service Position No. 100A

ED-99366-10—Common Systems—Coin Signal Multivibrator Unit Mechanized System for Operator Training—Traffic Service Position No. 100A

ED-99367-10—Common Systems Coin Signal and Gate Oscillator and Inhibitor Unit—Mechanized System for Operator Training—Traffic Service Position No. 100A

ED-99525-( )—Common Systems—Circuit and Specifications for Nofunctional Miscellaneous Amplas Unit (INWATS Auxiliary Line Unit)

ED-99526-01—Common Systems—Typical Mounting Arrangements for Message Timing Meters—Measured Rate INWATS Service

ED-94938-( )—Common Systems Assembly of INWATS Equipment for use in Local Office

Cabling

ED-91601-01—Common Systems—Relay Rack Unit, Horizontal Local Cable Wiring

4. EQUIPMENT

ED-95144-10—Subscriber Loop Bridge-Lifting Equipment—Common Battery Offices

Group 5—Assembly and equipment arranged for and equipped with 17 coil cases each equipped with two inductors per SD-95973-01, Fig 1. (See Notes A and B.)

Notes

A. These assemblies are available with either of two designation arrangements stamped as follows:

1. To designate 34 single inductors for use where one inductor is required per subscriber line circuit.

2. To designate 17 pairs of inductors for use where two inductors are required per subscriber line circuit.

B. To avoid cable congestion, not more than 11 assemblies designated as single inductors or 14 assemblies designated as paired inductors shall be mounted in one 23-inch relay rack bay. The remaining space in the bay may be used for central office equipment requiring light cabling.

ED-95163-10—Subscriber Loop Bridge-Lifting Equipment for Use Where 60-Hertz Inductive Interference Is Present—Common Battery Office

Group 1—Assembly and equipment arranged for and equipped with 17 coil cases each equipped with two inductors per SD-95973-01, Fig 2. (See Notes A and B.)

Notes

A. These assemblies are available with either of two designation arrangements stamped as follows:

1. To designate 34 single inductors for use where one inductor is required per subscriber line circuit.

2. To designate 17 pairs of inductors for use where two inductors are required per subscriber line circuit.

B. To avoid cable congestion, not more than 11 assemblies designated as single inductors or 14 assemblies designated as paired inductors shall be mounted in one 23-inch relay rack bay. The remaining space in the bay may be used for central office equipment requiring light cabling.

J99235A—AT&TCo Std—Ringing Interrupter and Alarm Unit—For 8-Party Semiselective Ringing Auxiliary Lines and Revertive Call Trunks (See Note A)

List 1—Framework, assembly, wiring, and common equipment for one unit.

	WIRE	EQUIP	NOTES
Framework, ED-92243-01, GR10 Ringing Interrupter and Alm Ckt, SD-95674-01:			
Interrupter Ckt, Fig 1	2	2	
Transfer & Alm Ckt, Fig 2	1	1	
Aux Line Time Alm, Fig 4	2	1	
Trk Time Alm Ckt, Fig 5	1	0	
Pickup Lead Alm, Fig 6	1	0	
Transfer Ckt, Fig 7	1	0	
Interrupter Rel for Rev Call Trks, Fig 8	2	0	
Pickup Rel, Fig 9	2	0	

List 2—Equipment per SD-95674-01, Fig 4, required in addition to list 1 when the number of 8-party semiselective ringing auxiliary lines exceeds 100.

List 3—Equipment per SD-95674-01, Fig 5, 6, and 7, and two each of Fig 8 and 9, required in addition to list 1 when reverting call trunks are provided.

Note

A. This unit is arranged to serve 100 8-party semiselective ringing auxiliary lines and 50 reverting call trunks. The number of auxiliary lines served can be expanded from 50 to a maximum of 400 by means of interrupter relay unit J99235K.

J99235B—AT&TCo Std — Line Load Control Unit—For Use in No. 1, No. 5 Crossbar or Panel Offices—2- by 23-Inch Mounting Plates—Surface Wired

List 1—Assembly, wiring, and equipment for one common line load control unit to serve a maximum of 120 line link frames or line switch frames, or line relay bays in No. 1 crossbar or panel offices per SD-96387-01, Fig 3, with Y and Z wiring. (See Notes A, B, and C.)

List 2—Assembly, wiring, and equipment for one common line load control unit to serve one marker group in No. 5 crossbar office in accordance with SD-96387-01, Fig 3, with W and X wiring, and Fig 7 and Fig 11. (See Notes B and C.)

Notes

A. Z wiring shall be connected when this unit is furnished for use in panel line switch offices arranged for service observing.

B. A wall cabinet in accordance with ED-91803-01, or a panel in accordance with J27753D, Fig 19, for No. 1 crossbar offices, or a panel in accordance with ED-26891-01 (A&M Only for additions to existing line load control panels) or ED-27683-( ) for No. 5 crossbar offices must be furnished with this unit. It must be equipped with keys and lamps as required by the number of frames served.

C. The resistor and relays required in accordance with SD-96387-01, Fig 1, 2, 4, 5, and 9, shall be mounted on a miscellaneous basis below the common control unit on J99235B-( ).

J99235C—AT&TCo Std—Private Line Unit—24-Volt Battery—2- by 23-Inch Mounting Plate

List 1—Assembly, wiring, and equipment for a single circuit per SD-96128-01, Fig 1 and 2, with Y wiring. (See Note A.)

List 2—Wiring and equipment per SD-96128-01, option X, apparatus required in addition to list 1 when associated with a No. 11 manual switchboard.

List 3—Wiring and equipment per SD-96128-01, Fig 1, option Z, required in addition to list 1 when trunk is used in a No. 5 crossbar office.

Note

A. The TP relay shall be provided, as required, for each particular job as covered on SD-96128-01.

J99235F—AT&TCo Std—Auxiliary Line Unit—Arranged To Apply Coin Return Potential at End of Call on Prepayment Coin Lines—Arranged for 10-Cent Initial Charge

List 1—Assembly and common equipment for one auxiliary line unit per SD-95607-01, Fig 1, 3, A, B, C, and D.

List 2—Wiring and equipment per SD-95607-01, Fig 1, required in addition to list 1 for one line circuit. (See Notes A and B.)

List 3—Wiring and equipment per SD-95607-01, Fig 3, required in addition to list 2 for one register relay.

List 4—Wiring and equipment per SD-95607-01, Fig B, required in addition to list 2 in offices having battery on cutoff relays or auxiliary lines that do not repeat to ground.

List 5—Wiring and equipment per SD-95607-01, Fig C, required in addition to list 2 for use in panel offices having ground on cutoff relays.

List 6—Wiring and equipment per SD-95607-01, Fig D, required in addition to list 2 for use in No. 1 or 350A step-by-step office.

Notes

A. Provide V wiring when dial-tone-first coin service is not required.

B. Provide T wiring when dial-tone-first coin service is required.

J99235G—AT&TCo Std—Dial Terminating Manual Line Circuit Unit or Emergency Transfer Circuit Unit Equipment—2 - by 23-Inch Mounting Plates—Surface Wired

List 1—Assembly, wiring, and common equipment for one dial terminating manual line circuit or one emergency transfer circuit per SD-95711-01, Fig 1. (See Note A.)

List 3—Wiring and equipment per SD-95711-01, Fig B, and X and Y wiring, required in addition to list 1 when the manual line circuit is in a panel office arranged for battery on the cutoff relay. (See Note B.)

List 4—Equipment per SD-95711-01, Fig B, X apparatus only, required in addition to list 3 when the manual line circuit is an individual line or the last line of a PBX group in a panel office arranged for battery on the cutoff relay.

List 5—Wiring and equipment per SD-95711-01, Fig C, and X and Y wiring, required in addition to list 1 when the manual line circuit is in a panel office arranged for ground on the cutoff relay. (See Note B.)

List 6—Wiring and equipment per SD-95711-01, Fig D, required in addition to list 1 when the manual line circuit is in a step-by-step office.

List 11—Wiring and equipment per SD-95711-01, Fig 3, required for one transfer control circuit.

List 12—Wiring and equipment per SD-95711-01, Fig 4, required in addition to list 13, 15, 17, 19, or 21 for each set of 12 or less emergency transfer circuits 0 to 11, 12 to 23, 24 to 35, 36 to 47, 48 to 59, 60 to 71, 72 to 83, 84 to 95, and 96 to 99. (See Note E.)

List 13—Wiring and equipment per SD-95711-01, Fig E and T wiring, required in addition to list 1 when the emergency transfer circuit is in a No 1 crossbar office.

List 14—Wiring and equipment for options S and W, SD-95711-01, Fig E, required in addition to list 13 to provide for the cutoff feature in a No 1 crossbar office. (See Note C.)

List 15—Wiring and equipment per SD-95711-01, Fig F, and R and T wiring, required in addition to list 1 when the emergency transfer circuit is in a panel office arranged for battery on the cutoff relay.

List 16—Wiring and equipment for options S, W, X, Y, and Z, SD-95711-01, Fig F, required in addition to list 15 to provide for the cutoff feature in this type of panel office. (See Notes B, C, and D.)

List 17—Wiring and equipment per SD-95711-01, Fig G and T and Y wiring, required in addition to list 1 when the emergency transfer circuit is in a panel office, arranged for ground on the cutoff relay.

List 18—Wiring and equipment for options S, X, and Z, SD-95711-01, Fig G, required in addition to list 17 to provide for the cutoff feature in this type of office. (See Notes B and D.)

List 19—Wiring and equipment per SD-95711-01, Fig H, and options J and T, required in addition to list 1 when the emergency transfer circuit is in a step-by-step office.

List 20—Wiring and equipment for options S, W, and Z, SD-95711-01, Fig H, required in addition

to list 19 to provide for the cutoff feature in a step-by-step office. (See Notes C and D.)

List 21—Wiring and equipment per SD-95711-01, Fig J, less option Q required in addition to list 1 when the emergency transfer circuit is in a No. 5 crossbar office.

List 22—Wiring and equipment for option Q, SD-95711-01, Fig J, required in addition to list 21 to provide for the cutoff feature in a No. 5 crossbar office.

List 23—Wiring and equipment for a trunk conductor transfer circuit per SD-95711-01, Fig K, required in addition to each list 13, 15, 17, 19, or 21 to provide for the transfer of existing trunk conductors for use with emergency transfer circuits.

List 24—Wiring and equipment for a transfer circuit per SD-95711-01, Fig L, required in addition to each list 13, 15, 17, 19, or 21 when trunk conductors are permanently assigned for use with emergency transfer circuits.

List 25—Wiring and equipment for a transfer relay circuit per SD-95711-01, Fig 5, required in addition to list 21 for each set of 12, or less, emergency transfer circuits 0 to 11, 12 to 23, 24 to 35, 36 to 47, 48 to 59, 60 to 71, 72 to 83, 84 to 95, and 96 to 99 when these circuits are used with special service or recording completing trunks in a No. 5 crossbar office. (See Notes E and F.)

List 26—Wiring and equipment for a transfer delay circuit per SD-95711-01, Fig 6, required in addition to each list 21 for use with list 25 in a No. 5 crossbar office.

Notes

A. Provide option V transformer only if government material restrictions prohibit the use of the coil per option U.

B. Connect X wiring when the manual line circuit or emergency transfer circuit is an individual circuit or is the last circuit of a PBX group. Connect Y wiring when the manual line or emergency transfer circuit is the first or intermediate circuit of a PBX group.

C. Connect W wiring when the circuit is made busy to incoming calls under control of the distant operator.

D. Connect Z wiring when the incoming calls are to be routed to the intercepting operator under control of the distant operator.

E. When there is a maximum of two emergency transfer circuits required, provide one list 11 only. List 12 is not required when there are two or less emergency transfer circuits provided.

F. When existing trunk conductors are to be transferred and others are permanently assigned for use with emergency transfer circuits in No. 5 crossbar offices, wiring and equipment per lists 12 and 25 may be combined as required.

J99235H—AT&TCo Std—No. 1 and No. 5 Crossbar—Step-by-Step No. 1, 350A, or 355A—Panel System—Selector Switch Unit—For Selecting Permanent Signal Holding Trunks, Plugging Up Lines, or Line Insulation Test Control Circuits

List 2—Selector per SD-25767-01, Fig 2, with options W and X. (See Notes A, B, and C.)

Notes

A. The selector shall be mounted on a suitable selector shelf per J58801AB, which must be ordered separately.

B. When the external pulsing loop is less than 1000 ohms, the installation force shall remove W wiring per SD-25767-01, Fig 2.

C. The test trunk unit J99235J and this selector switch unit provide the local No. 14 test desk with access to the permanent signal holding trunks, plugging up lines, and line insulation test control circuit.

J99235J—AT&TCo Std—No. 1 and No. 5 Crossbar—Step-by-Step No. 1, 350A, or 355A—Panel System—Test Trunk and Selector Unit—From No. 14, 15B, or 16 Local Test Desk or Local Test Cabinet No. 3 for Selecting Permanent Signal Holding Trunks, Plugging Up Lines, or Line Insulation Test Control Circuits

List 1—Assembly, wiring, and equipment for one test trunk circuit per SD-25767-01, Fig 1, less option T, and common equipment for one additional circuit. (See Notes A and B.)

List 2—Wiring and equipment per SD-25767-01, Fig 1, less option T, required in addition to list 1 for one test trunk circuit. (See Notes A and B.)

List 4—Wiring and equipment per SD-25767-01, Fig 1, option T only, required in addition to lists 1 and 2 when the test trunk circuit is used in crossbar offices.

Notes

A. Option Y or Z at the terminal strip shall be connected as required depending on ground potential between offices.

B. This unit, together with selector unit J99235H, is used to provide No. 14, 15B, or 16 local test desk and local test cabinet No. 3 access to the permanent signal holding trunks, plugging up lines, and the line insulation test control circuit. The trunk, line or path selected is extended over a clear tip and ring for testing. This equipment is located in the crossbar office.

J99235K—AT&TCo Std—Interrupter Relay Unit—For 8-Party Semiselective Ringing Auxiliary Lines (See Note A)

List 1—Framework, assembly, wiring, and common equipment for one unit.

	WIRE	EQUIP	NOTES
Framework, ED-92243-01,GR2		1	
Interrupter Rel Ckt, SD-95674-01: Fig 3	2	1	

List 2—Equipment per SD-95674-01, Fig 3, required in addition to list 1 when the number of 8-party semiselective auxiliary lines in the office exceeds 250.

Note

A. This unit is required in connection with ringing interrupter and alarm unit J99235A when the number of 8-party semiselective ringing auxiliary lines in the office exceeds 100. Ringing interrupter and alarm unit J99235A, together with interrupter relay unit J99235K, will serve a maximum of 400 8-party semiselective ringing auxiliary lines and 50 reverting call trunks.

J99235L—AT&TCo Std—Trunk Coin Control Unit—For Use With Toll Connecting Trunks in Manual or Dial Offices

List 1—Assembly, wiring, and equipment for a one-circuit unit per SD-95031-01, Fig 3.

List 2—Equipment and wiring per SD-95031-01, Fig B, required in addition to list 1 when coin potential over lead CC or CR is extended to coin box and slow-release relay in series with lead CO or RO in connecting circuit is provided and ground potential exceeds ±8 volts, or when the slow-release relay is not provided and ground potential does not exceed ±8 volts.

List 3—Equipment and wiring per SD-95031-01, Fig C, required in addition to list 1 when coin potential over lead CC or CR is extended to coin box and slow-release relay in series with lead CO or RO in connecting circuit is not provided and ground potential exceeds ±8 volts.

List 4—Equipment and wiring per SD-95031-01, Fig 4, required in addition to list 1 where tone signals are to be sent to operator.

Notes

A. When equipment per SD-95031-01, Fig 2, is provided, it is mounted on the incoming selector frame.

B. Provide options K, M, V, and W and Fig A as required.

J99235P—AT&TCo Std—Emergency Ringback Unit—For Use With Circuits Which Are Arranged for Ringing Inside the Transformer—Two 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Assembly, wiring, and equipment per SD-95083-01, Fig 5, less options, for one start circuit (one per a maximum of 180 trunks). (See Note A.)

List 2—Wiring and equipment per SD-95083-01, Fig 1, required in addition to list 1 for one transfer ringing supply circuit (one per a maximum of 15 trunks). (Circuits 1 to 9.)

List 3—Wiring and equipment per SD-95083-01, Fig 1, required in addition to list 1 for one transfer ringing supply circuit (one per a maximum of 15 trunks). (Circuits 10 to 12.)

List 4—Wiring and equipment per SD-95083-01, Fig C, required in addition to list 1 for offices arranged for 2-party selective, 4-party semiselective, or 5-, 10-, or 20-party code ringing (ac-dc).

List 5—Wiring and equipment per SD-95083-01, Fig D, required in addition to list 1 for offices arranged for 4-party selective, 8-party semiselective, or 10-party code ringing (SUP AUD).

List 6—Wiring and equipment per SD-95083-01, Fig 6, less options, required in addition to list 1 when alarm delay feature is required.

List 7—Wiring and equipment per SD-95083-01, Fig 5, option M only, required in addition to list 1 for dial office not in same building with toll office.

List 8—Wiring and equipment per SD-95083-01, Fig 5, option N only, required in addition to list 1 for No. 1 crossbar or step-by-step office (specify for first list 1 and other lists 1 not located adjacent to first list 1) or for No. 5 crossbar.

List 9—Wiring and equipment per SD-95083-01, Fig 6, option H only, required in addition to list 6 for No. 5 crossbar office.

Note

A. Equipment per SD-95083-01, Fig 3, shall be arranged on a miscellaneous basis and furnished as required.

J99235R—AT&TCo Std—Verification Request Trunk—No. 1 Crossbar, Panel, Step-by-Step No. 1 and 350A

List 1—Assembly, wiring, and equipment per SD-95691-01, App Fig 1, for one verification request trunk with common equipment for one additional circuit.

List 2—Equipment and wiring per SD-95691-01, App Fig 1, for one additional verification request trunk.

List 3—Equipment per SD-95691-01, App Fig 2, required in addition to list 1 or list 2 for one verification request trunk circuit for use in No. 1 crossbar office.

List 4—Equipment per SD-95691-01, App Fig 3, required in addition to list 1 or list 2 for one verification request trunk circuit for use in panel offices having battery on the cutoff relays.

List 5—Equipment per SD-95691-01, App Fig 4, required in addition to list 1 or list 2 for one verification request trunk circuit for use in panel offices having ground on the cutoff relays.

List 6—Wiring and equipment per SD-95691-01, App Fig 6, required in addition to list 1 or list 2 for one sleeve relay for one verification request trunk circuit for step-by-step offices.

Note

A. Wiring options X and Y only shall be applied on the job as specified by the telephone company.

J99235S—AT&TCo Std—Emergency Line Unit—For Completion of Calls to Police, Fire, and Ambulance Lines—2- by 23-Inch Mounting Plates—Surface Wired

List 1—Framework, assembly, wiring, and equipment per SD-96469-01, Fig 1, less option, for one emergency line circuit.

List 2—Wiring and equipment per SD-96469-01, Fig D, in addition to list 1 for use in No. 1 crossbar office.

List 3—Wiring and equipment per SD-96469-01, Fig A, required in addition to list 1 for use in No. 5 crossbar office.

List 4—Wiring and equipment per SD-96469-01, Fig B, required in addition to list 1 for use in step-by-step office.

List 5—Wiring and equipment per SD-96469-01, Fig C, required in addition to list 1 for use in panel offices with battery on the cutoff relays.

List 6—Wiring and equipment per SD-96469-01, Fig E, required in addition to list 1 for use in panel offices with grounds on the cutoff relays.

List 7—Wiring and equipment per SD-96469-01, Fig F and option N, required in addition to list 1 for use in a No. 1 ESS office.

J99235T—AT&TCo Prov—Voice - Controlled Amplifier—Single-Circuit Unit—For Use With Centralized Intercept Positions of DSA Boards and Information Boards—23-Inch Mounting Plates

List 1—Assembly, surface wiring, and equipment for one voice-controlled amplifier circuit per SD-95396-01, Fig 1 and 2. (See Notes A and B.)

Notes

A. Six 25L6G/GT electron tubes are required for the operation of this amplifier. These tubes are not

furnished with the panel and shall be provided only when specified by the customer.

B. Patching jack equipment per SD-95396-01, Fig 3, shall be provided on a miscellaneous basis and mounted in accordance with J99235T, Fig 3. A typical arrangement of amplifiers and patching jacks is shown on J99235T, Fig 5.

C. This equipment should not be installed adjacent to or in the same lineup of bays mounting equipment containing 200-type selectors or similar vibration-inducing apparatus, because microphics may disturb the operator.

J99235U—AT&TCo Std—Business Office Line Unit—Arranged for Incoming Service From Distant Switchboard and 2-Way Service to Dial Subscriber Line Circuit—Panel, Step-by-Step, No. 1 or No. 5 Crossbar Office—Two 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Framework, assembly, wiring, and equipment for a circuit of one business office line circuit per SD-95721-01, Fig 1.

List 2—Wiring and equipment per SD-95721-01, Fig A, required in addition to list 1 for use in a No. 1 crossbar office.

List 3—Wiring and equipment per SD-95721-01, Fig B, required in addition to list 1 for use in a panel battery cutoff office.

List 4—Wiring and equipment per SD-95721-01, Fig C, required in addition to list 1 for use in panel ground cutoff office.

List 5—Wiring and equipment per SD-95721-01, Fig D, required in addition to list 1 for use in step-by-step office.

List 6—Wiring and equipment per SD-95721-01, Fig E, required in addition to list 1 for use in a No. 5 crossbar office.

List 7—Wiring and equipment per SD-95721-01, option T, required in addition to list 1 when external circuit loop to business office is less than 400 ohms.

List 8—Wiring and equipment per SD-95721-01, Fig F, and option R, required in addition to list 1 for ESS No. 1 offices.

J99235W—AT&TCo Prov—Voice-Controlled Amplifier Test—Single-Circuit Unit—For Use With Centralized Intercept Positions of DSA Boards and Information Boards—2- by 23-Inch Mounting Plates

List 1—Assembly, surface wiring, and equipment for one amplifier test circuit per SD-95452-01, Fig 1. (See Note A.)

