

**ONE-WAY INTEROFFICE TRUNKS  
RELAY RACK UNITS  
EQUIPMENT DESIGN REQUIREMENTS  
STEP-BY-STEP 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 relay-rack mounted, one-way interoffice trunks, in step-by-step offices.

**1.02** This specification is reissued to:

- (a) Revise J33013AP,L6
- (b) Revise J33013AR,L1 and Note A
- (c) Revise J33013BD,L1 and add list 5
- (d) Revise J33913BF,L1 and add list 3 and Note A
- (e) Revise J33013BG,L1 and add list 5 and Note B.

**DESCRIPTION**

**1.03** It is intended eventually to include in this specification all relay rack units for one-way interoffice trunks, which are arranged on 2-inch wide mounting plates.

**1.04** These relay rack units consist of one or more mounting plates, 2 inches wide by 23 inches long, on which the apparatus for one or more circuits is mounted and surface wired to one or more unit terminal strips. The terminal strips facilitate shop testing of the circuit, provide a place for strapping used to obtain circuit options, and serve as a convenient place for the installer to make external connections. These 2-inch units may be mounted on relay racks drilled for 1-3/4 inch mounting plates by using

adapters per ED-92243-( ) as illustrated on ED-92242-01.

**1.05** All units covered by this specification are surface wired.

**1.06** The choice of a trunk circuit to be used for a particular installation is covered on the keysheet for that system.

**1.07** When making an incoming trunk busy, it is ordinarily necessary to do this at the preceding equipment, usually in the distant originating office. As an indication or reminder to this effect, a transparent, red-tinted, plastic-sheet, designation card cover per P-40C869 is available for inserting in the trunk designation card holder over the designation card. This imparts a red color to the designation card but does not appreciably reduce the visibility of the information. These covers are available in package lots of 100. They may be applied either by the installer or telephone company maintenance forces as required.

**2. SUPPLEMENTARY INFORMATION**

- 814-000-000—Numerical Index—Step-by-Step Systems
- 800-600-000—Checking List—General Equipment Requirements
- J1C121—801-603-163—13A Announcement Machine Equipment Design Requirement
- J33014—814-521-150—2-Way Interoffice Trunks—Relay Rack Units
- J38801—814-007-150—360A Dial Office
- J38805—814-005-151—355A Dial Office
- J39206—814-005-150—List of Requirement Specifications for No 1 and 350A Offices and 702A PBX
- J39210—814-008-150—No 35E97 Dial Office
- Current Drain Data—  
SD-31250-01—No 360A Office

**NOTICE**

Not for use or disclosure outside the  
Bell System except under written agreement

SD-31359-02—No 1 Office  
 SD-31364-02—No 350A Office  
 SD-31780-02—No 355A Office  
 SD-32325-02—No 35E97 Office

### 3. DRAWINGS

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

#### Keysheets

SD-31250-01—No 360A Dial Offices  
 SD-31359-01—No 1 Offices  
 SD-31364-01—No 350A Offices  
 SD-31780-01—No 355A Offices  
 SD-32325-01—No 35E97 Offices  
 SD-90250-01—Master Keysheet—All Systems

#### Equipment

ED-91837-01—Relay Rack Assembly—Angle Type—  
 1-Foot 0-Inch Sheet Metal Base—  
 9 Feet 0 Inch, 10 Feet 6 Inches, and  
 11 Feet 6 Inches High  
 ED-92242-01—Application of 2-Inch Plates or Units  
 to 1-3/4 Inch Racks or 1-3/4 Inch  
 Plates or Units to 2-Inch Racks—  
 Typical  
 ED-92243-( )—Relay Rack Unit Framework  
 ED-92465-01—Relay Rack Assembly—Floor Sup-  
 ported—Bulb-Angle Uprights—Height  
 6 Feet 10-1/2 Inches

### 4. EQUIPMENT

*J33013A—AT&T Co Std—Outgoing Trunk Unit—  
 From Local Selector Levels to Distant  
 Manual Switchboard—Arranged for  
 Calling Party Control*

*List 1—Framework, assembly, and equipment per  
 SD-32167-01, Fig 1, for two trunks to a dis-  
 tant manual switchboard. (One circuit, two  
 mounting plates.)*

*J33013B—A&M Only—Incoming Trunk Unit—  
 From Toll Switchboard With Rering and  
 Manual Start Machine Ringing—With  
 or Without Coin Control and Tone for  
 Intercepting Completing Operator*