Note

A. The following patching cords per SD-95452-01, Fig 2A, 2B, 2C, 2D, and 2E, shall be furnished as part of this test equipment.

One—2P3B Cord

One—3P7A Cord

Four—2P13B Cords

One—3W1A Cord

Three—2P19A Cords

J99235AA—AT&TCo Std—Business Office Line Unit—Outgoing to Distant Dial Office—No. 1, 3, 3C, or 3CL Toll Switchboard or 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Three 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Assembly, wiring, and common equipment for a unit of two business office line circuits equipped with one line per SD-95714-01, Fig 1.

List 2—Wiring and equipment per SD-95714-01, Fig 1, required in addition to list 1 for one additional line.

List 3—Wiring and equipment per SD-95714-01, Fig A, required in addition to lists 1 and 2 when used with No. 3, 3C, or 3CL toll switchboard. (See Note A.)

List 4—Wiring and equipment per SD-95714-01, Fig B, required in addition to list 1 or 2 when used with No. 1 toll switchboard.

List 5—Wiring and equipment per SD-95714-01, Fig C, required in addition to list 1 or 2 when used with No. 13C, 13D, 14C, 14D, 15C, and 15D switchboard.

List 6—Wiring and equipment per SD-95714-01, Fig 3, required in addition to list 3 for pad control.

List 7—Wiring and equipment per SD-95714-01, Fig 1, option G, required in addition to list 1 or 2 for building-out capacitor.

Note

A. Provide SD-95714-01, Fig 2, when list 6 is not specified.

J99235AB—AT&TCo Std—Outgoing Trunk Unit — For Time of Day or Official PBX—High-Low Reverse Battery—No. 1, 1C, 1D, or 11 Supervision Manual Switchboard on Step-by-Step or Panel Office—One 2- by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, wiring, and equipment for one outgoing trunk circuit per SD-95037-01, Fig 1.

List 2—Wiring and equipment per SD-95037-01, Fig A, required in addition to list 1 when circuit is connected to step-by-step office connector multiple.

List 3—Wiring and equipment per SD-95037-01, Fig B, required in addition to list 1 when circuit is connected to final multiple of a panel office having battery on the cutoff relay. (See Note A.)

List 4—A&M Only—Wiring and equipment per SD-95037-01, Fig C, required in addition to list 1 when circuit is connected to final multiple of a panel office having ground on the cutoff relay.

List 5—Wiring and equipment per SD-95037-01, Fig D, required in addition to list 1 when circuit is connected to a manual office outgoing trunk.

Note

A. Provide optional wiring and apparatus as required.

J99235AC—AT&TCo Std—Relay Interrupter Unit— For Furnishing 30, 60, and 120 IPM for Manual, Toll, Step-by-Step, and Telegraph—One 2- by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, wiring, and equipment required for one unit to provide 30, 60, and 120 IPM per SD-95036-01, one each of Fig 1, 4, D, and Y wiring, and four Fig 5.

List 2—Assembly, wiring, and equipment required for one unit to provide 30 and 60 IPM per SD-95036-01, one Fig 4, one Fig E and Y wiring, option E, and four Fig 5.

List 3—Wiring and equipment required in addition to list 2, per SD-95036-01, Fig 7, when interruptions are required for training equipment other than portable training equipment.

Note

A. When start key circuit per SD-95036-01, Fig 8, is required, it shall be located in the practice training switchboard position as shown on ED-10837-01, ED-62269-10, or ED-91813-01.

J99235AD—AT&TCo Std—Order Clerks or Chief Operators Line Unit—One 2- by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, equipment, and wiring for a 2-circuit unit with the first circuit equipped per SD-96262-01, Fig 1.

List 2—Wiring and equipment per SD-96262-01, Fig 1, required in addition to list 1 to equip the second circuit.

List 3—Wiring and equipment per SD-96262-01, Fig A, required in addition to list 1 or 2 when used in a manual office.

List 4—Wiring and equipment per SD-96262-01, Fig B, required in addition to list 1 or 2 when used in a No. 1 crossbar office.

List 5—Wiring and equipment per SD-96262-01, Fig C, D, or E, required in addition to list 1 or 2 when used in a battery cutoff relay panel office, ground cutoff relay panel office, step-by-step office, No. 5 crossbar office, and toll office.

J99235AE—AT&TCo Std—Impedance Compensator Unit—Two 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Assembly, wiring, and equipment for a 24-circuit impedance compensator unit per SD-95756-01, Fig 1, with first 12 circuits equipped.

List 2—Wiring and equipment per SD-95756-01, Fig 1, required in addition to list 1 to equip the second 12 circuits.

List 3—Equipment and wiring per SD-95756-01, Fig 1, option Y, required in addition to list 1 or 2, for H135, H175, or M88 loading.

Notes

A. Provide optional wiring as specified.

B. To avoid cable congestion, not more than 15 of these units shall be located in one 23-inch relay rack bay. The J99235AF units, when required, shall be located in the same bay and shall be adjacent to associated J99235AE units. Unused space may be used for other central office equipment requiring light cabling.

J99235AF—AT&TCo Std—Low-Frequency Impedance Corrector Unit—One 2- by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, wiring, and equipment for a 12-circuit, low-frequency impedance corrector unit per SD-95756-01, Fig 5, with the first circuit equipped.

List 2—Wiring and equipment per SD-95756-01, Fig 5, required in addition to list 1 for one additional circuit.

Notes

A. To avoid cable congestion, not more than 15 of these units shall be located in one 23-inch relay rack bay. The J99235AE unit, when required, shall be located in the same bay and shall be adjacent to associated J99235AF units, using D3 wiring between units. Unused space may be used for other central office equipment requiring light cabling.

B. Provide optional wiring as required.

J99235AG—AT&TCo Std—Fixed Pad Unit—One 2-by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, wiring, and equipment for a 14-circuit fixed pad unit per SD-95756-01, Fig 3, less options, with the first circuit equipped.

List 2—Wiring and equipment per SD-95756-01, Fig 3, less options, required in addition to list 1 for one additional circuit.

List 3—Wiring and equipment per SD-95756-01, Fig 3, option S, required in addition to list 1 or 2 for 2-dB pad when trunk impedance is 600 ohms.

List 4—Wiring and equipment per SD-95756-01, Fig 3, option T, required in addition to list 1 or 2 for 2-dB pad when trunk impedance is 900 ohms.

List 5—Wiring and equipment per SD-95756-01, Fig 3, option U, required in addition to list 1 or 2 for 2-dB pad when trunk impedance is 1500 ohms.

Note

A. To avoid cable congestion, not more than 15 of these units shall be located in one 23-inch relay rack bay. The J99235AE unit, when required, shall be located in the same bay and shall be adjacent to associated J99235AH units, using D3 wiring between units. Unused space may be used for other central office equipment requiring light cabling.

J99235AH—AT&TCo Std—Impedance Compensator and Building-Out Capacitor Unit—Three 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Framework, assembly, wiring, and equipment per SD-95756-01, Fig 1 and 4, less options, for a 24-circuit unit with the first 12 circuits equipped.

List 2—Wiring and equipment per SD-95756-01, Fig 1 and 4, less options, required in addition to list 1 to equip the second 12 circuits.

List 3—Wiring and equipment per SD-95756-01, Fig 1, option Y, required in addition to list 1 or 2 for H135, H175, or M88 loading.

Notes

A. Provide optional wiring as specified.

B. To avoid cable congestion, not more than 15 units per J99235AH shall be located in one 23-inch relay rack bay. The J99235AF unit, when required, shall be located in the same bay and shall be adjacent to associated J99235AH units, using D3 wiring between units. Unused space may be used for other central office equipment requiring light cabling.

J99235AJ—AT&TCo Std—Impedance Compensator Low-Frequency Impedance Corrector and Building-Out Capacitor Unit—Five 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Framework, assembly, wiring, and equipment per SD-95756-01, Fig 1, 4, and 5, and option Z, for one 24-circuit unit with the first 12 circuits equipped. (See Note A.)

List 2—Wiring and equipment per SD-95756-01, Fig 1, 4, and 5, and option Z, required in addition to list 1 to equip the second 12 circuits.

Note

A. Provide optional wiring as required.

J99235AK—AT&TCo Std—Incoming Trunk Unit—From Dial Office—Not Arranged for Machine Announcements—No. 12, 13C, 13D, 14C, 14D, 15C, or 15D Switchboard-Toll Switchboard—No. 1, 3, 3C, or 3CL—No. 17C, No. 19 or 23E Operating Room Desk—No. 1, 2, 7, or 7A Information Desk—Two 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Framework, assembly, common equipment, and surface wiring for one incoming trunk unit with test jack and not arranged for connection to a No. 6A machine announcement system per SD-95789-01, Fig 1, 9, and N.

List 2—Wiring and equipment per SD-95789-01, Fig D, required in addition to list 1 when calls are answered at No. 1 toll switchboard alone.

List 3—Wiring and equipment per SD-95789-01, Fig C, required in addition to list 1 when calls are answered at No. 3, 3C, or 3CL switchboard alone.

List 4—Wiring and equipment per SD-95789-01, Fig 8 and J, required in addition to list 1 when calls are answered at No. 13C, 13D, 14C, 14D, 15C, or 15D DSA switchboard.

List 5—Wiring and equipment per SD-95789-01, Fig 8 and Q, with options ZO, ZX, ZZ, and YA required in addition to list 1 when trunk is used with No. 12 switchboard alone.

List 6—Wiring and equipment per SD-95789-01, Fig 1, option ZB only, required in addition to list 1 when separate answering jacks are provided for trouble intercept for all switchboards other than No. 12 and for No. 14 operating room desk.

List 7—Wiring and equipment per SD-95789-01, Fig Q, options YK and ZA only, required in addition to lists 5 and 6 for No. 12 switchboard where separate answering jacks for trouble intercepting calls are provided.

List 8—Wiring and equipment per SD-95789-01, Fig E, required in addition to list 1 when calls are answered at No. 19 operating room desk with or without transfer, but with provision for future transfer to No. 1 toll switchboard or when regular intercept calls are answered at No. 2, 7, or 7A information desk with or without transfer to No. 1 toll switchboard and trouble calls are answered at No. 1 toll switchboard.

List 9—Wiring and equipment per SD-95789-01, Fig F, required in addition to list 1 when calls are answered at No. 19 operating room desk without night or light load transfer to switchboard or when regular intercepting calls only are answered at No. 2, 7, or 7A information desk without night or light load transfer to switchboard.

List 10—Wiring and equipment per SD-95789-01, Fig K, required in addition to list 3, 4, or 5 when calls are answered at No. 19 operating room desk with or without transfer, but with provision for future transfer, to all switchboards except No. 1 toll switchboard or when regular intercepting calls are answered at No. 2, 7, or 7A information desk with transfer to No. 12 switchboard or with or without transfer to all other switchboards except No. 1 toll switchboard.

List 11—Wiring and equipment per SD-95789-01, Fig G, with option ZT, required in addition to list 1 when regular intercepting calls are answered at No. 1 information desk with or without transfer to No. 1 toll switchboard and trouble calls are answered at No. toll switchboard.

List 12—Wiring and equipment per SD-95789-01, Fig G and option ZE, required in addition to list 1 when regular intercepting calls are answered at No. 23 operating room desk with or without transfer to No. 1 toll switchboard and trouble calls are answered at No. 1 toll switchboard.

List 13—Wiring and equipment per SD-95789-01, Fig 8 and H, with option ZH, required in addition to list 1 when regular intercepting calls are answered at No. 1 information desk without transfer to switchboard.

List 14—Wiring and equipment per SD-95789-01, Fig 8, C, and P, with option ZU, required in addition to list 1 when regular intercepting calls are answered at No. 1 information desk with or without transfer to No. 3, 3C, or 3CL switchboard and trouble calls are answered at No. 3, 3C, or 3CL switchboard.

List 15—Wiring and equipment per SD-95789-01, Fig P and option ZU, required in addition to list 5 or 5 and 7 when regular intercepting calls are answered at No. 1 information desk with transfer to No. 12 switchboard and

trouble intercept calls are answered at No. 12 switchboard, or required in addition to list 4 when regular intercepting calls are answered at No. 1 information desk with or without transfer to No. 13C, 13D, 14C, 15C, or 15D DSA switchboards and trouble calls are answered at DSA switchboards.

List 16—Wiring and equipment per SD-95789-01, Fig H, with ZZ apparatus, required in addition to list 1 when regular intercepting calls are answered at No. 23E operating room desk without transfer to switchboard.

List 17—Wiring and equipment per SD-95789-01, Fig H, required in addition to list 3, 4, or 5 when regular intercepting calls are answered at No. 23E operating room desk with transfer to No. 12 switchboard or with or without transfer to all other switchboards except No. 1 toll switchboard.

List 18—Wiring and equipment per SD-95789-01, Fig 8, A, K, and Q, with option ZA, required in addition to lists 1 and 7 when regular intercepting calls are answered at No. 2, 7, or 7A information desk without transfer to No. 12 switchboard.

List 19—Wiring and equipment per SD-95789-01, Fig 8 and P, with option ZU, and Fig Q, with option ZA, required in addition to lists 1 and 7 when regular intercepting calls are answered at No. 1 information desk without transfer to No. 12 switchboard.

List 20—Wiring and equipment per SD-95789-01, Fig 8, L, and Q, with option ZA, required in addition to lists 1 and 7 when regular intercepting calls are answered at No. 23E operating room desk without transfer to No. 12 switchboard.

List 21—Wiring and equipment per SD-95789-01, Fig 1, option V only, required in addition to list 1 when trunk impedance at 1000 hertz is 1100 ohms or less (94E transformer).

List 22—Wiring and equipment per SD-95789-01, Fig 1, option N only, required in addition to list 1 for 120C transformer.

List 23—Wiring and equipment per SD-95789-01, Fig 1, option T only, required in addition to list 1 for 120C transformer.

List 24—Wiring and equipment per SD-95789-01, Fig 1, option W only, required in addition to list 1 when trunk impedance at 1000 hertz is more than 1100 ohms (94F transformer).

List 25—Wiring and equipment per SD-95789-01, Fig 1, option P, required in addition to list 1 for 120D transformer.

List 26—Wiring and equipment per SD-95789-01, Fig 1, option U only, required in addition to list 1 for 120DS transformer.

List 27—Wiring and equipment per SD-95789-01, Fig 8, required in addition to list 1 when regular intercept calls are answered at No. 17C operating room desk or when regular intercept calls are answered at a No. 17C operating room desk with or without transfer to No. 3, 3C, or 3CL toll switchboard and trouble intercept calls are answered at No. 3, 3C, or 3CL toll switchboard.

List 28—Wiring and equipment per SD-95789-01, Fig U, required in addition to list 1 when regular calls are answered at the No. 17C operating room desk with or without transfer to No. 1 toll switchboard and trouble intercept calls are answered at No. 1 toll switchboard.

List 29—Wiring and equipment per SD-95789-01, Fig V, required in addition to lists 5 or 5 and 7 when regular intercept calls are answered at No 17C operating room desk, when transfer to No. 12 switchboard and trouble intercept calls are answered at No. 17 switchboard, or required in addition to list 4 when regular intercept is answered at No. 17C operating room desk with or without transfer to No. 13C, 13D, 14C, 14D, 15C, or 15D DSA switchboard, and trouble calls are answered at DSA switchboards.

Notes

A. Equipment per SD-95789-01, Fig 2, 3, and 4, shall be mounted on a miscellaneous mounting plate per ED-92924-30 and located at the top of the relay rack.

B. Provide optional wiring as required.

C. When lists 5, 10, 13, 15, and 17 are specified, option ZY must be provided.

D. When lists 18, 19, or 5, 7, 15, and 20 are specified, options YB and ZY must be provided.

J99235AL—AT&TCo Std—Intercepting Trunk Unit—Regular and Trouble From Dial Office—Arranged for Trouble Intercept Calls at No. 1, 3, 3C, or 3CL Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D Switchboard or No 19

Operating Room Desk Arranged for Regular Intercepting Calls at No 23A, 23B, 23C, or 23D Operating Room Desk—Or No. 3, 3A, 3B, 4, 4A, 4B, 6A, 6C, 6D, 6E, or 6F Information Desk—Two 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Framework, assembly, wiring, and equipment per SD-95740-01, Fig 1 and J, with A and J wiring, for one intercepting trunk unit.

List 2—Wiring and equipment per SD-95740-01, Fig A, required in addition to list 1 for regular intercepting trunks when tone identification is required for suburban calls to No. 23A, B, C, or D desks, or No. 3-, 4-, or 6-type desks.

List 3—Wiring and equipment per SD-95740-01, Fig 1, option ZA only, and Fig D, required in addition to list 1 for trouble intercept calls handled at No. 1 toll switchboard and the originating office is step-by-step.

List 4—Wiring and equipment per SD-95740-01, Fig D, option T only, required in addition to list 3 for trouble intercept calls handled at No. 1 toll switchboard and the originating office is panel or crossbar.

List 5—Wiring and equipment per SD-95740-01, Fig 1, option ZA only, and Fig C, required in addition to list 1 for trouble intercept calls handled at No. 3, 3C, or 3CL switchboard.

List 6—Wiring and equipment per SD-95740-01, Fig 1, option ZA only, and Fig F, required in addition to list 1 for trouble calls handled at No. 19 operating room desk.

List 7—Wiring and equipment per SD-95740-01, Fig 1, option ZA only, and Fig E, required in addition to list 1 for trouble intercept calls handled at No. 13C, 13D, 14C, 14D, 15C, or 15D switchboard.

List 9—Wiring and equipment per SD-95740-01, Fig 1, option Z only, required in addition to list 1 when trunk impedance at 1000 hertz is less than 1100 ohms (120C transformer).

List 12—Equipment and wiring per SD-95740-01, Fig 1, option ZX only, required in addition to list 1 when connection to TUR circuit for trunk holding time (seizure to disconnect) is required and trouble intercept is provided.

List 13—Equipment and wiring per SD-95740-01, Fig 1, option ZP only, required in addition to list 1 when connection to TUR circuit for FADS is required (not to be used on trunks which are concentrated).

List 14—Equipment and wiring per SD-95740-01, Fig A or B, option ZZ only, required in addition to list 1 when connection to trunk alarm circuit for No. 23 desk is required.

Note

A. Provide optional wiring as required.

B. Provide SD-95740-01, Fig 3, located miscellaneously one per desk or trunk concentrator when list 2 is provided and reduction of the level of the suburban high tone is required.

J99235AN—AT&TCo Std—Fixed Pad and Building-Out Capacitor Unit—Three 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Assembly, wiring, and equipment per SD-95756-01, Fig 3 and 4, less options, for a 24-circuit unit with the first 12 circuits equipped.

List 2—Wiring and equipment per SD-95756-01, Fig 3 and 4, less options, required in addition to list 1 for the second 12 circuits.

List 3—Wiring and equipment per SD-95756-01, Fig 3, option S only, required in addition to list 1 or 2 for 2-dB pad when trunk impedance is 600 ohms.

List 4—Wiring and equipment per SD-95756-01, Fig 4, option T only, required in addition to list 1 or 2 for 2-dB pad when trunk impedance is 900 ohms.

List 5—Wiring and equipment per SD-95756-01, Fig 3, option U only, required in addition to list 1 or 2 for 2-dB pad when trunk impedance is 1500 ohms.

J99235AP—AT&TCo Std—Incoming Trunk Unit—Regular or Regular and Trouble Intercepting—E and M Leads Signaling—Not Arranged for Machine Announcements—No. 12, 13C, 13D, 14C, or 14D, 15C, or 15D Switchboard—No. 1, 3, 3C, or 3CL Toll Switchboard—No. 19 or 23E Operating Room Desk—No. 1, 2, 7, or 7A Information Desk—Two 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Framework, assembly, equipment, and wiring per SD-96488-01, App Fig 1, less all options, required for one incoming trunk unit not arranged for machine announcement.

List 2—Equipment and wiring per SD-96488-01, App Fig 3 and 15, required in addition to list 1 when trunk is arranged for use with No. 1 toll switchboard alone.

List 3—Equipment and wiring per SD-96488-01, App Fig 10, required in addition to list 1 when trunk is arranged for use with No. 3, 3C, or 3CL switchboard alone except as covered by addition of list 10 or 17.

List 4—Equipment and wiring per SD-96488-01, App Fig 4 and 15, required in addition to list 1 when trunk is arranged for use with No. 13C, 13D, 14C, 14D, 15C, or 15D DSA switchboard alone except as covered by addition of list 10, 15, or 17.

List 5—Equipment and wiring per SD-96488-01, App Fig 8, with option T and App Fig 15, required in addition to list 1 when trunk is arranged for use with No. 12 switchboard alone, except as covered by addition to list 10, 15, or 17.

List 6—Equipment and wiring per SD-96488-01, App Fig 1, option X only, required in addition to list 1 when trouble intercept is provided.

List 7—Equipment and wiring per SD-96488-01, App Fig 8, option S only, required in addition to list 5 when trouble intercept is provided at No. 12 switchboard.

List 8—Equipment and wiring per SD-96488-01, App Fig 12 and 15, required in addition to list 1 when calls are answered at No. 19 operating room desk with transfer to No. 1 toll switchboard, or when regular intercepting calls are answered at No. 19 operating room desk or No. 2, 7, or 7A information desk with or without transfer to No. 1 toll switchboard and trouble calls are answered at No. 1 toll switchboard.

List 9—Equipment and wiring per SD-96488-01, App Fig 11, required in addition to list 1 when calls are answered at No. 19 operating room desk without transfer to switchboard or when regular intercepting calls are answered at No. 2, 7, or 7A information desk without transfer to switchboard.

List 10—Equipment and wiring per SD-96488-01, App Fig 6, required in addition to list 3, 4, or 5 when calls are answered at No. 19 operating room desk with transfer to No. 12 switchboard or with or without transfer to all other switchboards except No. 1 toll switchboard, or when regular intercept calls are answered at No. 19 operating room desk or No. 2, 7, or 7A information desk with transfer to No. 12 switchboard or with or without transfer to all other switchboards except No. 1 toll switchboard.

List 11—Equipment and wiring per SD-96488-01, App Fig 6 and 15 and App Fig 8, with option S, required in addition to list 1 when regular intercept calls are answered at No. 19 operating room desk, or at No. 2, 7, or 7A information desk without transfer to switchboard and trouble intercept calls are answered at No. 12 switchboard.

List 12—Equipment and wiring per SD-96488-01, App Fig 13 and 15, required in addition to list 1 when regular intercept calls are answered at No. 1 information desk with or without transfer to No. 1 toll switchboard and trouble calls are answered at No. 1 toll switchboard.

List 13—Equipment and wiring per SD-96488-01, App Fig 13 and 15, with options B and ZG, required in addition to list 1 when regular intercept calls are answered at No. 23E operating room desk with or without transfer to No. 1 toll switchboard and trouble intercept calls are answered at No. 1 toll switchboard.

List 14—Equipment and wiring per SD-96488-01, App Fig 7 and 15, required in addition to list 1 when regular intercept calls are answered at No. 1 information desk without transfer to switchboard.

List 15—Equipment and wiring per SD-96488-01, App Fig 5, required in addition to list 4 or 5 when regular intercepting calls are answered at No. 1 information desk with transfer to No. 12 switchboard or with or without transfer to No. 13C, 13D, 14C, 14D, 15C, or 15D DSA switchboard.

List 16—Equipment and wiring per SD-96488-01, App Fig 5 and 15, and App Fig 8, with option S, required in addition to list 1 when regular intercept calls are answered at No. 1 information desk without transfer to switchboard and trouble intercept calls are answered at No. 12 switchboard.

List 17—Equipment and wiring per SD-96488-01, App Fig 5 with options Q and ZG, required in addition to list 3, 4, or 5 when regular intercept calls are answered at No. 23E operating room desk with transfer to No. 12 switchboard or with or without transfer to all other switchboards except No. 1 toll switchboard.

List 18—Equipment and wiring per SD-96488-01, App Fig 5 and 15, with options Q and ZG, and App Fig 8, with option S, required in addition to list 1 when regular intercept calls are answered at No. 23E operating room desk without transfer to switchboard and trouble intercept calls are answered at No. 12 switchboard.

List 19—Equipment and wiring per SD-96488-01, App Fig 7, with option ZG, required in addition to list 1 when regular intercept calls are answered at No. 23E operating room desk without transfer to switchboard.

List 20—Equipment and wiring per SD-96488-01, App Fig 5, 10, and 15, required in addition to list 1 when regular intercept calls are answered at No. 1 information desk with or without transfer to No. 3, 3C, or 3CL switchboard.

Note

A. This incoming trunk is arranged for 900-ohm voice frequency termination. When 600-ohm voice frequency termination is required, provide option ZD.

J99235AR—AT&TCo Std—30-, 60-, or 120-IPM Interrupter Alarm Unit—Two 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Framework, assembly, wiring, and equipment for one interrupter alarm unit for 30-, 60-, or 120-IPM per SD-95078-01, Fig 11, with provisions for six 24-volt or 48 alarm relay circuits.

List 2—Wiring and equipment per SD-95078-01, Fig 5, required in addition to list 1 for one 24-volt relay.

List 3—Wiring and equipment per SD-95078-01, Fig 6, required in addition to list 1 for one 48-volt relay.

List 4—Wiring and equipment per SD-95078-01, option F only, required in addition to list 1 for high-voltage supply of 100 to 120 volts.

List 5—Wiring and equipment per SD-95078-01, option V only, required in addition to list 1 for high-voltage supply of 125 or 135 volts.

J99235AS—AT&TCo Std—30-, 60-, and 120-IPM Interrupter Transfer and Test Jack Unit—For Use With No. 1, 1B, 3B, 3C, or 3CL Toll Switchboard—No. 1 or 3 Toll Tandem Switchboard, No. 6A Teletypewriter Switchboard, or Intertoll Dialing—Two 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Framework, assembly, wiring, and equipment for one 30-, 60-, and 120-IPM interrupter transfer and jack unit per SD-95078-01, Fig 10.

J99235AT—Intercepting Trunk Unit—Regular and Trouble Intercept—E and M Lead Supervision—Arranged To Handle Trouble Intercepting Calls at No 1 Toll Switchboard or No. 3, 3C, 3CL, 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Or No. 19 Operating Room Desk—Not Arranged for Machine Announcement—With or Without Suburban Tone—No. 23A, 23B, 23C, or 23D Operating Room Desk—Two 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Framework, assembly, wiring, and equipment per SD-95846-01, App Fig 1, for one intercepting trunk unit.

List 2—Wiring and equipment per SD-95846-01, App Fig 2 and option ZG, required in addition to list 1 when tone identification is required for suburban calls.

List 3—Wiring and equipment per SD-95846-01, App Fig 1, option Z only, and App Fig 4, required in addition to list 1 for trouble intercept calls handled at No. 19 operating room desk.

List 4—Wiring and equipment per SD-95846-01, App Fig 1, option Z only, and App Fig 5, required in addition to list 1 for trouble intercept calls handled at No. 1 toll switchboard.

List 5—Wiring and equipment per SD-95846-01, App Fig 1, option Z only, and App Fig 6, required in addition to list 1 for trouble intercept calls handled at No. 3, 3C, or 3CL switchboard.

List 6—Wiring and equipment per SD-95846-01, App Fig 1, option Z only, and App Fig 3, required in addition to list 1 for trouble intercept calls handled at No. 13C, 13D, 14C, 14D, 15C, or 15D DSA switchboards.

List 7—Wiring and equipment per SD-95846-01, App Fig 1, option M only, required in addition to list 1 for service observing at No. 23A, 23B, 23C, or 23D desk.

List 10—Wiring and equipment per SD-95846-01, App Fig 1, option E only, required in addition to list 1 when connection to TUR circuit for trunk holding time (seizure to disconnect) is required.

List 11—Wiring and equipment per SD-95846-01, App Fig 1, option E only, required in addition to list 1 when connection to TUR circuit for FADS is required (not to be used on trunks which are concentrated).

List 12—Wiring and equipment per SD-95846-01, App Fig 1, option A only, required in addition to list 1 when connection to the trunk alarm circuit for No. 23 operating room desk is required.

Notes

A. Provide optional wiring as required.

B. Provide 120CS repeat coil, option ZC in list 1, only if required by government material restriction on the 120C repeat coil, option ZB.

C. Provides SD-95846-01, App Fig 11, FS 8, located miscellaneously one per desk or trunk concentrator when list 2 is provided and reduction of the level of the suburban tone is required.

J99235AU—AT&TCo Std—Timing Unit—For Initial Charge Period Reminding on Originating Calls—No. 12 Manual Switchboard—No. 15C or 15D Switchboard—No. 1, 3, 3C, or 3CL Toll Switchboard—Toll Switchboard No. 5—One 4- by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, wiring, and equipment for a 3-, 4-, and 5-minute timing unit arranged for four circuits with one circuit equipped per SD-95801-01, Fig 1, option ZB.

List 2—Wiring and equipment per SD-95801-01, Fig 1, option ZB, required in addition to list 1 or 4 for one additional 3-, 4-, and 5-minute timing circuit (maximum 3).

List 3—Wiring and equipment per SD-95801-01, Fig 1, option S, required in addition to lists 1 and 2 or list 4 or 5 when idle trunk indicating or busy lamps are required for No. 1, 3, 3C, or 3CL switchboard.

List 4—Assembly, wiring, and equipment for a 2-, 3-, and 4-minute timing unit arranged for four circuits with one circuit equipped per SD-95801-01, Fig 1, option ZC.

List 5—Wiring and equipment per SD-95801-01, Fig 1, option ZC, required in addition to list 1 or 4 for one additional 2-, 3-, and 4-minute timing circuit (maximum 3).

Notes

A. Provide optional wiring as required.

B. One interrupter circuit per SD-95801-01, Fig 4, is required per 48 Fig 1.

C. Provide interrupter relay per SD-95801-01, Fig 4, on a miscellaneous basis.

D. Provide Y, Z, or Y and Z wiring with 3- and 4-, 3- and 5-, or 3-, 4-, and 5-minute jack appearances, respectively.

E. Provide A, ZA, or A and ZA wiring with 2- and 3-, 2- and 4-, or 2-, 3-, and 4-minute jack appearances.

F. Provide R wiring when idle trunk indicating lamps are required for No. 15C or 15D switchboard or connection to relay interrupter circuit is required.

J99235AW—AT&TCo Std—Multifrequency Signal Generator Unit—Surface Wired

List 1—Framework, assembly, equipment, and wiring per SD-95867-01, Fig 1, option R and T required for one multifrequency generator unit. (See Note A.)

List 2—Equipment per SD-95867-01, Fig 1, option V, required in addition to list 1 when −6 dBm transmission level per tone is required. (See Note A.)

List 3—Equipment per SD-95867-01, Fig 1, option W, required in addition to list 1 when −8 dBm transmission level per tone is required. (See Note A.)

List 4—Equipment per SD-95867-01, Fig 1, option X, required in addition to list 1 when −3 dBm transmission level per tone is required. (See Note A.)

List 5—Equipment per SD-95867-01, Fig 1, option S, required in addition to list 1 when −8 dBm transmission level per tone, through hybrid coils, is required. (See Note A.)

Note

A. List 2, 3, 4, or 5 must be specified in addition to list 1.

J99235BA—AT&TCo Std—30-, 60-, and 120-IPM Interrupter Distributing Unit—No. 1, 1B, 3, 3B, 3C, or 3CL Toll Switchboard—No. 1 or 3 Toll Tandem Switchboard, No. 6A Teletypewriter Switchboard, or Intertoll Dialing—Four 2- by 23-Inch Mounting Plates

List 1—Framework, assembly, wiring, and common equipment for 24- and/or 48-volt distributing unit for 30-, 60-, or 120-IPM interrupter.

	WIRE	EQUIP	NOTES
Interrupter Dist Ckt, SD-95078-01:			
Fig 2	1	0	
Fig 3 & 4	3	0	
Fig 7, 8, 9, & 12	30	0	

List 2—Equipment per SD-95078-01, Fig 2, required in addition to list 1 for interrupter supply test jack. (See Note A.)

List 3—Equipment per SD-95078-01, Fig 3, 7, 9, and 12, required in addition to list 1 for ten interrupter leads for 24-volt operation. (See Note B.)

List 4—Equipment per SD-95078-01, Fig 4, 8, 9, and 12, required in addition to list 1 for ten interrupter leads for 48 volts. (See Note B.)

Notes

A. Specify list 2 for a single interrupter supply and the interrupter and test jack unit J99235AS for dual interrupter supply.

B. A maximum of three list 3 or 4 or combination thereof may be ordered per unit.

C. Provide a maximum of two units per pulse rate.

J99235BB—AT&TCo Std—Recorder Talking Line and Buzzer Unit Equipment

List 1—Assembly, wiring, and equipment for recorder talking line unit. (Required for a manual or a dial subscriber or direct line.)

List 2—Wiring and equipment per SD-95532-01, Fig 2, option T, required in addition to list 1 when a dial line subscriber is used.

List 3—Wiring and equipment per SD-95532-01, Fig 2, option S, required in addition to list 1 when a manual or a dial subscriber line is used.

List 4—Wiring and equipment per SD-95532-01, Fig 3, required in addition to list 1 for direct talking line.

List 5—Wiring and equipment per SD-31610-01, Fig 1, 6B, and 8, required in addition to list 1 for message register test line relay and buzzer circuit for step-by-step office having message-rate lines equipped with 600-ohm message registers.

List 6—Wiring and equipment per SD-31610-01, Fig 6B, 7, and 8, required in addition to list 1 for message register test line relay and buzzer circuit for step-by-step offices having 5- or 9.5-ohm message registers.

J99235BC—AT&TCo Std—No. 1, 3, 3C, or 3CL Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Emergency Transfer Unit—Intercepting or Information Trunks—With E and M Lead Supervision—Arranged To Use Existing Trunk Facilities To Terminate Lines From a Distant No. 5 Crossbar, Step-by-Step, or ESS No. 1 Office—Three 2- by 23-Inch Mounting Plates

List 1—Framework, assembly, wiring, and equipment for transfer of the first 19 intercepting or information trunk conductors for emergency line use with E and M lead supervision per SD-96517-01, Fig 1 and 4.

List 2—Equipment per SD-96517-01, Fig 1, options R and S, required in addition to list 1 for No. 1, 3, 3C, or 3CL toll switchboard when transfer is not controlled by 2-way signal circuit.

List 3—Equipment per SD-96517-01, Fig 1, options R and T, required in addition to list 1 for No. 13C, 13D, 14C, 14D, 15C, or 15D switchboard when transfer is not controlled by 2-way signal circuit.

List 4—Wiring and equipment per SD-96517-01, Fig 10, required in addition to list 1 for 48-volt transfer battery supply when transfer is not controlled by 2-way signal circuit.

List 5—Wiring and equipment per SD-96517-01, Fig 11, required in addition to list 1 for 130-volt transfer battery supply when transfer is not controlled by 2-way signal circuit.

List 6—Wiring and equipment per SD-96517-01, Fig 12, required in addition to list 1 for transfer

tone supply when transfer is not controlled by 2-way signal circuit.

Note

A. Provide one unit per J99235BD for each additional 20 emergency lines.

J99235BD—AT&TCo Std—No. 1, 3, 3C, or 3CL Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Emergency Transfer Unit for Additional Trunks—With E and M Lead Supervision—Arranged To Use Existing Trunk Qualities To Terminate Lines From a Distant No. 5 Crossbar, ESS No. 1, or Step-by-Step Office—Three 2- by 23-Inch Mounting Plates

List 1—Framework, assembly, wiring, and equipment for transfer of 20 additional intercepting or information trunk conductors for emergency line use with E and M lead supervision per SD-96517-01, Fig 3 and 4.

Note

A. The unit per J99235BC must be provided for the first 18 trunks.

J99235BE—AT&TCo Std—No. 1, 3, 3C or 3CL Toll Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D—Emergency Transfer Unit—Intercepting or Information Trunks With Loop Supervision—Arranged To Use Existing Facilities To Terminate Lines From a Distant No. 5 Crossbar, Step-by-Step, or ESS No. 1 Office—Three 2- by 23-Inch Mounting Plates

List 1—Framework, assembly, wiring, and equipment for transfer of 20 additional intercepting or information trunk conductors for emergency line use with loop signaling per SD-96517-01, Fig 3 and 5.

Note

A. The unit per J99235BF must be provided for the first 19 trunks.

J99235BF—AT&TCo Std—No. 1, 3, 3C, or 3CL Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Emergency Transfer Unit—Intercepting or Information Trunks—With Loop Supervision Arranged To Use Existing Trunk Facilities To Terminate Lines From a Distant No. 5 Crossbar or ESS No. 1 Office—Three 2- by 23-Inch Mounting Plates

List 1—Framework, assembly, wiring, and equipment for transfer of the first 19 intercepting or information trunk conductors for emergency line use with loop supervision per SD-96517-01, Fig 1 and 5.

List 2—Wiring and equipment per SD-96517-01, Fig 1, options R and S, required in addition to list 1 for No. 1, 3, 3C, or 3CL toll switchboard when transfer is not controlled by 2-way signal circuit.

List 3—Wiring and equipment per SD-96517-01, Fig 1, options R and T, required in addition to list 1 for No. 13C, 13D, 14C, 14D, 15C, or 15D switchboard when transfer is not controlled by 2-way signal circuit.

List 4—Wiring and equipment per SD-96517-01, Fig 10, required in addition to list 1 for 48-volt transfer battery supply when transfer is not controlled by 2-way signal circuit.

List 5—Wiring and equipment per SD-96517-01, Fig 10, required in addition to list 1 for 48-volt transfer battery supply when transfer is not controlled by 2-way signal circuit.

List 6—Wiring and equipment per SD-96517-01, Fig 12, required in addition to list 1 for transfer tone supply when transfer is not controlled by 2-way signal circuit.

Note

A. Provide one unit per J99235BE for each additional 20 emergency lines.

J99235BG—AT&TCo Std—No. 1, 3, 3C, or 3CL Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Emergency Transfer Unit—For Transfer of Recording Completing Trunk Circuit for Emergency Use—Arranged To Use Existing Trunk Facilities To Terminate Lines From a Distant No. 5 Crossbar, Step-by-Step, or ESS No. 1

Office—One 2- by 23-Inch Mounting Plate

List 1—Assembly, wiring, and equipment for transfer of ten recording completing trunk circuits for emergency line use with provision for transferring 90 additional emergency lines per SD-96517-01, Fig 6.

List 2—Wiring and equipment per SD-96517-01, Fig 7, required in addition to list 1 for transfer of ten additional emergency lines.

List 3—Wiring and equipment per SD-96517-01, Fig 6, options R and S, required in addition to list 1 for No. 1, 3, 3C, or 3CL toll switchboard when transfer is not controlled by 2-way signal circuit.

List 4—Wiring and equipment per SD-96517-01, Fig 6, options R and T, required in addition to list 1 for No. 13C, 13D, 14C, 14D, 15C, or 15D switchboard when transfer is not controlled by 2-way signal circuit.

List 5—Wiring and equipment per SD-96517-01, Fig 10, required in addition to list 1 for 48-volt transfer battery supply when transfer is not controlled by 2-way signal circuit.

List 6—Wiring and equipment per SD-96517-01, Fig 11, required in addition to list 1 for 130-volt supply when transfer is not controlled by 2-way signal circuit.

List 7—Wiring and equipment per SD-96517-01, Fig 12, required in addition to list 1 for tone supply when transfer is not controlled by 2-way signal circuit.

J99235BH—AT&TCo Std—Outgoing Trunk Unit—For Dial Coin Zone Service—For Use With Cord Switchboard Located in Distant Building—No. 1 Crossbar, Panel, or Step-by-Step Office—Two 2- by 23-Inch Mounting Plates

List 1—Assembly, equipment, and wiring required for one trunk where length of cable between MDFs is less than 3000 feet or where only loaded cable is used and loss between MDFs exceeds 6 dB in accordance with SD-96523-01, Fig 1 and 3. (See Notes C and D.)

List 2—Assembly, equipment, and wiring required for one trunk where length of cable between MDFs is greater than 3000 feet and where the loss between MDFs is 6 dB or less in accordance with SD-96523-01, Fig 1 and 4.

List 3—Equipment and wiring required in addition to list 1 or 2 to provide for concentrator operation in accordance with SD-96523-01, Fig 2.

Notes

A. Wiring per SD-96523-01, option W, is required in addition to list 3 to provide busy ground on the first equipped circuit only.

B. Job records need not be maintained for option W, X, Y, or Z.

C. No provision is made for nonloaded cable with a loss greater than 6 dB.

D. When loaded cable only is used and loss between MDFs exceeds 6 dB, provide E3 repeater and connect in accordance with SD-96523-01, FS 3, and strap in accordance with Note 302. Where loss is greater than 13 dB, also provide an E23 repeater at the switchboard office, or at an intermediate office, in addition to the E3 repeater.

J99235BJ—AT&TCo Std—Outgoing Trunk Unit—For Dial Coin Zone Service—For Use With Cord Switchboard Located in Same Building—No. 1 Crossbar, Panel, or Step-by-Step Office—Two 2- by 23-Inch Mounting Plates

List 1—Assembly, equipment, and wiring for one outgoing trunk in accordance with SD-96522-01, Fig 1.

List 2—Equipment and wiring required in addition to list 1 to provide for operation with No. 1 toll switchboard in the same building in accordance with SD-96522-01, Fig 2.

List 3—Equipment and wiring required in addition to list 1 to provide for operation with No. 13C, 13D, 14C, 14D, 15C, 15D, and DSA switchboard in the same building in accordance with SD-96522-01, Fig 3.

List 4—Equipment and wiring required in addition to list 1 to provide for operation with No. 3C or 3CL switchboard in the same building in accordance with SD-96522-01, Fig 4.

List 5—Equipment and wiring required in addition to list 1 to provide for concentrator operation in accordance with SD-96522-01, Fig 5.

Notes

A. Wiring per SD-96522-01, option Y, is required in addition to list 2 when this circuit connects to No.

1 toll switchboard with coin control circuit of the position type.

B. Wiring per SD-96522-01, option Z, is required in addition to list 2 when this circuit connects to No. 1 toll switchboard with coin control circuit of the separate jack type.

C. Wiring per SD-96522-01, option W, is required in addition to list 5 to provide busy ground on the first equipped circuit only.

J99235BK—AT&TCo Std—Signal Generator Unit for Supplying Frequencies to Keysets Arranged To Pulse 2/6 and 4 by 4 Frequencies

List 1—Framework, assembly, wiring, and equipment for one signal generator unit per SD-99328-01, Fig 1, 2, 3, 4, and 5, less all options. (See Note A.)

List 3—Wiring and equipment per SD-99328-01, Fig 1, option Z only, required in addition to list 1 when a transmission output level of −8 dBm per tone is required, or when circuit is used in 5D switchboard, 19A or 21A testboard, or switched services testboard. (See Note A.)

List 4—Wiring and equipment per SD-99328-01, Fig 1, option Y only, required in addition to list 1 when a transmission output level of −6 dBm per tone is required, or when circuit is used in local test desk No. 14. (See Note A.)

List 5—Wiring and equipment per SD-99328-01, Fig 1, option V only, required in addition to list 1 when signal generator unit is powered by a −48 volt battery supply. (See Note A.)

List 6—Wiring and equipment per SD-99328-01, Fig 1, option T only, required in addition to list 1 when signal generator unit is powered by a +24 volt battery supply. (See Note A.)

List 7—Bracket required in addition to list 5 or 6 when hardening is required.

Note

A. One list 3 or 4 and one list 5 or 6 must be provided with list 1.

J99235BL—AT&TCo Std—No. 1 Crossbar and/or Panel Outgoing Trunk Unit—For Dial Coin Zone Service Via Crossbar or Panel Sender Tandem With Operator Control at Local or Remote Switchboard

List 1—Framework, common equipment, wiring, and assembly for one trunk.

	WIRE	EQUIP	NOTES
Outgoing Trunk Ckt, SD-96518-01:			A
Fig 1	1	1	
Fig 2	1	0	
Fig 3, 4, & 5, each	1	0	

List 2—Equipment per SD-96518-01, Fig 2, required in addition to list 1 for each of a maximum of eight charging rates for which the trunk is to be arranged. (See Note E.)