*List 1—Framework, assembly, wiring, and equipment  
 for one incoming trunk from a toll switch-  
 board with rering and manual start machine  
 ringing, without coin control or tone for in-  
 tercepting completing operator per SD-  
 31703-01, Fig 1, A, and C, less repeating  
 coils. (See Notes A, B, and C.) (Three  
 mounting plates, one circuit.)*

*List 2—Wiring and equipment per SD-31703-01, Fig  
 B, required in addition to list 1 to provide  
 coin control.*

*List 5—Repeating coils per SD-31703-01, option A  
 only, required in addition to list 1 for use  
 with trunks having 1100 or less ohms im-  
 pedance at 1000 hertz. (See Note D.)*

*List 6—Repeating coils per SD-31703-01, option B  
 only, required in addition to list 1 for use  
 with trunks having greater than 1100-ohm  
 impedance at 1000 hertz.*

*List 7—Wiring and equipment per SD-31703-01, Fig  
 F, required in addition to list 1 when +48  
 volt talk battery is required for coin stations  
 arranged for coinless access to specified  
 numbers (dial tone first). (See Note B.)*

#### Notes

- A. The R resistance lamp shall be located on a miscellaneous fuse and lamp panel.
- B. Wiring per SD-31703-01, Fig 1, option N only, is always required in addition to list 2.
- C. Provide wiring per option M only in addition to list 1 when +48 volt talk battery is not required.
- D. Provide wiring per Fig A only when coin control is not required.
- E. Provide wiring per option K only for single wire coin control.
- F. Provide wiring per option J only when single wire coin control is not required.

*J33013C—AT&T Co Std—Recording Completing  
 Trunk Unit—CX Signaling, Type B—  
 Arranged for Class-of-Service Tone*

*List 4—Wiring and equipment per SD-31888-01, Fig  
 1, R apparatus only, required in addition to  
 list 1, 5, or 16 when associated trunk con-  
 nects to a telephone repeater or carrier tele-  
 phone circuit.*

*List 14—Wiring and equipment per SD-31888-01, Fig  
 1, H apparatus and wiring only, omit G wir-  
 ing, required in addition to list 5 or 16 when*

connection to a coin control trunk is required.

- List 16**—Framework, assembly, wiring, and equipment for one recording completing trunk unit, with -48 volt fuse failure make busy, per SD-31888-01, Fig 1 and F apparatus with N, G, and W wiring and Fig 2 and B. (See Notes A and B.) (One mounting plate, one circuit.)
- List 17**—Equipment and wiring per SD-31888-01, Fig 2, option ZE, required in addition to list 16 when positive talk battery is required. (See Note B.)
- List 18**—Framework, assembly, wiring, and equipment for one applique unit equipped with three single class-of-service circuits per SD-31888-01, Fig 3, with ZJ apparatus, for use in No 1 or 350A office without precise tone supply. (One mounting plate, three circuits.)
- List 19**—Framework, assembly, wiring, and equipment for one applique unit equipped with one single class-of-service tone circuit per SD-31888-01, Fig 3, with ZJ apparatus, for use in No 1 or 350A office without precise tone supply. (One mounting plate, one circuit.)
- List 20**—Framework, assembly, wiring, and equipment for one applique unit equipped with three single class-of-service tone circuits per SD-31888-01, Fig 3, with ZI or E apparatus, for use with No 355A or 360A office or when precise tone supply in No 1 or 350A office is specified. (One mounting plate, three circuits.)
- List 21**—Framework, assembly, wiring, and equipment for one applique unit equipped with one single class-of-service tone circuit per SD-31888-01, Fig 3, with ZI or E apparatus, for use with No 355A or 360A office or when precise tone supply in No 1 or 350A office is specified. (One mounting plate, one circuit.)
- List 22**—Framework, assembly, wiring, and equipment for one applique unit equipped with three double class-of-service tone circuits per SD-31888-01, Fig 4, with ZJ apparatus, for use in No 1 or 350A office without precise tone supply. (One mounting plate, three circuits.)
- List 23**—Framework, assembly, wiring, and equipment for one applique unit equipped with one double class-of-service tone circuit per SD-31888-01, Fig 4, with ZJ apparatus, for

use in No 1 or 350A office without precise tone supply. (One mounting plate, one circuit.)