List 3—Equipment per SD-96518-01, Fig 3, required in addition to list 1 when operator assistance is handled via concentrators.

List 4—Equipment per SD-96518-01, Fig 4, required in addition to list 1 to arrange the trunk for overtime charging on local calls.

List 5—Equipment per SD-96518-01, Fig 5, required in addition to list 1 to arrange the trunk for automatic return of initial deposit.

List 6—Equipment per SD-96518-01, Fig 10, required in addition to list 1 when positive talk battery is required for use with coin station sets arranged for dial-tone-first operation to cancel the nickel trap feature or permit totalizer readout and to disable the TOUCH-TONE dial after an operator is connected. (See Note B.)

Notes

A. The unit local cable contains all wiring options. R, T,V, and W wiring are administered externally at the unit terminal strips.

B. Provide wiring per SD-96518-01, option J, when list 6 is not furnished.

C. Provide wiring per SD-96518-01, option G, when coin control over the tip lead with the ring lead open is required for use with coin station sets arranged for dial-tone-first operation to permit operation of the coin magnet by releasing the ground isolation relay. (See Note D.)

D. Provide wiring per SD-96518-01, option H, when option G is not furnished.

E. List 2 shall be equipped in consecutive order from charge rate 1 up to maximum charge rate required.

J99235BM—AT&TCo Std—No. 1 Crossbar and/or Panel—Timed Release and Alarm Unit for Use With Dial Coin Zone Trunk J99235BL—Surface Wired

List 1—Equipment, assembly, and surface wiring for a 2-circuit release and alarm unit per SD-96518-01, Fig 7 and 9. (See Note A.)

Note

A. Each of the two circuits on the unit serves five even- or five odd-numbered coin zone trunks in the same group of ten. The unit is located on a relay rack with its associated trunks, at a convenient height from the floor.

J99235BR—AT&TCo Std—Echo Suppressor and Amplifier Unit—For Use With Trunk Circuits—No. 5C or 5D Switchboard or No. 5 Crossbar Office

List 1—Framework, assembly, wiring, and equipment for a unit of two amplifier circuits per SD-95924-01, Fig 1. (See Note B.)

List 2—Equipment per SD-95924-01, Fig 1, option Y, required in addition to list 1 when used with toll switching trunk circuit or outgoing trunk circuit.

Notes

A. Provide Z wiring when list 2 is not specified.

B. The 1A echo suppressor specified in SD-95924-01, Fig 1, is located on the 1A echo suppressor bay and shall be provided in accordance with J68606K.

J99235BS—AT&TCo Std—TOUCH-TONE Frequency Test Unit—Three 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Assembly, wiring, and equipment for SD-94813-01, Fig 1, and SD-98150-01, Fig 2, for one TOUCH-TONE frequency test unit. (See Notes A and B.)

List 2—Wiring and equipment required in addition to list 1 when test of 4-wire, 16-pushbutton stations is required per SD-94813-01, Fig 2.

List 3—Wiring and equipment per SD-94813-01, option Q only, required in addition to list 1 when the associated TOUCH-TONE receiver is equipped with eight channels and list 2 is not provided.

List 4—Wiring and equipment per SD-94813-01, Fig 3, required in addition to list 1 when unit is used in conjunction with speed test circuit for automatic dialers.

Notes

A. Provide K wiring per SD-94813-01, when list 4 is not furnished.

B. One TOUCH-TONE station test receiver unit per J99297A is required with each TOUCH-TONE frequency test unit. These units are mounted on miscellaneous relay racks with the TOUCH-TONE station test unit directly above its associated TOUCH-TONE frequency test unit.

J99235BT—AT&TCo Std—TOUCH-TONE Frequency Test Connector Unit (Arranged for Ten Inputs and Four Outputs)—Eight 2- by 23-Inch Mounting Plates

List 1—Assembly, wiring, and equipment for one TOUCH-TONE frequency test connector unit equipped for ten inputs and four outputs in accordance with SD-94814-01, Fig 1.

J99235BU—AT&TCo Std—TOUCH-TONE Frequency Test Connector Unit (Arranged for Three Inputs and One Output)—One 2- by 23-Inch Mounting Plate

List 1—Assembly, wiring, and equipment for one TOUCH-TONE frequency test connector unit, equipped for three inputs and one output in accordance with SD-94814-01, Fig 2.

J99235BY—AT&TCo Std—Auxiliary Permanent Signal Holding Trunk for Automatic Application of Announcement and Receiver Off-Hook Tone—Announcement and Tone Control Unit

List 1—Assembly, equipment, and wiring per SD-99329-01, Fig 1, for one announcement and tone control unit.

List 2—Wiring and equipment per SD-99329-01, option ZM, in Fig 1, required in addition to list 1 for Unigauge range extension without audible ring.ing

List 3—Wiring and equipment per SD-99329-01, option B, in Fig 1, required in addition to list 1

when connected in No. 5 crossbar office or No. 1 Crossbar office.

List 3—Wiring and equipment per SD-99329-01, option ZN and ZB, required in addition to list 1 for both Unigauge range extension and audible ringing.

List 4—Wiring and equipment per SD-99329-01, option ZN and ZB required in addition to list 1 for audible ringing without Unigauge range extension.

Note

A. Provide optional wiring as required.

J99235CA—AT&TCo Std—Test Line and Test Line Connector Equipment for Use With 2B Concentrator

List 2—Equipment required in addition to list 1 or 3 when hardening is required.

List 3—Assembly, wiring, and equipment for one test line connector circuit per SD-99353-01, Fig 1, with options W and Y.

J99235CB—AT&TCo Std—Auxiliary Line Circuit Unit Arranged for One-Way Dial Pulse to Local Office With E and M Lead Supervision From Switched Services Network Office, for Use in No. 1 and No. 5 Crossbar, Step-by-Step and ESS No. 1, 1A, 2, 2A, and 3 Offices, With Line or Auxiliary Line Circuits Arranged for Ground Start on Ring-Two 2- by 23-Inch Mounting Plates

List 1—Assembly, wiring, and equipment for one auxiliary line circuit unit per SD-99415-01, Fig 1 and option T. (See Notes A and B.)

List 2—Wiring and equipment required in addition to list 1, for ESS offices, per SD-99415-01, option S, (less option T.)

Notes

A. Furnish Y wiring, in additon to list 1 for No. 1 or No.5 crossbar or ESS offices.

B. Furnish X wiring, in addition to list 1, for step-by-step offices arranged for common or non-common control TOUCH-TONE calling, or for ESS offices.

J99235CC—AT&TCo Std—Remote Control Unit for 2-Way Signaling to Local Office—Toll and DSA Switchboards

List 1—Assembly, equipment, and surface wiring for one remote control circuit per SD-99330-01, Fig 1.

Notes

A. Furnish V or T wiring when required.

B. Installer shall provide W, X, Y, and Z wiring as required.

J99235CD—AT&TCo Std—Local Central Office Control Unit for 2-Way Signaling to Distant Switchboard

List 1—Assembly, equipment, and surface wiring for four local central office control circuits per SD-99330-01, Fig 3.

J99235CE—AT&TCo Std—Toll Switchboard No. 1, 3, 3C, or 3CL, Switchboard No. 13C, 13D, 14C, 14D, 15C, or 15D—Transfer Unit for Transfer of Emergency Lines Through Trunks Using 2-Way Trunk Circuits To Terminate Lines From a Distant No. 5 Crossbar, ESS No. 1, or Step-by-Step Office

List 1—Common equipment required for transfer of emergency lines (using 2-way trunk circuits) per SD-96517-01, five Fig 13 and five Fig 14.

List 2—Wiring and equipment for transfer of 12 emergency lines (using 2-way trunk circuits) per SD-96517-01, Fig 13.

List 3—Wiring and equipment for transfer of 12 intercept or information trunks (using 2-way trunk circuits) per SD-96517-01, Fig 14.

J99235CJ—AT&TCo Std—Permanent Signal Holding Trunk Receiver Off-Hook Announcement and Tone Timing Control Unit

List 1—Assembly, equipment, and wiring for one receiver off-hook announcement and tone timing control circuit per SD-95554-01, Fig 5.

List 2—Apparatus and wiring required in addition to list 1 when PBX or combined classes of service is provided per SD-95554-01, Fig 7. (See Note A.)

Note

A. Wiring required in addition to list 2 to eliminate automatic application of receiver off-hook tone to a PBX attendant per SD-95554-01, option ZK.

J99235CK—AT&TCo Std—PBX-AIOD Signaling Converter Unit

List 1—Assembly, wiring, and equipment per SD-99435-01, Fig 2 and two Fig 1, for one signaling converter unit for use with two data links (two converters per unit).

J99235CM—AT&TCo Std—Auxiliary Permanent Signal Holding Trunk Announcement and Tone Generator Alarm Unit

List 1—Assembly, wiring, and equipment per SD-99329-01, Fig 2 and 6, for one announcement and tone generator alarm circuit for 250 permanent signal holding trunk circuits.

List 2—Wiring and equipment per SD-99329-01, Fig 2, option V, required in addition to list 1 for alarm circuits requiring battery.

J99235CN—AT&TCo Std—Tie Trunk Unit—One- or 2-Way—Same Building Without Transfer—For Connection Between No. 3 Type Switchboards, Testboards, Bays, Frames, Relay Racks, Test Units—Maintenance Desks or No. 12 Service Observing Desks

List 1—Assembly, wiring, and equipment for one basic trunk circuit per SD-99434-01, Fig 1. (See Notes A and B.)

List 2—Wiring and equipment per SD-99434-01, Fig 5, required in addition to list 1 for dc blocking capacitor for 2-wire circuits.

List 3—Wiring and equipment per SD-99434-01, Fig 5, option W only, required in addition to list 2 for 4-wire circuits.

List 4—Wiring and equipment per SD-99434-01, Fig 10, required in addition to list 1 to provide connection at end A to switchboards such as No. 3, 3C, 3CF, or 3CL or testboards such as No. 17B or 18B. (See Note C.)

List 5—Wiring and equipment per SD-99434-01, Fig 10, required in addition to list 1 to provide connection at end B to switchboards such as No. 3, 3C, 3CF, or 3CL or testboards such as No. 17B or 18B. (See Note C.)

List 6—Wiring and equipment per SD-99434-01, Fig 14, and option ZY, required in addition to list 1 to provide connection at end A to No. 5 type switchboards or No. 19A or No. 21A testboards.

List 7—Wiring and equipment per SD-99434-01, Fig 14, and option ZZ, required in addition to list 1 to provide connection at end A to No. 17C or 17D testboards.

List 8—Wiring and equipment per SD-99434-01, Fig 14, and option ZY, required in addition to list 1 to provide connection at end B to No.5 type switchboards or No. 19A or No. 21A testboards.

List 9—Wiring and equipment per SD-99434-01, Fig 14, and option ZZ, required in addition to list 1 to provide connection at end B to N, 17C or 17D testboards.

List 10—Wiring and equipment per SD-99434-01, Fig 34, required in addition to list 1 when list 4 or 5 is specified for building-out capacitor.

List 11—Wiring and equipment per SD-99434-01, Fig 35, and option ZN, required in addition to list 1 when audible ringing is required toward end A.

List 12—Wiring and equipment per SD-99434-01, Fig 35, and option ZN, required in addition to list 1 when audible ringing is required toward end B.

List 13—Wiring and equipment per SD-99434-01, Fig 4, required in addition to list 1 for battery supply for consoles, handsets, or subsets.

List 14—Wiring and equipment per SD-99434-01, Fig 41, and option XC, required in addition to list 1 when the jack and lamp in the connecting circuit at end A requires −24 volt battery on the S lead for operation.

List 15—Wiring and equipment per SD-99434-01, Fig 41, and option XC, required in addition to list 1 when the jack and lamp in the connecting circuit at end B requires −24 volt battery on the S lead for operation.

Notes

A. Provide wiring per SD-99434-01, FS 9 and FS 18 for connection to bays, frames, relay racks, test units, and maintenance desks.

B. Provide optional wiring as required.

C. Provide XH wiring.

J99235CP—AT&TCo Std—Auxiliary Line Unit for Measured Rate INWATS Service

List 5—Equipment and wiring per SD-99439-01, options Z, ZW, and YC required in addition to list 20 when this unit is used in a step-by-step office.

List 6—Equipment and wiring per SD-99439-01, option T, required in addition to list 1 or 9 when used in panel battery cutoff offices. (See Note C.)

List 7—Equipment and wiring per SD-99439-01, option V, required in addition to list 1 or 9 when used in panel ground cutoff offices. (See Note C.)

List 9—Assembly, equipment, and wiring per SD-99439-01, Fig 1, with options D and ZE, less all other options, for one auxiliary line unit for use in the No. 1 crossbar, No. 5 crossbar, panel, step-by-step, No. 1 ESS offices, or No. 2 ESS offices. (See Notes A, B, and C.)

List 11—Equipment and wiring per SD-99439-01, options X, ZF, and YC required in addition to list 20 when this unit is used in a No. 1 crossbar office.

List 12—Equipment and wiring per SD-99439-01, options ZA and YC required in addition to list 20 when this unit is used in a No. 1 or No. 2 ESS office.

List 13—Equipment and wiring per SD-99439-01, options D and ZC required in addition to list 20, when this unit is used in a No. 1 or No. 5 crossbar or a step-by-step office.

List 14—Equipment and wiring per SD-99439-01, option ZH only, required in addition to list 9 when used in No. 2 ESS offices. (Omit option D.) (See Note C.)

List 16—Equipment and wiring per SD-99439-01, option ZK required in addition to list 20, when this unit is used in a No. 5 crossbar office. (See Note D.)

List 17—Equipment and wiring per SD-99439-01, option ZL, required in addition to list 16 for terminating service with manual class of service for origination in No. 5 crossbar offices.

List 18—Wiring and equipment per SD-99439-01, Fig 1, option ZM only, required in addition to list 9 when the message count registration feature is required (omit option ZP). (See Notes D, E, and F.)

List 19—Reserved.

List 20—Assembly, equipment, and wiring per SD-99439-01, Fig 1 and Fig 4 with options H, YA, ZS, and ZV, for one auxiliary line unit. (See Notes A, B, and C.)

List 21—Equipment and wiring per SD-99439-01, option YD required in addition to list 16, when manual class of service is specified for attempted origination on INWATS lines in a No. 5 crossbar office. (See Note E.)

List 22—Apparatus and wiring per SD-99439-01, Fig 8, required in addition to list 16, when connection to the No. 5 crossbar distributor and scanner application for ETS is required.

List 23—Wiring and equipment per SD-99439-01, Fig 1, option XU only, required in addition to list 20 when variable measured rate (time of day) is required.

Notes

A. Auxiliary line units are used to provide measured rate INWATS service in No. 1 and No. 5 crossbar, step-by-step, No. 1 and No. 2 ESS offices. Four measuring devices shall be provided with each unit: A (TM) running time meter, a (MR) message register, a (SZ) seizure register, and an (OF) overflow register. The meters are mounted on the J99235EB unit and the registers are mounted on three separate J99235EF units. See ED-94938-10 for mounting.

B. Auxiliary line units should be located on the same relay rack or frame as the associated J99235EB timer units and the J99235EF registration units. The auxiliary line units shall be serially numbered with the same numbers that are shown on their associated measuring devices.

C. Options F and G are administered at the unit terminal strip depending on the features required by the telephone company.

D. Option ZY shall be provided in a No. 5 crossbar office when a ground busy is required on the NS lead.

E. Option YC shall be provided in a No. 5 crossbar office when list 21 is not required.

J99235CR—AT&TCo Std—Auxiliary Signaling Relays—For MJ or MK Mobile Telephone System—Switchboard End—Auxiliary Relay Unit

List 1—Framework, assembly, wiring, and equipment per SD-99419-01, for two Fig 1, for two switchboard end auxiliary relay circuits.

J99235CS—AT&TCo Std—Auxiliary Signaling Relays—For MJ or MK Mobile Telephone System—MJ Mobile Telephone End—Auxiliary Relay Unit

List 1—Framework, assembly, wiring, and equipment per SD-99419-01, Fig 2, for two MJ or MK mobile telephone auxiliary circuits.

J99235CT—AT&TCo Std—E and M Lead Signaling Test Unit—One 2- by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, wiring, and equipment for one E and M lead signaling test unit per SD-99407-01, Fig 1.

List 2—Wiring and equipment per SD-99407-01, Fig 1, option Z, required in addition to list 1 for use with No. 22A testboard.

List 3—Wiring and equipment per SD-99407-01, Fig 1, option Y, required in addition to list 1 for use with No. 50A test position.

List 4—Equipment required in addition to list 1 for use in hardened sites.

J99235CU—AT&TCo Std—PBX—Automatic Identified Outward Dialing Signaling Converter Unit—For Converting Simplex Supervision to E and M Supervision

List 1—Framework, assembly, wiring, and equipment for one signaling converter unit arranged and equipped for two signaling converter circuits for converting simplex supervision to E and M supervision per SD-99446-01, Fig 1, 2, and 3.

J99235CV—AT&TCo Std—Monitoring Unit—For Signaling Circuits Having Sending M Leads and Receiving E Leads Occupies Space of Nine 2- by 23-Inch Mounting Plates—Local Cable

List 5—Assembly, local cable, and common equipment per SD-99441-01, 15 Fig 1, 10 Fig 3, 1 Fig 4, option X, and 10 Fig 5 for one monitoring unit for signaling circuits having M leads and receiving E leads for use with toll testboard No. 17C (circuits 0-4, 7-16). (See Notes A, B, C, and D.)

List 6—Equipment per SD-99441-01, 2 Fig 1, required in addition to list 5 for two additional circuits (circuits 5 and 6). (See Notes B and F.)

List 7—Equipment per SD-99441-01, 3 Fig 1, required in addition to list 5 for three additional circuits (circuits 17-19). (See Notes B and F.)

Notes

A. Twenty 407A electron tubes are required for the operation of this unit. These tubes are not furnished as part of the unit, and shall be provided only when specified by the customer.

B. The associated keys and lamps per SD-99441-01, Fig 2, shall be located as shown on testboard No. 17C front equipment, drawing ED-68737-( ), or ED-68210-( ).

C. This unit shall be located as shown on testboard No. 17C front equipment, drawing ED-68737-( ), or ED-68210-( ).

D. The local cable shall be provided for 20 circuits.

E. Provide list 6 when SMAS MAINTENANCE line control panel is not provided.

F. Provide list 7 when KS-19260 oscillator is not provided in the jack field.

J99235CW—AT&TCo Std—Frame Line Unit—For Use With Switchboards, Testboards, Desks, Bays, Frames, Racks—TSPS No. 1 or Stored Program Control No. 1—Without Signaling

List 1—Assembly, wiring, and equipment for one basic frame line circuit per SD-99434-01, Fig 2. (See Notes A and B.)

List 2—Wiring and equipment per SD-99434-01, Fig 2, option X only, required in addition to list 1 for switchboard or testboard requiring 1800-ohm sleeve.

List 3—Wiring and equipment per SD-99434-01, Fig 2, option Y only, required in addition to list 1 for No. 17C testboard (4-wire 350-ohm sleeve).

List 4—Wiring and equipment per SD-99434-01, Fig 2, option Z only, required in addition to list 1 for DSA or manual switchboard (37-ohm sleeve).

List 5—Wiring and equipment per SD-99434-01, Fig 4 and 5, for blocking capacitors and battery supply for consoles, handsets, or subsets.

List 6—Wiring and equipment per SD-99434-01, Fig 2, option YE only, required in addition to list

1 when blocking capacitors for switchboards or testboards are required.

Notes

A. Provide option ZW for TSPS No. 1 operation. The 6017D key is provided on a miscellaneous basis and mounted as specified by the customer.

B. Provide optional wiring as required.

J99235CY—AT&TCo Std—Frame Line Unit—For Connection to Switchboards, Testboards, Handsets, Subsets, Bays, Frames, Relay Racks, Test Positions, Maintenance Desks, Key Telephones, or Consoles—With Signaling

List 1—Framework, assembly, wiring, and equipment for one frame line unit per SD-99434-01, Fig 1, 2, and 5. (See Notes A and B.)

List 2—Wiring and equipment per SD-99434-01, Fig 4, required in addition to list 1 for battery supply for console, handset, or subset.

List 3—Wiring and equipment per SD-99434-01, Fig 10, required in addition to list 1 when connection is made to No. 3, 3C, 3CF, or 3CL switchboard, No. 17B, 17E, 18B, 19A, 20A, or 21A testboard, or No. 5A test unit. (See Note B.)

List 4—A&M Only—Wiring and equipment per SD-99434-01, Fig 11, required in addition to list 1 when connection is made to No. 1 toll switchboard. (See Note B.)

List 5—Wiring and equipment per SD-99434-01, Fig 12 with option XH, required in addition to list 1 when connection is made to manual switchboard No. 1, 1D, 10, 11, or DSA switchboard No. 13, 14, or 15 type or No. 19 operating room desk.

List 6—Wiring and equipment per SD-99434-01, Fig 13, required in addition to list 1 when connection is made to manual switchboard No. 12.

List 7—Wiring and equipment per SD-99434-01, Fig 14 and option ZY, required in addition to list 1 when connection is made to No. 5 type switchboard or testboard No. 19A or 21A.

List 8—Wiring and equipment per SD-99434-01, Fig 14 and option ZZ, required in addition to list 1 when connection is made to No. 17C or 17D testboard.

List 9—Wiring and equipment per SD-99434-01, Fig 35 and option ZN, required in addition to list 1 when audible ringing is required toward end B.

List 10—Wiring and equipment per SD-99434-01, Fig 34, required in addition to list 3 or 4 when equalization of office cable capacitance is required.

List 11—Wiring and equipment per SD-99434-01, Fig 41, and option XC, required in addition to list 1 when the jack and lamp in the connecting circuit at end A requires −24 volt battery on the S lead for operation.

Notes

A. Provide wiring per SD-99434-01, FS 6, 7, 9, 17, or 18, for connection to handset jacks, subsets, bays, frames, relay racks, test frames, key telephones, consoles, repair service desks, or equivalent.

B. Provide optional wiring as required.

J99235DA—AT&TCo Std—Incoming to ESS Offices or Tie Line Unit—One- or 2-Way—Same or Distant Building—Or Incoming Trunk Unit—E and M or Loop Supervision—With or Without Electrical Hold and Automatic Release to Official PBX, Toll, or Local Subscriber Line Circuit—For Connection Between Switchboards, Testboards, Handsets, Subsets, Bays, Frames, Relay Racks, Key Telephones, Consoles, or Maintenance Desk

List 1—Framework, assembly, wiring, and equipment per SD-99434-01, Fig 1, for one basic tie line trunk circuit. (See Notes A, B, C.)

List 2—Wiring and equipment per SD-99434-01, Fig 4, required in addition to list 1 for battery supply for consoles, handsets, or subsets.

List 3—Wiring and equipment per SD-99434-01, Fig 5, required in addition to list 1 for dc blocking capacitors for 2- or 4-wire lines.

List 4—Wiring and equipment per SD-99434-01, Fig 5, option W only, required in addition to list 3 for dc blocking capacitor for 4-wire lines.

List 5—Wiring and equipment per SD-99434-01, Fig 10, required in addition to list 1 for connection at end A to No. 3, 3C, 3CF, 3CL switchboard, or testboard such as No. 8, 16, 17B, 17E, 18B, 19A, 20A, 21A, and test unit No. 5A. (See Note F.)

List 6—A&M Only—Wiring and equipment per SD-99434-01, Fig 11, required in addition to list 1 to provide connection at end A to toll switchboard No. 1. (See Note F.)

List 7—Wiring and equipment per SD-99434-01, Fig 12 with option XH, required in addition to list 1 to provide connection at end A to No. 1, 1D, 10, 11, 13, 14, or 15 type switchboard to No. 19A operating room desk.

List 8—Wiring and equipment per SD-99434-01, Fig 13, required in addition to list 1 to provide connection at end A to No. 12 switchboard.

List 9—Wiring and equipment per SD-99434-01, Fig 14 and option ZY, required in addition to list 1 to provide connection at end A to No. 5 type switchboard or testboard No. 19A or 21A.

List 10—Wiring and equipment per SD-99434-01, Fig 14 and option ZZ, required in addition to list 1 to provide connection at end A to testboard No. 17C or 17D.

List 11—Wiring and equipment per SD-99434-01, Fig 31, required in addition to list 1 when end A connects to console or key telephone set, key and lamp of telephone circuit, or key telephone circuit without key telephone system and when electrical hold automatic release is required.

List 12—Wiring and equipment per SD-99434-01, Fig 10, required in addition to list 1 when end B connects to toll switchboards No. 3, 3C, 3CF, or 3CL; testboard No. 8, 16, 17B, 17E, 18B, 19A, 20A, or 21A or test unit No. 5A. (See Note F.)

List 13—A&M Only—Wiring and equipment per SD-99434-01, Fig 11, required in addition to list 1 to provide connection at end B to toll switchboard No. 1. (See Note F.)

List 14—Wiring and equipment per SD-99434-01, Fig 12 with option XH, required in addition to list 1 to provide connection at end B to No. 1, 1D, 10, 11, 13, 14, or 15 type switchboard, or to No. 19A operating room desk.

List 15—Wiring and equipment per SD-99434-01, Fig 13, required in addition to list 1 to provide connection at end B to No. 12 switchboard.

List 16—Wiring and equipment per SD-99434-01, Fig 14 and option ZY, required in addition to list 1 to provide connection at end B to No. 5 type switchboard or to No. 19A or 21A testboards.

List 17—Wiring and equipment per SD-99434-01, Fig 14 and option ZZ, required in addition to list 1 to provide connection at end B to testboard No. 17C or 17D.

List 18—Wiring and equipment per SD-99434-01, Fig 15, required in addition to list 1 to provide connection at end B to a distant building using E and M lead supervision with or without transfer. (See Notes B and G.)

List 19—Wiring and equipment per SD-99434-01, Fig 16 and option N, required in addition to list 1 to provide connection at end B to a distant building with high-low supervision.

List 20—Wiring and equipment per SD-99434-01, Fig 16 and option M, required in addition to list 1 to provide connection at end B to a distant building with reverse battery supervision.

List 21—Wiring and equipment per SD-99434-01, Fig 17, required in addition to list 1 to provide connection at end B to panel, No. 1 or No. 5 crossbar, or step-by-step offices in same building. (See Notes D and E.)

List 22—Wiring and equipment per SD-99434-01, Fig 18 and option YJ, required in addition to list 1 to provide connection at end B to official PBX, subscriber line circuit, or toll subscriber line circuit.

List 23—Wiring and equipment per SD-99434-01, Fig 16, option ZA only, required in addition to list 19 or 20 when impedance ratio between transmission facilities and trunk circuit is 1 to 1.

List 24—Wiring and equipment per SD-99434-01, Fig 16, option D only, required in addition to list 19 or 20 when impedance ratio between transmission facilities and trunk circuit is 1 to 1.5.

List 25—Wiring and equipment per SD-99434-01, Fig 34, required in addition to list 5, 6, 12, or 13 when equalization of office cable capacitance is required.

List 26—Wiring and equipment per SD-99434-01, Fig 35 and option ZN, required in addition to list 1 when audible ringing toward end A is required in a non-ESS office.

List 27—Wiring and equipment per SD-99434-01, Fig 35 and option ZN, required in addition to list 1 when audible ringing toward end B is required in a non-ESS office.

List 28—Wiring and equipment per SD-99434-01, Fig 13, option ZX only, required in addition to list 8 to provide cord supervision to a manual office at end B.

List 29—Wiring and equipment per SD-99434-01, Fig 17, option ZG only, required in addition to

list 21 to provide connection at end B to step-by-step offices

List 30—Wiring and equipment per SD-99434-01, Fig 31, option YY only, required in addition to list 11 for connection to interrupter other than key telephone systems and start lead is required for 120-IPM interruptions.

List 31—Wiring and equipment per SD-99434-01, Fig 8, option YR only, required in addition to list 1 for use in ESS offices at end A wired per FS 18.

List 32—Wiring and equipment per SD-99434-01, Fig 41, and option XC, required in addition to list 1 when the jack and lamp in the connecting circuit at end A requires −24 volt battery on the S lead for operation.

List 33—Wiring and equipment per SD-99434-01, Fig 18, option XU only, required in addition to list 22 for connection from a step-by-step office in the same or adjacent building with connectors arranged for terminating service only, when transfer from primary answering location to a secondary answering location (park-on type trunk) is required or when the primary answering location is to be made busy.

List 34—Wiring and equipment per SD-99434-01, Fig 18, option XX only, required in addition to list 22 when incoming signals lock in for a maximum of two minutes on unanswered calls.

Notes

A. Provide wiring per SD-99434-01, FS 6, 7, 9, 17, or 18, for connection to handset jacks, subsets, bays, frames, relay racks, key telephones, consoles, or maintenance desks, as required.

B. Provide G wiring when transfer ability is required and F wiring when transfer ability is not required. Provide E wiring when trunk impedance is 600 ohms.

C. The TR relays per SD-99434-01, Fig 23, 24, or 25, are provided on a miscellaneous basis.

D. Provide YF wiring to provide for connection to a panel, No. 1 crossbar, crossbar tandem, or No. 5 crossbar office.

E. Provide YG wiring.

F. Provide XH wiring.

G. Provide YZ wiring.

H. Provide the transfer key and transfer and make-busy relay per SD-99434-01, Fig 44 on a miscellaneous basis.

J99235DC—AT&TCo Std—Line or Trunk Unit for Maintenance Communication or Repair Service—Incoming or 2-Way Trunk Unit—Multiple Circuit for Joint Access Grouping or Add-On of Similar or Unlike Circuits at End A—Transfer From Repair Service Desk and From Consoles or Key Telephones to Switchboards or Testboard

List 1—Framework, assembly, wiring, and equipment per SD-99434-01, Fig 1 and 20, required for multiple circuit for joint access to end A.

List 2—Framework, assembly, wiring, and equipment per SD-99434-01, Fig 1 and 21, required for grouping or add-on of similar circuits at end A.

List 3—Framework, assembly, wiring, and equipment per SD-99434-01, Fig 1 and 22, required to provide transfer in same building from repair service desk or equivalent to a switchboard other than No. 12 at end A.

List 4—Framework, assembly, wiring, and equipment per SD-99434-01, Fig 1, 5, 13, and 26, required to provide transfer in same building from repair service desk to a No. 12 switchboard at end A.

List 5—Framework, assembly, wiring, and equipment per SD-99434-01, Fig 1 and 27, required to provide transfer in the same building at end A from console or key telephone to a switchboard other than No. 12.

List 6—Framework, assembly, wiring, and equipment per SD-99434-01, Fig 1 and 30, required for grouping or add-on of unlike circuits at end A.

List 7—Wiring and equipment per SD-99434-01, Fig 31, to be specified in addition to list 3, 4, or 6 when electrical hold and automatic release is required.

List 8—Wiring and equipment per SD-99434-01, Fig 10, required in addition to list 2 or 6 to provide primary connection at end A to switchboard No. 3, 3C, 3CF, or 3CL, testboard No. 8, 16, 17B, 17E, 18B, 19A, 20A, or 21A, or test unit No.5A.

List 9—A&M Only—Wiring and equipment per SD-99434-01, Fig 11 with option XH, required in

addition to list 2 or 6 to provide primary connection at end A to No. 1 toll switchboard.

List 10—Wiring and equipment per SD-99434-01, Fig 12, with option XH, required in addition to list 2 or 6 to provide primary connection at end A to manual switchboard No. 1, 1D, 10, or 11; DSA switchboard No. 13C, 13D, 14C, 14D, 15C, or 15D; or operating room desk No. 19.

List 11—Wiring and equipment per SD-99434-01, Fig 10, required in addition to list 1, 2, 3, 5, or 6 to provide secondary connection at end A to No. 3, 3C, 3CF, or 3CL switchboard, No. 8, 16, 17B, 17E, 18B, 19A, 20A, or 21A or test unit No. 5. (See Note D.)

List 12—A&M Only—Wiring and equipment per SD-99434-01, Fig 11, required in addition to list 1, 2, 3, 5, or 6 to provide secondary connection at end A to toll switchboard No. 1. (See Note D.)

List 13—Wiring and equipment per SD-99434-01, Fig 12 with option XH, required in addition to list 1, 2, 3, 5, or 6 to provide secondary connection at end A to manual switchboard No. 1, 1D, 10, or 11; DSA switchboard No. 13C, 13D, 14C, 14D, 15C, or 15D; or operating room desk No. 19.

List 14—Wiring and equipment per SD-99434-01, Fig 15, required in addition to list 1, 2, 3, 4, 5, or 6 when connection to distant building with E and M lead signaling is required at end B. (See Note E.)

List 15—Wiring and equipment per SD-99434-01, Fig 16 and option M, required in addition to list 1, 2, 3, 4, 5, or 6 when connection to distant building with reverse battery supervision is required at end B.

List 16—Wiring and equipment per SD-99434-01, Fig 16 and option N, required in addition to list 1, 2, 3, 4, 5, or 6 when connection to distant building with high-low supervision is required at end B.

List 17—Wiring and equipment per SD-99434-01, Fig 17, required in addition to list 1, 2, 3, 4, 5, or 6 when 3-wire connection in same building to panel, No. 1 crossbar, crossbar tandem, step-by-step or No. 5 crossbar is required at end B. (See Note C.)

List 18—Wiring and equipment per SD-99434-01, Fig 18 and options YJ and YK, required in addition to list 1, 2, 3, 4, 5, or 6 when connection to subscriber line circuit, official PBX line circuit, toll subscriber line circuit, or equivalent, is required at end B.

List 19—Wiring and equipment per SD-99434-01, Fig 16, option ZA only, required in addition to list 15 or 16, when impedance ratio between end A and interoffice facilities is 1 to 1.

List 20—Wiring and equipment per SD-99434-01, Fig 16, option D only, required in addition to list 15 or 16 when impedance ratio between end A and interoffice facilities is 1 to 1.5.

List 21—Wiring and equipment per SD-99434-01, Fig 4, required in addition to list 1, 2, 5, or 6 when battery supply for console or key telephone set is required at end A.

List 22—Wiring and equipment per SD-99434-01, Fig 4, to be required in addition to list 2 or 6 for battery supply for console or key telephone set and grouping or add-on is required at end A.

List 23—Wiring and equipment per SD-99434-01, Fig 5, required in addition to list 8, 9, 10, 17, or 21 when dc blocking capacitors for primary connecting circuit at end A are required.

List 24—Wiring and equipment per SD-99434-01, Fig 5, required in addition to list 11, 12, 13, 17, or 22 when dc blocking capacitors for secondary connecting circuit at end A are required.

List 25—Wiring and equipment per SD-99434-01, Fig 35 and option ZN, required in addition to list 14 when audible ringing toward end A is required.

List 26—Wiring and equipment per SD-99434-01, Fig 35 and option ZN, to be furnished in addition to list 1, 2, 3, 4, 5, or 6 and audible ringing toward end B is required.

List 27—Wiring and equipment per SD-99434-01, Fig 34, required in addition to list 8 or 9 when equalization of office cable capacitance is required.

LIst 28—Wiring and equipment per SD-99434-01, Fig 34, required in addition to list 11 or 12 when equalization of office cable capacitance is required.

List 29—Wiring and equipment per SD-99434-01, Fig 13, option ZX only, required in addition to list 4 to provide cord supervision to a manual office at end B.

List 30—Wiring and equipment per SD-99434-01, Fig 17, option ZG only, required in addition to list 17 to provide connection at end B to step-by-step offices. (See Note B.)

List 31—Wiring and equipment per SD-99434-01, Fig 31, option YY only, required in addition to list 7 for connection to interrupter other

than key telephone systems and start lead is required for 120-IPM interruptions.

List 32—Wiring and equipment per SD-99434-01, Fig 8, option YR, required in addition to list 1, 2, 3, or 6 for use in ESS offices.

List 33—Wiring and equipment per SD-99434-01, Fig 12, with option XF only, required in addition to list 3 or 5 when transfer is required with a ringdown trunk at end B. (See Note D.)

List 34—Wiring and equipment per SD-99434-01, Fig 11, option XF only, required in addition to list 12 when transfer is required at a ringdown trunk at end B. (See Note D.)

List 35—Wiring and equipment per SD-99434-01, Fig 10, option XF only, required in addition to list 11 when transfer is required with a ringdown trunk at end B. (See Note D.)

List 36—Wiring and equipment per SD-99434-01, Fig 22, option XF only, required in addition to list 3 when transfer is required with a ringdown trunk at end B. (See Note D.)

List 37—Wiring and equipment per SD-99434-01, Fig 27, option XF only, required in addition to list 5 when transfer is required with a ringdown trunk at end B. (See Note D.)

Notes

A. Provide wiring per FS 17 or 18 for connection to key telephones, consoles, repair service desks, or equivalent, and provide optional wiring as required.

B. Provide YF wiring for connection to a panel No. 1 crossbar, crossbar tandem, or No. 5 crossbar office.

C. Provide YG wiring.

D. Provide XH wiring when no transfer is required or when transfer is required with other than a ringdown trunk at end B.

E. Provide YZ wiring.

J99235DD—AT&TCo Special—Line Trunk Unit—Multiple of a 4-Wire 101 Trunk to a Console and Testboard No. 21A—With or Without Audible Ringing Toward 101 Trunk

List 1—Assembly, wiring, and equipment for one tie trunk to provide connection from a 4-wire 101 trunk to a console and a 101 trunk to a console and a No. 21A testboard per SD-99434-01, Fig 1, 4, and 5, with option W and Fig 33. (See Notes A and B.)

List 2—Wiring and equipment per SD-99434-01, Fig 35 and option ZN, required in addition to list 1 when audible ringing is required toward end B.

Notes

A. Provide wiring per FS 17 for connection to key telephones or consoles.

B. Provide the transfer key circuit per SD-99434-01, Fig 29, and the make-busy circuit per SD-99434-01, Fig 32, on a miscellaneous basis, and provide as required.

J99235DE—AT&TCo Std—Permanent Signal Holding Trunk Common Control Alarm Unit

List 1—Assembly, equipment, and wiring for one common control alarm circuit per SD-95554-01, Fig 6, or SD-25418-01, Fig 10. (See Note B.)

Notes

A. Wiring required in addition to list 1 when alarm transfer circuit is provided per SD-95554-01, option ZC, or per SD-25418-01, option ZC.

B. List 1 serves 288 permanent signal holding trunks.

J99235DF—AT&TCo Std—SF Test Unit— Arranged for Use With Testboard No. 22A and No. 24A or Test Position No. 50A

List 1—Framework, assembly, wiring, and equipment for one SF test unit per SD-99413-01, Fig 1. (See Note A.)

List 2—Wiring and equipment per SD-99413-01, Fig 1, option Y, required in addition to list 1 for use with testboard No. 22A and No. 24A.

Note

A. Provide Z wiring for use with testboard No. 50A.

J99235DG—AT&TCo Std—E2L Transmission Test Applique Unit for Use With Testboard No. 22A and No. 24A

List 1—Assembly, wiring, and common equipment for one E2L transmission test applique unit equipped with one circuit per SD-99413-01, Fig 3.

List 2—Equipment and wiring per SD-99413-01, Fig 3, required in addition to list 1 for one additional circuit (maximum four list 2 per unit).

J99235DH—AT&TCo Std—2-Way Auxiliary Line Circuit Unit—For Incoming and Outgoing Service Between Local and Switched Services Network Offices

List 1—Assembly, wiring, and equipment per SD-99484-01, Fig 1, for one 2-way auxiliary line circuit unit.

List 2—Equipment and wiring per SD-99484-01, option Y in Fig 1, required in addition to list 1 when unit is used in No. 5 crossbar offices.

List 3—Equipment and wiring per SD-99484-01, option W in Fig 1, required in addition to list 1 when automatic timed release of calling party holds in step-by-step offices is provided.

List 4—Wiring and equipment per SD-99484-01, Fig 3, required in addition to list 1, when unit is used in No. 1 and No. 5 crossbar offices.

List 5—Wiring and equipment per SD-99484-01, Fig 2, required in addition to list 1 when unit is used in step-by-step offices.

List 6—Wiring and equipment per SD-99484-01, option S of Fig 1, required in addition to list 2, when unit is used in No. 5 crossbar office.

List 7—Wiring and equipment per SD-99484-01 options F, J, S, and Y required in addition to list 1 when unit is used in an ESS office.

Note

A. In addition, there are options involving wiring only. Wiring required in addition to list 1 when used in step-by-step office, option T and Z; when used in No. 1 crossbar office, option T and X.

J99235DJ—AT&TCo Std—Tie Trunk Unit—Transfer From Park-On Circuit or Desk to Switchboard in Same Building for Centralized Repair Service

List 1—Assembly, wiring, and equipment for one basic trunk circuit for transfer from park-on circuit or desk to switchboard in same building for centralized repair service per SD-99434-01, Fig 1 and 36. (See Note A.)

List 2—Wiring and equipment per SD-99434-01, Fig 5, required in addition to list 1 for dc blocking capacitors.

List 3—Wiring and equipment per SD-99434-01, Fig 10, required in addition to list 1 for connection at end A to No. 3, 3C, 3CF, or 3CL switchboard. (See Note B.)

List 4—A&M Only—Wiring and equipment per SD-99434-01, Fig 11, required in addition to list 1 for connection at end A to a No. 1 toll switchboard. (See Note B.)

List 5—Wiring and equipment per SD-99434-01, Fig 12 with option XH, required in addition to list 1 for connection at end A to a No. 1, 1D, 10, or 11, or to DSA switchboard No. 13, 14, or 15 type.

List 6—Wiring and equipment per SD-99434-01, Fig 13, required in addition to list 1 for connection at end A to No. 12 switchboard.

List 7—Wiring and equipment per SD-99434-01, Fig 34, required in addition to list 1 for building-out capacitor.

Notes

A. The transfer key circuit per SD-99434-01, Fig 29, is provided on a miscellaneous basis.

B. Provide XH wiring.

J99235DK—AT&TCo Std—No. 19A or 21A Testboard—Dial Bridge Test Unit—One 2- by 23-Inch Mounting Plate

List 1—Assembly, wiring, and equipment for one dial bridge test unit per SD-1C232-01, Fig 4.

List 2—Framework required in addition to list 1 for hardening.

J99235DL—AT&TCo Std—Incoming Trunk Unit—Arranged for Electrical Hold—Connection to Consoles, Key Telephones, or Desks, at End "A"—3-Wire Connection to Panel, No. 1 Crossbar, Crossbar Tandem, Step-by-Step, or No. 5 Crossbar in Same Building or for Connection to Official PBX, Toll or Local Subscriber Line Circuit at End B—One 2- by 23-Inch Mounting Plate

List 1—Assembly, wiring, and equipment per SD-99434-01, Fig 1, for one incoming trunk unit. (See Note A.)

List 2—Wiring and equipment per SD-99434-01, Fig 4, required in addition to list 1 for battery supply for console handset or subset.

List 3—Wiring and equipment per SD-99434-01, Fig 5, required in addition to list 1 for dc blocking capacitors.

List 4—Wiring and equipment per SD-99434-01, Fig 17 and options YF and YG, required in addition to list 1 to provide connection at end B to panel, No. 1, or No. 5 crossbar offices in the same building.

List 5—Wiring and equipment per SD-99434-01, Fig 17, options ZG and YG, required in addition to list 4 to provide connection at end B to step-by-step offices in same building.

List 6—Wiring and equipment per SD-99434-01, Fig 18 and option YJ, required in addition to list 1 to provide connection at end B to official PBX, subscriber line, or toll subscriber line circuit. (See Note B.)

List 7—Wiring and equipment per SD-99434-01, Fig 31, required in addition to lists 1 and 6 when electrical hold automatic release is required at end A.

List 8—Wiring and equipment per SD-99434-01, Fig 35 and option ZN, required in addition to list 7 when audible ringing is required toward end B.

List 9—Wiring and equipment required in addition to list 7 when connection to interrupter, other than key telephone system, and start lead is required for 120-IPM interrupter per SD-99434-01, Fig 31, option YY only.

List 10—Wiring and equipment per SD-99434-01, Fig 18, option XX only, required in addition to list 6 when incoming signals lock in for a maximum of two minutes on unanswered calls.

Notes

A. Provide wiring per FS 17 or 18 for connection to consoles, key telephones, or desks.

B. Provide optional wiring as required.

J99235DM—AT&TCo Std—Incoming Trunk Unit—3-Wire Connection to Panel, No. 1 Crossbar, Crossbar Tandem, Step-by-Step, or No. 5 Crossbar or Official PBX or 2-Wire Connection to Toll or Local Subscriber Line Circuit or to Trunk Circuit (Park-On Type)

List 1—Assembly and common equipment for two incoming trunk circuits.

List 2—Wiring and equipment per SD-99434-01, two Fig 5 and 17, with option YH, required in addition to list 1 for connection in same building from panel, No. 1 crossbar tandem, or No. 5 crossbar to park-on circuit for centralized repair.

List 3—Wiring and equipment per SD-99434-01, two Fig 17, option ZG only, required in addition to list 2 to provide connection in same building from step-by-step offices to park-on circuit for centralized repair service.

List 4—Wiring and equipment per SD-99434-01, two Fig 18, with option YI and XS, required in addition to list 1 for connection to official PBX, subscriber line circuit, or toll subscriber line circuit to park-on circuit for centralized repair service with answer supervision not required. (See list 7.)

List 5—Wiring and equipment per SD-99434-01, two Fig 18, option YT only, required in addition to list 4 for step-by-step offices.

List 6—Wiring and equipment per SD-99434-01, two Fig 18, option YU only, required in addition to list 4 for No. 5 crossbar offices.

List 7—Wiring and equipment per SD-99434-01, Fig 18, with option YI and XR, required in addition to list 1 for connection to official PBX, subscriber line circuit, or toll subscriber line circuit to park-on circuit for centralized repair service with answer supervision required.

Note

A. Provide optional wiring as required.

B. Provide transfer key and transfer and make-busy relay per SD-99434-01, Fig 44 on a miscellaneous basis.

J99235DN—AT&TCo Std—Monitoring Unit for Signaling Circuits Having Sending M Lead and Receiving E Lead—Occupies Space of Five 2- by 23-Inch Mounting Plates—Local Cable

List 1—Framework, assembly, local cable, and equipment for one monitoring circuit per SD-99441-01, four Fig 1, two Fig 3, one Fig 4, options X and V, and ten Fig 5, for signaling circuits having sending M lead and receiving

E lead. For use with toll testboard No. 17C (circuits 0-3). (See Notes A, B, C, and D.)

Notes

A. Twenty 407A electron tubes are required with list 1 for the operation of this unit. These tubes are not furnished as part of the unit and shall be provided only when specified by the customer.

B. The associated keys and lamps for SD-99441-01, Fig 2, shall be located as shown on toll testboard No. 17C front equipment drawing ED-68737-( ).

C. This unit shall be located as shown on toll switchboard No. 17C front equipment drawing ED-68737-( ).

D. The local cable shall be provided for four circuits.

J99235DP—AT&TCo Std—Line or Trunk—One or 2-Way Tie Line Unit in Same Building or With E and M Leads Supervision to Distant Building for Connection Between Handsets, Subsets, Bays, Frames, Relay Racks, Key Telephones, Consoles, Maintenance Desks, Switchboards, and Testboards—One Circuit Occupying Space of One 2- by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, equipment, and wiring per SD-99434-01, Fig 1, required for a basic unit of one tie line circuit.

List 2—Equipment and wiring per SD-99434-01, Fig 4, required in addition to list 1 when battery supply for end A is required.

List 3—Equipment and wiring per SD-99434-01, Fig 4, required in addition to list 1 when battery supply for end B is required.

List 4—Equipment and wiring per SD-99434-01, Fig 5, required in addition to list 1 when dc blocking capacitors are required to prevent the flow of direct current between 2-wire connecting circuits or between 4-wire connecting circuits, transmit path at end A, and receive path at end B.

List 5—Equipment and wiring per SD-99434-01, Fig 5, option W only, required in addition to list 1 when dc blocking capacitors are required to prevent the flow of direct current between 4-wire connecting circuits, transmit path at end B, and receive path at end A.

List 6—Equipment and wiring per SD-99434-01, Fig 12 with option XH, required in addition to list 1 for connection to switchboard No. 1, 1D, 10, 11, 13C, 13D, 14D, 15C, or 15D, or to operating room desk No. 19A at end B.

List 7—Equipment and wiring per SD-99434-01, Fig 13, required in addition to list 1 for connection to switchboard No. 12 at end B.

List 8—Equipment and wiring per SD-99434-01, Fig 14 and option ZY, required in addition to list 1 for connection to testboard No. 19A or 21A or to No. 5 type switchboard at end B.

List 9—Equipment and wiring per SD-99434-01, Fig 14 and option ZZ, required in addition to list 1 for connection to testboard No. 17C or 17D at end B.

List 10—Equipment and wiring per SD-99434-01, Fig 15, required in addition to list 1 for connection to distant building with E and M lead signaling at end B. (See Note C.)

List 11—Equipment and wiring per SD-99434-01, Fig 18 and option YJ, required in addition to list 1 for connection to official PBX, toll, or local subscriber line circuit at end B.

List 12—Equipment and wiring per SD-99434-01, Fig 35 and option ZN required in reinput in addition to list 1 for audible ringing from end A to end B.

List 13—Equipment and wiring per SD-99434-01, Fig 35 and option ZN, required in addition to list 1 for audible ringing from end B to end A.

List 14—Wiring and equipment per SD-99434-01, Fig 41, option XC, required in addition to list 1 when the jack and lamp in the connecting circuit requires −24 volt battery on the S lead for operation at end B.

List 15—Reserved.

List 16—Wiring and equipment per SD-99434-01, Fig 18, option XX only, required in addition to list 11 when incoming signals lock in for a maximum of two minutes on unanswered calls.

Notes

A. Provide wiring per SD-99434-01, FS 6, 7, 9, 17, or 18, for connection to handset jacks, subsets, bays, frames, relay racks, test frames, key telephones, consoles, repair service desks, or equivalent at end A and/or at end B.

B. Provide optional wiring as required.

C. Provide YZ wiring.

J99235DR—AT&TCo Std—Incoming Trunk Unit—Regular Intercept—E and M Lead Signaling—Not Arranged for Machine Announcements—No. 12, 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—No. 1, 3, 3C, or 3CL Toll Switchboard—No. 19 or 23E Operating Room Desk—No. 1, 2, 7, or 7A Information Desk

List 1—Framework, assembly, equipment, and wiring per SD-96488-01, App Fig 16, less all options, required for one incoming regular intercept trunk unit not arranged for machine announcement.

List 2—Equipment and wiring per SD-96488-01, App Fig 10, required in addition to list 1 when calls are answered at No. 3, 3C, or 3CL switchboard alone.

List 3—Equipment and wiring per SD-96488-01, App Fig 3 and 15, required in addition to list 1 when calls are answered at No. 1 toll switchboard alone.

List 4—Equipment and wiring per SD-96488-01, App Fig 4 and 15, required in addition to list 1 when calls are answered at No. 13C, 13D, 14C, 14D, 15C, or 15D DSA switchboard alone.

List 5—Equipment and wiring per SD-96488-01, App Fig 8 and 15, and option T, required in addition to list 1 when calls are answered at No. 12 switchboard alone.

List 6—Equipment and wiring per SD-96488-01, App Fig 7, with option ZG, required in addition to list 1 when calls are answered at No. 23 operating room desk without transfer to switchboard.

List 7—Equipment and wiring per SD-96488-01, App Fig 11, required in addition to list 1 when calls are answered at No. 2, 7, or 7A information desk or No. 19 operating room desk without transfer to switchboard.

List 8—Equipment and wiring per SD-96488-01, App Fig 7 and 15, required in addition to list 1 when calls are answered at No. 1 information desk without transfer to switchboard.

List 9—Equipment and wiring per SD-96488-01, App Fig 13 and 15, and options B and ZG, required in addition to list 1 when calls are answered at No. 23 operating room desk with transfer to No. 1 toll switchboard.

List 10—Equipment and wiring per SD-96488-01, App Fig 12 and 15, required in addition to list 1 when calls are answered at No. 2, 7, or 7A information desk or No. 19 operating room desk with transfer to No. 1 toll switchboard.

List 11—Equipment and wiring per SD-96488-01, App Fig 13 and 15, required in addition to list 1 when calls are answered at No. 1 information desk with transfer to No. 1 toll switchboard.

List 12—Equipment and wiring per SD-96488-01, App Fig 5 and 15, and options Q and ZG, required in addition to list 1 when calls are answered at No. 23 operating room desk with transfer to No. 3, 3C, or 3CL switchboard.

List 13—Equipment and wiring per SD-96488-01, App Fig 6 and 10, required in addition to list 1 when calls are answered at No. 2, 7, or 7A information desk or No. 19 operating room desk with transfer to No. 3, 3C, or 3CL switchboard.

List 14—Equipment and wiring per SD-96488-01, App Fig 5, 10, and 15, required in addition to list 1 when calls are answered at No. 1 information desk with transfer to No. 3, 3C, or 3CL switchboard.

List 15—Equipment and wiring per SD-96488-01, App Fig 4, 5 and 15, and options Q and ZG, required in addition to list 1 when calls are answered at No. 23 operating room desk with transfer to DSA switchboard No. 13C, 13D, 14C, 14D, 15C, or 15D.

List 16—Equipment and wiring per SD-96488-01, App Fig 4, 6, and 15, required in addition to list 1 when calls are answered at information desk No. 2, 7, or 7A, or No. 19 operating room desk with transfer to DSA switchboard No. 13C, 13D, 14C, 14D, 15C, or 15D.

List 17—Equipment and wiring per SD-96488-01, App Fig 4, 5, and 15, required in addition to list 1 when calls are answered at information desk No. 1 with transfer to DSA switchboard No. 13C, 13D, 14C, 14D, 15C, or 15D.

List 18—Equipment and wiring per SD-96488-01, App Fig 5, 8, and 15, options Q, T, and ZG, required in addition to list 1 when calls are answered at No. 23 operating room desk with transfer to No. 12 switchboard.

List 19—Equipment and wiring per SD-96488-01, App Fig 6, 8, and 15, and option T, required in addition to list 1 when calls are answered at information desk No. 2, 7, or 7A, or No. 19 operating room desk with transfer to No.

12 switchboard.

List 20—Equipment and wiring per SD-96488-01, App Fig 5, 8, and 15, and option T, required in addition to list 1 when calls are answered at information desk No. 1 with transfer to No. 12 switchboard.

J99235DS—AT&TCo Std—Line or Trunk Equipment—For Maintenance Communication or Repair Service—Incoming Trunk Unit—Transfer for Rerouting of Calls—Loop Signaling—Hi-Lo Supervision—Four Circuits

List 1—Framework, assembly, wiring, and equipment for a unit of two incoming trunk circuits with provisions for two additional trunk circuits per SD-99434-01, two Fig 1, two Fig 16 with option N, and one Fig 39. (See Notes A and B.)

List 2—Equipment per SD-99434-01, two Fig 1, two Fig 16 with option N, and one Fig 39 for two additional incoming trunk circuits. (See Notes A and B.)

List 3—Wiring and equipment per SD-99434-01, Fig 16, option ZA only, required in addition to list 1 or 2 when impedance ratio between end A and interoffice facilities is 1:1.

List 4—Wiring and equipment per SD-99434-01, Fig 16, option D only, required in addition to list 1 or 2 when impedance ratio between end A and interoffice is 1:1.5.

List 5—Wiring and equipment per SD-99434-01, two Fig 35 and option ZN and XK required in addition to list 1 or 2 for audible ringing end A toward end B.

Notes

A. Provide wiring per SD-99434-01, FS 18.

B. Provide optional wiring as required.

C. The transfer control relay per SD-99434-01, Fig 40, is provided on a miscellaneous basis, one per 11 trunks to be transferred.

J99235DT—AT&TCo Std—Line or Trunk Equipment—For Maintenance Communication or Repair Service—Incoming Trunk to Park-On Trunk—E and M Lead Signaling—Three Circuits

List 1—Assembly, wiring, and equipment for one incoming trunk unit per SD-99434-01, Fig 15 with option XA, with provisions for two additional trunk circuits. (See Note A.)

List 2—Wiring and equipment per SD-99434-01, Fig 15 with option XA, required in addition to list 1 for one additional incoming trunk. (See Note A.)

Note

A. Provide optional wiring as required.

J99235DU—AT&TCo Std—Line or Trunk Equipment—For Maintenance Communication or Repair Service—Incoming Trunk to Park-On Trunk—With Transfer for Rerouting of Calls—E and M Lead Signaling

List 1—Framework, assembly, wiring, and equipment for a unit of two incoming trunk circuits per SD-99434-01, two Fig 1, two Fig 15 with option XA, two Fig 15 with option YZ, and one Fig 38. (See Notes A, B, and C.)

List 3—Wiring and equipment per SD-99434-01, two Fig 35, with options ZN and XK, required in addition to list 1 when audible ringing is required from end A toward end B.

Notes

A. Provide wiring per SD-99434-01, FS 18.

B. Provide optional wiring as required.

C. The transfer control relay per SD-99434-01, Fig 40, is provided on a miscellaneous basis, one per 11 trunks to be transferred.

J99235DV—AT&TCo Std—Private Line Unit—48-Volt Operation

List 1—Assembly, wiring, and equipment for one private line circuit per SD-96147-01, Fig 4 and B. (See Note A.)

List 4—Wiring and equipment per SD-96147-01, Fig 4, options U and W, required in addition to list 1 when used in a No. 1 ESS office utilizing an AJ118 (TP) tripping relay.

List 5—Wiring and equipment per SD-96147-01, Fig 4, options V and W, required in addition to list 1 when used in a No. 1 ESS office utilizing an AJ119 (TP) tripping relay.

List 6—Wiring and equipment per SD-96147-01, Fig 4, option T, required in addition to list 1 when used in other than No. 1 ESS offices utilizing an AJ47 (TP) tripping relay.

List 7—Wiring and equipment per SD-96147-01, Fig 4, option Z and ZJ, required in addition to list 1 when circuit is located in other than No. 1 ESS office or 35E97 office equipped with grounded ringing supply.

List 8—Wiring and equipment per SD-96147-01, Fig 4, option ZF and ZJ, required in addition to list 1 when used in 35E97 office with grounded ringing supply.

Note

A. Provide optional wiring as required.

J99235DW—AT&TCo Std—Dial Tone Applique Unit—Arranged for Use With Auxiliary Line Circuits in Step-by-Step Offices With Common or Nocommon Control TOUCH-TONE Calling or in ESS Offices.

List 1—Assembly, wiring, and equipment for one unit equipped with four dial tone applique circuits, per SD-99415-01, Fig 2, when TOUCH-TONE dial tone is provided in step-by-step or ESS offices.

List 2—Apparatus required in addition to list 1, per SD-99415-01, option W, when other than TOUCH-TONE dial tone is provided.

List 3—Wiring and apparatus required in addition to list 1, per SD-99415-01, options R and S, for use in ESS offices.

J99235DY—AT&TCo Std—Common Systems—Specification for −48 Volt Auxiliary Line Unit—With Automatic Cutoff—For Individual Lines With Main and Extension Stations on Separate Loops—Surface Wired

List 1—Assembly, wiring, and equipment for one −48 volt auxiliary line circuit per SD-96468-01, Fig 2. (See Notes A, B, and C.)

List 2—Wiring and equipment per SD-96468-01, Fig 2, option J, required in addition to list 1 when busy tone is required in a panel or No. 1 crossbar office. (See Notes B and C.)

List 3—Wiring and equipment per SD-96468-01, Fig 2, option H, required in addition to list 1 when busy tone is required in a step-by-step or No. 5 crossbar office. (See Notes B and C.)

List 4—Wiring and equipment per SD-96468-01, Fig 2, option G, required in addition to list 1 when busy tone is required in an ESS office. (See Notes B and C.)

List 5—Wiring and equipment per SD-96468-01, Fig 2, option R, required in addition to list 1 when this unit is used in an ESS office.

Notes

A. Provide K and X wiring in addition to list 1 when feature and control of cutoff must be monitored from main station.

B. Provide Y wiring in addition to list 1 when feature and control of cutoff do not have to be monitored from main station or when list 2, 3, or 4 is furnished.

C. Provide K and Y wiring in addition to list 1 when busy tone is not required.

J99235EA—AT&TCo Std—Common Systems Tie Line Unit for ESS Offices or Incoming Trunk Unit—Connection Between Maintenance Desks—Loop Signaling—High-Low or Reverse Battery Supervision—One 2- by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, wiring, and equipment for one trunk unit or tie line unit per SD-99434-01, Fig 1.

List 2—Wiring and equipment per SD-99434-01, Fig 8, option YR, required in addition to list 1 for use in ESS offices at end A. (See Note A.)

List 3—Wiring and equipment per SD-99434-01, Fig 8, option YR, required in addition to list 1 for use in ESS offices at end B. (See Note B.)

List 4—Wiring and equipment per SD-99434-01, Fig 16, and option N, required in addition to list 1 to provide connection at end B to a distant building with high-low supervision.

List 5—Wiring and equipment per SD-99434-01, Fig 16, and option M, required in addition to list 1 to provide connection at end B to a distant building with reverse battery supervision.

List 6—Wiring and equipment per SD-99434-01, Fig 16, option ZA only, required in addition to list 4 or 5 when impedance ratio between transmission facilities and trunk circuit is 1 to 1.

List 7—Wiring and equipment per SD only-99434-01, Fig 16, option D only, required in addition to list 4 or 5 when impedance ratio between transmission facilities and trunk circuit is 1 to 1.5.

List 8—Wiring and equipment per SD-99434-01, Fig 35 and options ZN and XK, required in addition to list 1 when audible ringing toward end B is required in a non-ESS office. (See Note A.)

List 9—Wiring and equipment per SD-99434-01, Fig 35 and options ZN and XK, required in addition to list 1 when audible ringing toward end A is required in a non-ESS office. (See Note B.)

Notes

A. Provide wiring per SD-99434-01, FS 18 at end A with list 2 or list 8.

B. Provide wiring per SD-99434-01 FS 18 with list 3 or list 9.

C. The TR relays per SD-99434-01, Fig 23 or 24, are provided on a miscellaneous basis.

D. Provide optional wiring as required.

J99235EB—AT&TCo Std—Auxiliary Timing Meter Unit for Use With Auxiliary Line Unit for Measured Rate INWATS Service J99235CP

List 3—Mounting plate for an auxiliary line timing meter unit arranged for eight running time meters to be wired by installation force. (See Note A.)

List 4—Running time meter less wiring per SD-99439-01, Fig 2, required in addition to list 3 for one timing meter (TM) for each individual line circuit or step-by-step auxiliary trunk circuit. (Maximum of 8 list 4 per unit.)

List 5—Equipment per SD-99439-01, Fig 19 required in addition to list 3 to provide a TMP prime time running time meter when variable rate for time of day billing is provided.

List 6—Equipment per SD-99439-01, Fig 20, required in addition to list 3 to provide a TME evening time running time meter when variable rate for time of day billing is provided.

Note

A. Meters on this unit shall be numbered serially on a job basis. The number of each meter shall be the same as the number of its associated line auxiliary unit. See ED-94938-10 for a standardized equipment arrangement on a relay rack for the meters and other INWATS equipment.

J99235EC—AT&TCo Std—911 Emergency Service Trunk Unit—Ringdown Signaling—For Use With Panel or No. 1 Crossbar—Three 2- by 23-Inch Mounting Plates—Surface Wired

List 1—Assembly, wiring, and equipment for one 911 emergency service trunk circuit per SD-94830-01, Fig 1. (See Notes A, B, C, D, and E.)

List 2—Wiring and equipment per SD-94830-01, Fig 2 and SD-94820-01, Fig 2, when unrestricted emergency ringback is required.

List 3—Wiring and equipment per SD-94830-01, option M, required in addition to list 1, when a precise tone to the 911 bureau is required. (See Note F.)

Notes

A. Provide Z wiring when trunk is used in a No. 1 crossbar office.

B. Provide Y wiring when trunk is used in a panel office.

C. Provide W wiring when calling party off-hook indication to emergency bureau is required; when not required, provide X wiring.

D. Provide T wiring when dial-tone-first operation is required; when not required, provide V wiring.

E. Provide S wiring when unrestricted emergency ringback is not required.

F. Provide N wiring when list 3 is not required

J99235ED—AT&TCo Std—Interrupter for 6-Minute Timing Unit—One 2- by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, wiring, and equipment per SD-94831-01, Fig 1; for one 6-minute interrupter unit.

Note

A. Provide one 6-minute interrupter unit for a maximum of 15 circuits to be timed.

J99235EE—AT&TCo Std—60 IPM and Flash or 120-IPM Unit—Two 2-Inch by 23-Inch Mounting Plates—Surface Wired

List 1—Assembly, wiring, and equipment per SD-1C484-01, Fig 1 and 2, wired for five additional Fig 2, to provide a flashing circuit of 60 or 120 IPM for a maximum of 20 lamps. (See Note A.)

List 2—Equipment per SD-1C484-01, Fig 2, required in addition to list 1 to provide a flashing circuit of 60 or 120 IPM for an additional 20 lamps maximum. (See Note A.)

Notes

A. The installation force shall connect straps on unit terminal strip (C) in accordance with Table A, SD-1C484-01, per option W to provide 120 IPM and option X to provide 60 IPM for sets of 20 lamps each maximum. The maximum number of lamps to be connected is 120; either all 120 IPM, all 60 IPM, or combined 60 and 120 IPM in groups of 20 lamps.

B. The installation force shall provide option Y for −24 volts input to unit and option Z for −48 volt input to unit.

J99235EF—AT&TCo Std—Auxiliary Line Registration Unit for Registering Message Counts, Line Seizure Counts, or Overflow Counts for Measured Rate INWATS Service

List 3—Mounting plate for one registration unit arranged for eight registers, to be wired by the installation force. (See Notes A and C.)

List 4—Apparatus, less wiring, per SD-99439-01, Fig 3, required in addition to list 3 to provide one (MR) register on a register unit for each individual line circuit or step-by-step auxiliary trunk circuit. (Maximum of 8 list 4 per unit.)

List 5—Apparatus, less wiring, per SD-99439-01, Fig 5, required in addition to list 3 to provide one (SZ) register on a registration unit for each individual line circuit or step-by-step auxiliary trunk circuit. (Maximum 8 list 5 per unit.)

List 6—Apparatus less wiring per SD-99439-01, Fig 6, required in addition to list 3, to provide one (OF) register for overflow counts. (Maximum 8 list 6 per unit.)

List 7—Apparatus, less wiring, per SD-99439-01, Fig 10, required in addition to list 3 to provide one (ATB) all trunks busy register for each group of step-by-step auxiliary trunk circuits for an all trunks busy count. (SD-35072-01 Fig 3.) (See Note D.) (Maximum 8 list 7 per unit.)

List 8—Equipment per SD-99439-01, Fig 21, required in addition to list 3 to provide an MRP prime time register on a register unit when variable rate for time of day billing is provided

List 9—Equipment per SD-99439-01, Fig 22, required in addition to list 3 to provide an MRE evening time register on a register unit when variable rate for time of day billing is provided.

Notes

A. MR, SZ, and OF registers shall not be mixed on the same unit. Registers on the message count units and seizure count units are to be equipped in consecutive order beginning with position 1. Registers on the overflow count unit are to be equipped in the positions specified on the job order.

B. J99234EF units are associated with J99234CP auxiliary line units. See ED-94938-10, for a standardized equipment arrangement on a relay rack.

C. MR, SZ, and OF registers shall be numbered serially on a job basis. The number of each register shall be the same as the number of its associated auxiliary line unit.

D. The (ATB) register on the step-by-step all trunks busy unit shall be mounted in position specified on the job order. It shall be numbered to agree with the first trunk of the associated trunk group which may be located above or below the (ATB) register.

J99235EG—AT&TCo Std—Ringback Start Unit—One 2- by 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, wiring, and equipment per SD-94831-01, Fig 2, for one ringback start unit.

List 2—Equipment and wiring per SD-94831-01, Fig 3, required in addition to list 1 for offices arranged for individual 2-party selective, 4-party semiselective, or 10-party 5-code ringing (ac-dc ringing).

List 3—Equipment and wiring per SD-94831-01, Fig 4, required in addition to list 1 for offices arranged for 4-party selective or 8-party semiselective ringing (superimposed ringing).

Note

A. Provide one ringback start unit for a maximum of 15 trunks.

J99235EH—AT&TCo Std—Impedance Compensator and Fixed Pad Unit—One 2- By 23-Inch Mounting Plate—Surface Wired

List 1—Assembly, wiring, and equipment per SD-95756-01, Fig 6, for nine 900-ohm H pads variable from 0.5 dB to 2.0 dB in 0.25 dB steps.

Note

A. The installation force shall connect straps on unit in accordance with Table A for desired decibel loss.

J99235EJ—AT&TCo Std—Common Systems Auxiliary Trunk Composite Signaling Unit

List 1—Assembly, wiring, and equipment per SD-94847-01, Fig 1, to provide for use on local or toll connecting trunks with or without dial tone DP or MF pulsing for use with crossbar tandem.

Note

A. This unit is arranged for four auxiliary trunks. The number shown in ( ) signifies with which trunk the equipment is located.

J99235EK—AT&TCo Std—Flexible Night Connection Unit for 770A PBX Served By SD-99439-01 INWATS Auxiliary Lines

List 1—Assembly, wiring, and equipment per SD-99439-01, Fig 7, less option YE, for one PBX flexible night connection unit arranged to serve three INWATS auxiliary lines.

List 2—One set of three plug-in component assemblies per SD-99439-01, option YE of Fig 7, required in addition to list 1, to activate one PBX flexible night connection circuit. (Maximum 3 list 2 per unit.)

J99235EL—AT&TCo Std—Common Systems Permanent Signal Holding Trunk—Hold Relay Release Unit for Crossbar No. 1

List 1—Assembly and equipment for one PSHT-hold relay release unit for crossbar No. 1 arranged for ten SD-95554-01, Fig 8, or ten SD-25418-01, Fig 11, or ten SD-25126-01, Fig 4.

List 2—Equipment and wiring required in addition to list 1 for each permanent signal holding trunk served, per SD-95554-01, Fig 8, or SD-25418-01, Fig 11, or SD-25126-01, Fig 4.

List 3—Equipment required in addition to list 2, when AMA is required per SD-95554-01, option ZT, or SD-25418-01, option ZS, or SD-25126-01, option A.

J99235EN—AT&TCo Std—Impedance Compensator—Fixed and Variable Pad Unit

List 1—Framework required for mounting 20 component assemblies.

List 2—Apparatus required in addition to list 1 for three 23.0-dB attenuator circuits, 600-ohm input and output impedance per SD-95756-01, Fig 7.

List 3—Apparatus required in addition to list 1 for two 2.0-dB attenuator circuits, 600-ohm input and output impedance per SD-95756-01, Fig 8 and option S.

List 4—Apparatus required in addition to list 1 for two 2.0-dB attenuator circuits, 900-ohm input and output impedance per SD-95756-01, Fig 8 and option T.

List 5—Apparatus required in addition to list 1 for two 2.0-dB attenuator circuits, 1500-ohm input and output impedance per SD-95756-01, Fig 8 and option U.

J99235EP—AT&TCo Std—Auxiliary Test Trunk—For Use in a No. 5 Crossbar Office for Testing a Subscribers Line That is Connected to a Common Overflow Trunk, Permanent Signal Holding Trunk or Plugging up Line Circuit

List 1—Assembly, wiring, and equipment for one auxiliary test trunk unit for use with test trunk and selector circuit SD-25767-01 to permit testing a subscribers line that is connected to a common overflow trunk, per-

manent signal holding trunk or plugging up line circuit in a No. 5 crossbar office in accordance with SD-25767-01, Fig 4 and option M.

J99235ER—AT&TCo Std—Auxiliary Test Trunk—For Use In a No. 1 Crossbar or Panel Office for Testing a Subscribers Line that is Permanently Connected To a Common Overflow Trunk, Permanent Signal Holding Trunk or Plugging Up Line Circuit

List 1—Assembly, wiring, and equipment for one auxiliary test trunk unit for use with a test trunk and selector circuit SD-25767-01 to permit testing a subscribers line that is connected to a common overflow trunk, permanent signal holding trunk or plugging up line circuit in a No. 1 crossbar or panel office in accordance with SD-25767-01, Fig 4 and option N.

J99235ES—AT&TCo Std—Auxiliary Test Trunk—For Use in Step-by-Step Offices for Testing a Subscribers Line That is Connected To a Common Overflow Trunk, Permanent Signal Holding Trunk or Plugging Up Line Circuit

List 1—Assembly, wiring, and equipment for one auxiliary test trunk unit for use with test trunk and selector circuit, SD-25767-01 to permit testing a subscribers line that is connected to a common overflow trunk, permanent signal holding trunk or plugging up line circuit in a step-by-step office in accordance with SD-25767-01, Fig 4 and option K.

J99235ET—AT&TCo Std—Auxiliary Line Timing Meter Unit—Common Systems

List 1—Mounting plate for an auxiliary line timing meter unit to provide for a maximum of eight auxiliary trunk groups.

List 2—Running time meter, less wiring, per SD-99439-01, Fig 9, required in addition to list 1 for each group of step-by-step auxiliary trunk circuits SD-35072-01. (See Note A.) (Maximum 8 list 2 per unit.)

Note

A. The (TMB) timer shall be mounted in position specified on the job order. It shall be numbered and aligned to agree with the first trunk of the associated trunk group which may be located above or below the (TMB) timer unit.

J99235EU—AT&TCo Std—INWATS Auxiliary Line Seizure Guard Unit Arranged To Serve Three Auxiliary Lines

List 1—Assembly, wiring, and equipment per SD-99439-01, Fig 11, for a unit arranged to provide three seizure guard circuits for three auxiliary line circuits.

List 2—Wiring and equipment per SD-99439-01, Fig 11, option XH only, required for each seizure guard circuit to be arranged for seizure delay timing feature. (Maximum of 3 list 2 per unit.) (See Note A.)

List 3—One set of three plug-in component assemblies per SD-99439-01, Fig 11, option YT only, to activate the delay timing feature of list 2. (Maximum of 3 list 3 per unit.)

Note

A. All component assembly connectors KS-19437 L1 shall be wired when option XH is equipped.

J99235EV—AT&TCo Std—INWATS Time of Day Rate Control Unit Arranged For a Maximum of 1000 Auxiliary Line Circuits

List 1—Assembly, wiring, and equipment per SD-99439-01, Fig 17 and 18 for INWATS time of day control unit equipped to handle a maximum of 1000 INWATS auxiliary line circuits (SD-99439-01, Fig 1). (See Note A).

List 2—Wiring and equipment per SD-99439-01, Fig 16, required in addition to list 1 when manual transfer is required to a mate control unit in the same building.

List 3—Wiring and equipment per SD-99439-01, Fig 17, option XQ only, required in addition to list 1 when control unit connects to alarms in a step-by-step 35E97 type (Automatic Electric) office.

Note

A. The J99235EV unit shall be mounted at a convenient maintenance height. Provide an ac outlet at rear upright side viewed from the rear similar to ED-81770-10, GR14.

J99235EW—AT&TCo Std—INWATS Time of Day Cut-Through Unit Arranged For a

Maximum of 100 Auxiliary Line Circuits

List 1—Assembly, wiring, and equipment per SD-99439-01, two Fig 13 and one Fig 14 for INWATS time of day cut-through unit arranged for a maximum of 100 auxiliary lines and equipped for 20 auxiliary lines. (See Note A.)

List 2—Wiring and equipment per SD-99439-01, two Fig 13, required in addition to list 1 for an additional 20 auxiliary lines (maximum 4 list 2).

Note

A. The J99235EW unit requires mounting space of 10 inches to allow space for fanning of switchboard cables.

Miscellaneous Equipment

4.01 ***SD-95756-01, Fig 4:*** When building-out capacitor per SD-95756-01, Fig 4 only, is required in a crossbar tandem office, it shall be installed in accordance with ED-92905-30 and wired by the installer. Fig 4 is to be arranged for cross-connection only when no associated Fig 1 or 3 is required.

5. GENERAL NOTES AND INDEXES

5.01 Codes BN and DB are unassigned.

List of A&M Only and Mfr Disc Equipment

The following 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.

EQUIPMENT	RATING	DETAILS LAST SHOWN IN ISSUE	REPLACING EQUIPMENT
ED-95144-10, GR1 to GR4	Mfr Disc	2	—
J99235D	Mfr Disc	7	J99235CH
J99235E	Mfr Disc	1	J99235Q
J99235G,L2	Mfr Disc	1	—
L7	Mfr Disc	1	J99235G,L13 & L14
L8	Mfr Disc	1	J99235G,L15 & L16
L9	Mfr Disc	1	J99235G,L17 & L18
J99235G,L10	Mfr Disc	1	J99235G,L19 & L20
J99235H,L1	Mfr Disc	1	—
J99235J,L3	Mfr Disc	1	—
J99235N,L4	A&M Only	1	—
J99235Q	Mfr Disc	6	J99235DX J99235DY
J99235V	Mfr Disc	5	J99235DV
J99235Y	Mfr Disc	6	J61565D
J99235AB,L4	A&M Only	2	—
J99235AF,L3	Mfr Disc		
L4	Mfr Disc	2	—
J99235AJ,L3	Mfr Disc	2	—
L4 & L5	Mfr Disc	2	—
J99235AM	Mfr Disc	2	J95417G
J99235AQ	Mfr Disc	2	J99235BA
J99235AT,L8	Mfr Disc	4	—
L9	Mfr Disc	2	—
J99235AX	Mfr Disc	3	—
J99235AY	Mfr Disc	3	—
J99235BK,L2	Mfr Disc	4	—
J99235BP	Mfr Disc	2	J99235BK
J99235BW	Mfr Disc	3	J99235CL
J99235CA,L1	Mfr Disc	7	J99235CA,L3
J99235CF	Mfr Disc	3	J99235CR
J99235CG	Mfr Disc	3	J99235CS
J99235CH	Mfr Disc	5	J99235DV
J99235CJ,L2			
L3	Mfr Disc	3	—
J99235CL	Mfr Disc	3	J99235CM
J99235CP,L1	Mfr Disc	5	J99235CP,L9
L2	Mfr Disc	5	L10
L3	Mfr Disc	7	L15
L4	Mfr Disc	5	L11
L8	Mfr Disc	5	L12
L10	Mfr Disc	7	L17
L15	Mfr Disc	7	L16
J99235CP,L6	Mfr Disc	8	—
L7	Mfr Disc	8	—
L9	Mfr Disc	8	L20
L14	Mfr Disc	8	L12
L17	Mfr Disc	8	L21
L18	Mfr Disc	8	—
J99235CV,L1	Mfr Disc	4	—
L2	Mfr Disc	4	—
L3	Mfr Disc	7	J99235CV,L5
L4	Mfr Disc	7	L6 L7
J99235CY,L4	A&M Only	6	—
J99235DA,L6	A&M Only	6	—
L13	A&M Only	6	—

EQUIPMENT	RATING	DETAILS LAST SHOWN IN ISSUE	REPLACING EQUIPMENT
J99235DA,L33	Mfr Disc	7	—
J99235DC,L9	A&M Only	4	—
L12	A&M Only	5	—
L38	*	7	—
L39	*	7	—
L40	*	7	L34
J99235DU,L2	Mfr Disc	9	—
J99235AL,			—
L8	Mfr Disc	8	—
L10	Mfr Disc	8	—
L11	Mfr Disc	8	—
J99235N	Mfr Disc	8	J99235CW J99235CY
J99235DX	Mfr Disc	8	—
J99235M	Mfr Disc	7	J99235EJ
L42	*	7	L35
L43	*	7	L36
J99235DX,			
L44	*	7	
J99235DJ,L4	A&M Only	6	—
J99235DV,L2	Mfr Disc	7	J99235DV,L7
L3	Mfr Disc	7	L8
J99235EB,L1	Mfr Disc	8	L3
L2	Mfr Disc	8	L4
J99235EF,L1	Mfr Disc	8	L3
L2	Mfr Disc	8	L4, L5, L6
J99235EM	Mfr Disc	10	

* Lists 34, 35, 36, 37, 38, 39, and 41 in Issue 7 are deleted because the equipment was never manufactured. Lists 40, 42, 43, and 44 are renumbered lists 34, 35, 36, and 37, respectively, in accordance with latest Western Electric Company drawings.

SUBDIVISIONS OF EQUIPMENT AND DETAILED INDEX

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

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
ED-95144-10		Subscriber Loop Bridge-Lifting Equipment—Common Battery Offices	ED-95144-10	SD-95973-01	Common Battery and Dial Offices
ED-95163-10		Subscriber Loop Bridge-Lifting Equipment for Use Where 60-Hertz Inductive Interference Is Present—Common Battery Office	ED-95163-10	SD-95973-01	Common Battery and Dial Offices
J99235A	Std	Ringing Interrupter and Alarm Unit—For 8-Party Semiselective Ringing Auxiliary Lines and Revertive Call Trunks	J99235A-( )	SD-95674-01	No. 1 Crossbar
J99235B	Std	Line Load Control Unit—For Use in No. 1, No. 5 Crossbar or Panel Offices	J99235B-( )	SD-96387-01	Crossbar or Panel
J99235C	Std	Private Line Unit—24-Volt Battery	J99235C-( )	SD-96128-01	Any Type of Office
J99235F	Std	Auxiliary Line Unit—Arranged to Apply Coin Return Potential at End of Call on Prepayment Coin Lines—Arranged for 10-Cent Initial Charge	J99235F-( )	SD-95607-01	Panel, Step-by-Step, or Crossbar No. 1
J99235G	Std	Dial Terminating Manual Line Circuit Unit or Emergency Transfer Circuit Unit Equipment	J99235G-( )	SD-95711-01	Panel, Crossbar No. 1 and Step-by-Step
J99235H	Std	No. 1 and No. 5 Crossbar—Step-by-Step No. 1, 350A, or 355A—Panel System—Selector Switch Unit—For Selecting Permanent Signal Holding Trunks, Plugging Up Lines, or Line Insulation Test Control Circuits	J99235H-( )	SD-25767-01	Crossbar No. 1, No. 5, Step-by-Step and Panel

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235J	Std	No. 1 and No. 5 Crossbar—Step-by-Step No. 1, 350A, or 355A—Panel System—Test Trunk and Selector Unit—From No. 14, 15B, or Local Test Desk or Local Test Cabinet No. 3 for Selecting Permanent Signal Holding Trunks, Plugging Up Lines, or Line Insulation Test Control Circuits	J99235J-( )	SD-25767-01	Crossbar No. 1, No. 5, Step-by-Step and Panel
J99235K	Std	Interrupter Relay Unit—For 8-Party Semiselective Ringing Auxiliary Lines	J99235K-( )	SD-95674-01	No. 1 Crossbar
J99235L	Std	Trunk Coin Control Unit—For Use With Toll Connecting Trunks in Manual or Dial Offices	J99235L-( )	SD-95031-01	Panel, Step-by-Step and Crossbar Offices
J99235P	Std	Emergency Ringback Unit—For Use With Circuits Which Are Arranged for Ringing Inside the Transformer	J99235P-( )	SD-95083-01	Panel, Step-by-Step and Crossbar Offices
J99235R	Std	Verification Request Trunk—No. 1 Crossbar, Panel, Step-By-Step No. 1 and 350A	J99235R-( )	SD-95691-01	Panel and Crossbar No. 1, Step-by-Step No. 1 and 350 A
J99235S	Std	Emergency Line Unit—For Completion of Calls to Police, Fire, and Ambulance Lines	J99235S-( )	SD-96469-01	Panel, Step-by-Step and Crossbar
J99235T	Prov	Voice-Controlled Amplifier—Single-Circuit Unit—For Use With Centralized Intercept Positions of DSA Boards and Information Boards	J99235T-( )	SD-95396-01	Centralized Intercept DSA Boards and Information Boards

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235U	Std	Business Office Line Unit —Arranged for Incoming Service From Distant Switchboard and 2-Way Service to Dial Subscriber Line Circuit—Panel, Step-by-Step, No. 1 or No. 5 Crossbar Office	J99235U-( )	SD-95721-01	Panel, Step-by-Step, Crossbar No. 1 and Crossbar No. 5
J99235W	Prov	Voice-Controlled Amplifier Test—Single-Circuit Unit —For Use With Centralized Intercept Positions of DSA Boards and Information Boards	J99235W-( )	SD-95452-01	Centralized Intercept DSA Boards and Information Boards
J99235AA	Std	Business Office Line Unit —Outgoing to Distant Dial Office—No. 1, 3, 3C, or 3CL Toll Switchboard or 13C, 13D, 14C, 14D, 15C, or 15D Switchboard	J99235AA-( )	SD-95714-01	Toll and DSA Boards
J99235AB	Std	Outgoing Trunk Unit— For Time of Day or Official PBX—High-Low Reverse Battery—No. 1, 1C, 1D, or 11 Supervision Manual Switchboard on Step-by-Step or Panel Office	J99235AB-( )	SD-95037-01	Manual, Step-by-Step, or Panel
J99235AC	Std	Relay Interrupter Unit— For Furnishing 30, 60, and 120 IPM for Manual, Toll, Step-by-Step, and Telegraph	J99235AC-( )	SD-95036-01	Manual, Toll and Step-by-Step
J99235AD	Std	Order Clerks or Chief Operators Line Unit	J99235AD-( )	SD-96262-01	Manual, No. 1 Crossbar, Panel, Step-by-Step and No. 5 Crossbar Offices
J99235AE	Std	Impedance Compensator Unit	J99235AE-( )	SD-95756-01	Toll, Crossbar, Tandem and No. 5 Crossbar
J99235AF	Std	Low-Frequency Impedance Corrector Unit	J99235AF-( )	SD-95756-01	Toll, Crossbar Tandem and No. 5 Crossbar

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235AG	Std	Fixed Pad Unit	J99235AG-( )	SD-95756-01	Toll, Crossbar Tandem and No. 5 Crossbar
J99235AH	Std	Impedance Compensator and Building-Out Capacitor Unit	J99235AH-( )	SD-95756-01	Crossbar Tandem
J99235AJ	Std	Impedance Compensator Low-Frequency Impedance Corrector and Building-Out Capacitor Unit	J99235AJ-( )	SD-95756-01	Crossbar Tandem
J99235AK	Std	Incoming Trunk Unit—From Dial Office—Not Arranged for Machine Announcements—No. 12, 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Toll Switchboard No. 1, 3, 3C or 3CL—No. 17C, 19 or 23E Operating Room Desk—No. 1, 2, 7, or 7A Information Desk	J99235AK-( )	SD-95789-01	Any Type of Office
J99235AL	Std	Intercepting Trunk Unit—Regular and Trouble From Dial Office—Arranged for Trouble Intercept Calls at No. 1, 3, 3C, or 3CL Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D Switchboard or No. 19 Operating Room Desk Arranged for Regular Intercepting Calls at No. 23A, 23B, 23C, or 23D Operating Room Desk—Or No. 3, 3A, 3B, 4, 4A, 4B, 6A, 6C, 6D, 6E, or 6F Information Desk	J99235AL-( )	SD-95740-01	Any Type of Office
J99235AN	Std	Fixed Pad and Building-Out Capacitor Unit	J99235AN-( )	SD-95756-01	Crossbar Tandem

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235AP	Std	Incoming Trunk Unit—Regular or Regular and Trouble Intercepting—E and M Leads Signaling—Not Arranged for Machine Announcements—No. 12. 13C, 13D, 14C, or 14D, 15C, or 15D Switchboard—No. 1, 3, 3C, or 3CL Toll Switchboard—No. 19 or 23E Operating Room Desk—No. 1, 2, 7, or 7A Information Desk	J99235AP-( )	SD-96488-01	Any Type of Office
J99235AR	Std	30-, 60-, and 120-IPM Interrupter Alarm Unit	J99235AR-( )	SD-95078-01	No. 1 or No. 3 Type Toll and DSA
J99235AS	Std	30-,60-, and 120-IPM Interrupter Transfer and Test Jack Unit—For Use With No. 1, 1B, 3B, 3C, or 3CL Toll Switchboard—No. 1 or 3 Toll Tandem Switchboard, No. 6A Teletypewriter Switchboard, or Intertoll Dialing	J99235AS-( )	SD-95078-01	No. 1 or No. 3 Type Toll and DSA
J99235AT	Std	Intercepting Trunk Unit—Regular and Trouble Intercept—E and M Lead Supervision—Arranged To Handle Trouble Intercepting Calls at No. 1 Toll Switchboard or No. 3, 3C, 3CL, 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Or No. 19 Operating Room Desk—Not Arranged for Machine Announcement—With or Without Suburban Tone—No. 23A, 23B, 23C, or 23D Operating Room Desk	J99235AT-( )	SD-95846-01	Any Type of Office
J99235AU	Std	Timing Unit—For Initial Charge Period Reminding on Originating Calls—No. 12 Manual Switchboard—No. 15C or 15D Switchboard—No. 1, 3, 3C, or 3CL Toll Switchboard—Toll Switchboard No. 5	J99235AU-( )	SD-95801-01	Any Type of Office

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235AW	Std	Multifrequency Signal Generator Unit	J99235AW-( )	SD-95867-01	Panel, Step-by-Step and Crossbar Offices
J99235BA	Std	30-, 60-, and 120-IPM Interrupter Distributing Unit—No. 1, 1B, 3, 3B, 3C, or 3CL Toll Switchboard—No. 1 or 3 Toll Tandem Switchboard, No. 6A Teletypewriter Switchboard, or Intertoll Dialing	J99235BA-( )	SD-95078-01	No. 1 or No. 3 Type Toll and DSA
J99235BB	Std	Recorder Talking Line and Buzzer Unit Equipment	J99235BB-( )	SD-31610-01 SD-95532-01	Any Type of Office
J99235BC	Std	No. 1, 3, 3C, or 3CL Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Emergency Transfer Unit—Intercepting or Information Trunks—With E and M Lead Supervision—Arranged To Use Existing Trunk Facilities To Terminate Lines From a Distant No. 5 Crossbar, Step-by-Step, or ESS No. 1 Office	J99235BC-( )	SD-96517-01	Toll and DSA Boards
J99235BD	Std	No. 1, 3, 3C, or 3CL Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Emergency Transfer Unit for Additional Trunks—With E and M Lead Supervision—Arranged To Use Existing Trunk Qualities To Terminate Lines From a Distant No. 5 Crossbar, ESS No. 1, or Step-by-Step Office	J99235BD-( )	SD-96517-01	Toll and DSA Boards

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235BE	Std	No. 1, 3, 3C, or 3CL Toll Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D—Emergency Transfer Unit—Intercepting or Information Trunks With Loop Supervision—Arranged To Use Existing Facilities To Terminate Lines From a Distant No. 5 Crossbar, Step-by-Step, or ESS No. 1 Office	J99235BE-( )	SD-96517-01	Toll and DSA Boards
J99235BF	Std	No. 1, 3, 3C, or 3CL Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Emergency Transfer Unit—Intercepting or Information Trunks—With Loop Supervision Arranged To Use Existing Trunk Facilities To Terminate Lines From a Distant No. 5 Crossbar or ESS No. 1 Office	J99235BF-( )	SD-96517-01	Toll and DSA Boards
J99235BG	Std	No. 1, 3, 3C, or 3CL Switchboard—No. 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—Emergency Transfer Unit—For Transfer of Recording Completing Trunk Circuit for Emergency Use—Arranged To Use Existing Trunk Facilities To Terminate Lines From a Distant No. 5 Crossbar, Step-by-Step, or ESS No. 1 Office	J99235BG-( )	SD-96517-01	Toll and DSA Boards

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235BH	Std	Outgoing Trunk Unit—For Dial Coin Zone Service—For Use With Cord Switchboard Located in Distant Building—No. 1 Crossbar, Panel, or Step-by-Step Office	J99235BH-( )	SD-96523-01	No. 1 Crossbar, Panel, or Step-by-Step
J99235BJ	Std	Outgoing Trunk Unit—For Dial Coin Zone Service—For Use With cord Switchboard Located in Same Building—No. 1 Crossbar, Panel, or Step-by-Step Office	J99235BJ-( )	SD-96522-01	No. 1 Crossbar, Panel, or Step-by-Step
J99235BK	Std	Signal Generator Unit for Supplying Frequencies to Keysets Arranged To Pulse 2/6 and 4 by 4 Frequencies	J99235BK-( )	SD-99328-01	4-Wire No. 5 Crossbar
J99235BL	Std	No. 1 Crossbar and/or Panel Outgoing Trunk Unit—For Dial Coin Zone Service Via Crossbar or Panel Sender Tandem With Operator Control at Local or Remote Switchboard	J99235BL-( )	SD-96518-01	No. 1 Crossbar and/or Panel
J99235BM	Std	No. 1 Crossbar and/or Panel—Timed Release and Alarm Unit for Use With Dial Coin Zone Trunk J99235BL	J99235BM-( )	SD-96518-01	No. 1 Crossbar and/or Panel
J99235BR	Std	Echo Suppressor and Amplifier—For Use With Trunk Circuits—No. 5C or 5D Switchboard or No. 5 Crossbar Office	J99235BR-( )	SD-95924-01	DSA Manual No. 5 Crossbar
J99235BS	Std	TOUCH-TONE Frequency Test Unit	J99235BS-( )	SD-94813-01 SD-98150-01	Panel, Step-by-Step and Crossbar
J99235BT	Std	TOUCH-TONE Frequency Test Connector Unit (Arranged for Ten Inputs and Four Outputs)	J99235BT-( )	SD-94814-01	Panel, Step-by-Step and Crossbar
J99235BU	Std	TOUCH-TONE Frequency Test Connector Unit (Arranged for Three Inputs and One Output)	J99235BU-( )	SD-94814-01	Panel, Step-by-Step and Crossbar

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235BY	Std	Auxiliary Permanent Signal Holding Trunk for Automatic Application of Announcement and Receiver Off-Hook Tone—Announcement and Tone Control Unit	J99235BY-( )	SD-99329-01	Any Type of Office
J99235CA	Std	Test Line and Test Line Connector Equipment for Use With 2B Concentrator	J99235CA-( )	SD-99353-01	Any Type of Office (Subscriber's Premises)
J99235CB	Std	Arranged for One-Way Dial Pulse to Local Office With E and M Lead Supervision From Switched Services Network Office, for Use in No. 1 and No. 5 Crossbar and Step-by-Step Offices With Line or Auxiliary Line Circuits Arranged for Ground Start on Ring (Auxiliary Line)	J99235CB-( )	SD-99415-01	Step-by-Step, No. 1, No. 5 Crossbar Offices
J99235CC	Std	Remote Control Unit for 2-Way Signaling to Local Office—Toll and DSA Switchboards	J99235CC-( )	SD-99330-01	Toll and DSA Boards
J99235CD	Std	Local Central Office Control Unit for 2-Way Signaling to Distant Switchboard	J99235CD-( )	SD-99330-01	Any Type of Office
J99235CE	Std	Toll Switchboard No. 1, 3, 3C, or CL, Switchboard No. 13C, 13D, 14C, 14D, 15C, or 15D—Transfer Unit for Transfer of Emergency Lines Through Trunks Using 2-Way Trunk Circuits To Terminate Lines From a Distant No. 5 Crossbar, ESS No. 1, or Step-by-Step Office	J99235CE-( )	SD-96517-01	Toll and DSA Boards
J99235CJ	Std	Permanent Signal Holding Trunk Receiver Off-Hook Announcement and Tone Timing Control Unit	J99235CJ-( )	SD-95554-01	Crossbar No. 1 and Panel

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235CK	Std	PBX-AIOD Signaling Converter Unit	J99235CK-( )	SD-99435-01	Any Type of Office
J99235CM	Std	Auxiliary Permanent Signal Holding Trunk Announcement and Tone Generator Alarm Unit	J99235CM-( )	SD-99329-01	Any Type of Office
J99235CN	Std	Tie Trunk Unit—One- or 2-Way—Same Building Without Transfer—For Connection Between No. 3 Type Switchboards, Testboards, Bays, Frames, Relay Racks, Test Units—Maintenance Desks or No. 12 Service Observing Desks	J99235CN-( )	SD-99434-01	Any Type of Office
J99235CP	Std	Auxiliary Line Unit for Measured Rate INWATS Service	J99235CP-( )	SD-99435-01 SD-99439-01	Panel, Step-by-Step and Crossbar Offices
J99235CR	Std	Auxiliary Signaling Relays —For MJ or MK Mobile Telephone System—Switchboard End—Auxiliary Relay Unit	J99235CR-( )	SD-99419-01	—
J99235CS	Std	Auxiliary Signaling Relays —For MJ or MK Mobile Telephone System MJ Mobile Telephone End—Auxiliary Relay Unit	J99235CS-( )	SD-99419-01	—
J99235CT	Std	E and M Lead Signaling Test Unit	J99235CT-( )	SD-99407-01	Any Type of Office
J99235CU	Std	PBX—Automatic Identified Outward Dialing Signaling Converter Unit—For Converting Simplex Supervision to E and M Supervision	J99235CU-( )	SD-99446-01	Step-by-Step No. 1, No. 5 Crossbar Offices
J99235CV	Std	Monitoring Unit—For Signaling Circuits Having Sending M Leads and Receiving E Leads Control Units	J99235CV-( )	SD-99441-01	No. 4A Toll Office

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235CW	Std	Frame Line Unit—For Use With Switchboards, Testboards, Desks, Bays, Frames, Racks—TSPS No. 1 or Stored Program Control No. 1—Without Signaling	J99235CW-( )	SD-99434-01	Any Type of Office
J99235CY	Std	Frame Line Unit—For Connection to Switchboards, Testboards, Handsets, Subsets, Bays, Frames, Relay Racks, Test Positions, Maintenance Desks, Key Telephones, or Consoles—With Signaling	J99235CY-( )	SD-99434-01	Any Type of Office
J99235DA	Std	Incoming to ESS Offices or Tie Line Unit—One- or 2-Way—Same or Distant Building—Or Incoming Trunk Unit—E and M or Loop Supervision—With or Without Electrical Hold and Automatic Release to Official PBX, Toll, or Local Subscriber Line Circuit—For Connection Between Switchboards, Testboards, Handsets, Subsets, Bays, Frames, Relay Racks, Key Telephones, Consoles, or Maintenance Desks	J99235DA-( )	SD-99434-01	Any Type of Office
J99235DC	Std	Line or Trunk Unit for Maintenance Communication or Repair Service—Incoming or 2-Way Trunk Unit—Multiple Circuit for Joint Access Grouping or Add-On of Similar or Unlike Circuits at End A—Transfer From Repair Service Desk and From Consoles or Key Telephones to Switchboards or Testboards	J99235DC-( )	SD-99434-01	Any Type of Office

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235DD	Special	Line Trunk Unit—Multiple of a 4-Wire 101 Trunk to a Console and Testboard No. 21A—With or Without Audible Ringing Toward 101 Trunk	J99235DD-( )	SD-99434-01	—
J99235DE	Std	Permanent Signal Holding Trunk Common Control Alarm Unit	J99235DE-( )	SD-25418-01 SD-95554-01	No. 1 Crossbar and Panel
J99235DF	Std	SF Test Unit—Arranged for Use With Testboard No. 22A and No. 24A or Test Position No. 50A	J99235DF-( )	SD-99413-01	Any Type of Office
J99235DG	Std	E2L Transmission Test Applique Unit for Use With Testboard No. 22A and No. 24A	J99235DG-( )	SD-99413-01	Any Type of Office
J99235DH	Std	2-Way Auxiliary Line Circuit Unit—For Incoming and Outgoing Service Between Local and Switched Services Network Offices	J99235DH-( )	SD-99484-01	Step-by-Step No. 1 Crossbar, No. 5 Crossbar Offices
J99235DJ	Std	Tie Trunk Unit—Transfer From Park-On Circuit or Desk to Switchboard in Same Building for Centralized Repair Service	J99235DJ-( )	SD-99434-01	Toll and DSA Boards
J99235DK	Std	No. 19A or 21A Testboard —Dial Bridge Test Unit	J99235DK-( )	SD-1C232-01	4W ESS No. 1 4W No. 5 Crossbar
J99235DL	Std	Incoming Trunk Unit—Arranged for Electrical Hold—Connection to Consoles, Key Telephones, or Desks at End "A"—3-Wire Connection to Panel, No. 1 Crossbar, Crossbar Tandem, Step-by-Step, or No. 5 Crossbar in Same Building or for Connection to Official PBX, Toll or Local Subscriber Line Circuit at End B	J99235DL-( )	SD-99434-01	Any Type of Office

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235DM	Std	Incoming Trunk Unit—3-Wire Connection to Panel, No. 1 Crossbar, Crossbar Tandem, Step-by-Step, or No. 5 Crossbar or Official PBX or 2-Wire Connection to Toll or Local Subscriber Line Circuit or to Trunk Circuit (Park-On Type)	J99235DM-( )	SD-99434-01	Any Type of Office
J99235DN	Std	Monitoring Unit for Signaling Circuits Having Sending M Lead and Receiving E Lead	J99235DN-( )	SD-99441-01	Any Type of Office
J99235DP	Std	Line or Trunk—One- or 2-Way Tie Line Unit in Same Building or With E and M Lead Supervision to Distant Building for Connection Between Handsets, Subsets, Bays, Frames, Relay Racks, Key Telephones, Consoles, Maintenance Desks, Switchboards, and Testboards	J99235DP-( )	SD-99434-01	Any Type of Office
J99235DR	Std	Incoming Trunk Unit—Regular Intercept—E and M Lead Signaling—Not Arranged for Machine Announcements—No. 12C, 13C, 13D, 14C, 14D, 15C, or 15D Switchboard—No. 1, 3, 3C, or 3CL Toll Switchboard—No. 19 or 23E Operating Room Desk —No. 1, 2, 7, or 7A Information Desk	J99235DR-( )	SD-96488-01	Any Type of Office
J99235DS	Std	Line or Trunk Equipment —For Maintenance Communication or Repair Service—Incoming Trunk Unit—Transfer for Rerouting of Calls—Loop Signaling—Hi-Lo Supervision—Four Circuits	J99235DS-( )	SD-99434-01	Any Type of Office

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235DT	Std	Line or Trunk Equipment —For Maintenance Communication or Repair Service—Incoming Trunk to Park-On Trunk—E and M Lead Signaling—Three Circuits	J99235DT-( )	SD-99434-01	Any Type of Office
J99235DU	Std	Line or Trunk Equipment —For Maintenance Communication or Repair Service—Incoming Trunk to Park-On Trunk—With Transfer for Rerouting of Calls—E and M Lead Signaling	J99235DU-( )	SD-99434-01	Any Type of Office
J99235DV	Std	Private Line Unit—48-Volt Operation	J99235DV-( )	SD-96147-01	Any Type of Office
J99235DW	Std	Dial Tone Applique—4-Circuit Unit—For Use With Auxiliary Line Circuits in Step-by-Step Offices Arranged for Common or Noncommon Control TOUCH-TONE Calling	J99235DW-( )	SD-99415-01	Step-by-Step Offices Arranged for Common Control
J99235DY	Std	Common Systems—Specification for—48 Volt Auxiliary Line Unit—With Automatic Cutoff—For Individual Lines With Main and Extension Stations on Separate Loops	J99235DY-( )	SD-96468-01	Any Type of Office
J99235EA	Std	Common Systems Tie Line Unit for ESS Offices or Incoming Trunk Unit—Connection Between Maintenance Desks—Loop Signaling—High-Low or Reverse Battery Supervision	J99235EA-( )	SD-99434-01	ESS Offices
J99235EB	Std	Auxiliary Timing Meter Unit for Use With Auxiliary Line Unit for Measured Rate INWATS Service J99235CP	J99235EB-( )	SD-99439-01	Panel, Step-by-Step, and Crossbar

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235EC	Std	911 Emergency Service Trunk—Ringdown Signaling—For Use With Panel or No. 1 Crossbar	J99235EC-( )	SD-94830-01	Panel No. 1 Crossbar
J99235ED	Std	Interrupter for 6-Minute Timing Unit	J99235D-( )	SD-94831-01	Panel No. 1 Crossbar
J99235EE	Std	60-IPM and Flash or 120-IPM Unit	J99235EE-( )	SD-1C484-01	Any Type of Office
J99235EF	Std	Auxiliary Message Count Registration Unit for Use With Auxiliary Line Circuit Arranged for Measured Rate INWATS Service Unit J99235CP	J99235EF-( )	SD-99439-01	Panel, Step-by-Step, and Crossbar
J99235EG	Std	Ringback Start Unit	J99235EG-( )	SD-94831-01	Panel No. 1 Crossbar
J99235EH	Std	Impedance Compensator and Fixed Pad Unit—One 2-By 23-Inch Mounting Plate—Surface Wired	J99235EH-( )	SD-95756-01	
J99235EJ	Std	Common Systems Auxiliary Trunk Composite Signaling Unit	J99235EJ-( )	SD-94847-01	Crossbar Tandem
J99235EK	Std	Flexible Night Connection Unit for 770A PBX Served By SD-99439-01 INWATS Auxiliary Lines	J99235EK-( )	SD-99439-01	No. 1 and No. 5 Crossbar Step-By-Step, No. 1 and No. 2 ESS
J99235EL	Std	Common System Permanent Signal Molding Trunk Hold Relay Release Unit For Crossbar No. 1	J99235-EL-( )	SD-95554-01	Offices Used in Crossbar No. 1
J99235EN	Std	Impedance Compensator Fixed and Variable Pad Unit	J99235EN-( )	SD-95756-01	Common

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
J99235EP	Std	Auxiliary Test Trunk—for use in a No. 5 Crossbar Office for Testing a Subscribers Line That is Connected to a Common Overflow Trunk, Permanent Signal Holding Trunk or Plugging Up Line Circuit	J99235EP-( )	SD25767-01	No. 5 Crossbar
J99235ER	Std	Auxiliary Test Trunk—for use in a No. 1 Crossbar or Panel Office for Testing a Subscribers Line That is Permanently Connected to a Common Overflow Trunk, Permanent Signal Holding Trunk or Plugging Up Line Circuit	J99235ER-( )	SD-25767-01	Panel, No. 1, Crossbar
J99235ES	Std	Auxiliary Test Trunk—for for Use in Step-by-Step Offices for Testing a Subscriber Line That is Connected to a Common Overflow Trunk, Permanent Signal Holding Trunk or Plugging Up Line Circuit	J99235ES-( )	SD-25767-01	Step-by-Step
J99235ET	Std	Auxiliary Line Timing Meter Unit—Common Systems	J99235ET-( )	SD-99439-01	Common
J99235EU	Std	INWATS Auxiliary Line Seizure Guard Unit Arranged To Serve Three Auxiliary Lines	J99235EU( )	SD-99439-01	Common
J99235EV	Std	INWATS Time of Day Rate Control Unit Arranged For a Maximum of 1000 Auxiliary Line Circuits	J99235EV-( )	SD-99439-01	Common
J99235EW	Std	INWATS Time of Day Cut-Through Unit Arranged For a Maximum of 100 Auxiliary Line Circuits	J99235EW-( )	SD-99439-01	Common
Installer Wired	Std	Subscriber Loop Bridge-Lifting Equipment Common Battery Offices	ED-95144-10	SD-95973-01	Common Battery Offices

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	OFFICES USED IN AND REMARKS
Installer Wired	Std	Subscriber Loop Bridge-Lifting Equipment for Use Where 60-Hertz Inductive Interference is Present—Common Battery Offices	ED-95163-10	SD-95973-01	Common Battery Offices

Circuit Schematic Index

CIRCUIT DRAWING	J99235 EQPT CODE
ED-91601-01	A, BL
SD-25418-01	DE
SD-25767-01	H, J, EP, ER, ES
SD-31610-01	BB
SD-94813-01	BS
SD-94814-01	BT, BU
SD-94830-01	EC
SD-94831-01	ED, EG
SD-94847-01	EJ
SD-95031-01	L
SD-95036-01	AC
SD-95037-01	AB
SD-95078-01	AR, AS, BA
SD-95083-01	P
SD-95396-01	T
SD-95452-01	W
SD-95532-01	BB
SD-95554-01	CJ, DE
SD-95607-01	F
SD-95674-01	A, K
SD-95691-01	R
SD-95711-01	G
SD-95714-01	AA
SD-95721-01	U
SD-95740-01	AL
SD-95756-01	AE, AF, AG, AH, AJ, AN, EH, EN,
SD-95789-01	AK
SD-95801-01	AU
SD-95846-01	AT
SD-95867-01	AW
SD-95924-01	BR
SD-95973-01	ED-95144-10
	ED-95163-10
SD-96128-01	C
SD-96147-10	DV
SD-96262-01	AD
SD-96387-01	B
SD-96468-01	DY
SD-96469-01	S
SD-96488-01	AP, DR
SD-96517-01	BC, BD, BE, BF, BG, CE
SD-96518-01	BL, BM
SD-96522-01	BJ
SD-96523-01	BH
SD-98150-01	BS
SD-99328-01	BK
SD-99329-01	BY, CM, EM
SD-99330-01	CC, CD
SD-99353-01	CA
SD-99407-01	CT
SD-99413-01	DF, DG
SD-99415-01	CB, DW
SD-99419-01	CR, CS
SD-99434-01	CN, CW, CY, DA, DC, DD, DJ, DL, DM, DP, DS, DT, DU, EA
SD-99435-01	CK
SD-99439-01	CP, EB, EF, EK, ET, EU, EV, EW
SD-99441-01	CV, DN
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SD-99484-01	DH
SD-1C232-01	DK
SD-1C484-01	EE

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