- List 24**—Framework, assembly, wiring, and equipment for one applique unit equipped with three double class-of-service tone circuits per SD-31888-01, Fig 4, with ZI apparatus for use in No 355A office or when precise tone supply in No 1 or 350A office is specified. (One mounting plate, three circuits.)
- List 25**—Framework, assembly, wiring, and equipment for one applique unit equipped with one double class-of-service tone circuit per SD-31888-01, Fig 4, with ZI apparatus, for use in No 355A office or when precise tone supply in No 1 or 350A office is specified. (One mounting plate, one circuit.)
- List 26**—Wiring and equipment per SD-31888-01, Fig 1, ZK or E apparatus only, required in addition to list 5 or 16 for ringing supply resistance for other than No 355A offices (one required per 60 trunks).

#### Notes

- A. When list 18, 19, 20, 21, 22, 23, 24, or 25 is specified, N wiring shall be omitted.
- B. When positive talk battery is required, provide A wiring; when not required, provide B and ZD wiring.
- C. Installer shall, according to job requirements, connect ZA, ZB, or ZC wiring to the unit terminal strip.

#### *J33013D—AT&T Co Std—Recording Completing Trunk Unit—With or Without Coin—With Ringback—CX Signaling, Type B, or Simplex Signaling*

- List 2**—Wiring and equipment per SD-32042-01, Fig 5, with ZC and ZE wiring, required in addition to list 1, 12, or 17 for trunks accessible to prepay or prepay and noncoin lines only, automatic return of initial coin deposit, without class-of-service tone (omit W wiring). (See Note F.)
- List 3**—Wiring and equipment per SD-32042-01, Fig 4 and 5, with ZC and ZE wiring, required in addition to list 1, 12, or 17 for trunks accessible to prepay or prepay and noncoin lines

only, automatic return of initial coin deposit, with one or two class-of-service tones (omit W wiring). (See Notes A, B, E, and H.)

- List 5**—Wiring and equipment per SD-32042-01, Fig 3, required in addition to list 1, 12, or 17 for trunks accessible to noncoin or noncoin and postpay lines only, when one class-of-service tone is required.
- List 6**—Wiring and equipment per SD-32042-01, Fig 4, required in addition to list 1, 12, or 17 for trunks accessible to noncoin or noncoin and postpay lines only, when two class-of-service tones are required.
- List 7**—Wiring and equipment per SD-32042-01, option Y, required in addition to list 3, 5, 6, or 14 for a No 355A office with or without precise tone.
- List 8**—Wiring and equipment per SD-32042-01, option Z, required in addition to list 3, 5, 6, or 14 for No 1 or 350A office without precise tone.
- List 11**—Wiring and equipment per SD-32042-01, Fig 1, J apparatus only, required in addition to list 1, 12, or 17 when a telephone repeater is used in the connecting trunk.
- List 13**—Wiring and equipment per SD-32042-01, Fig 7, with ZE wiring, required in addition to list 12 or 17 for trunks accessible to prepay or prepay and noncoin lines only, retention of initial coin deposit, without class-of-service tone (omit W wiring).
- List 14**—Wiring and equipment per SD-32042-01, Fig 4 and 7, with ZE wiring, required in addition to list 12 for trunks accessible to prepay or prepay and noncoin lines only, retention of initial coin deposit, with one or two class-of-service tones (omit W wiring). (See Notes A and B.)
- List 17**—Framework, assembly, wiring, and equipment for one recording completing trunk, with -48 volt fuse failure make busy, per SD-32042-01, Fig 1, 6, B, and D, with A, B, and W wiring options ZG and ZU. (See Notes C, D, E, and G.)
- List 18**—Equipment and wiring per SD-32042-01, Fig 6, option ZP, required in addition to list 17 when positive talk battery is required. (See Note G.)
- List 19**—Wiring and equipment per SD-32042-01, option ZT, required in addition to list 3, 5, 6, or 14 for No 1 or 350A office with precise tone.
- List 20**—Wiring and equipment per SD-32042-01, ZV wiring and apparatus required in addition to

list 17 when used in a No 355A office, omit ZU wiring.

#### Notes

- A. When direct ground is on lead A, Fig 4, T wiring only shall be specified.
- B. When resistance ground is on lead A, Fig 4, V wiring only shall be specified.
- C. The B wiring includes a strap furnished by the shop on the unit terminal strip. This strap shall be cut by the installer when this trunk connects to rotary outgoing trunk switches.
- D. When coin control with off-hook indication is specified, ZA and ZB wiring is required.
- E. The R and RB resistance lamps per SD-32042-01, Fig 1, shall be located on a miscellaneous fuse and lamp panel bay.
- F. For coin control on tip lead only, provide ZK wiring; for coin control on tip and ring, provide ZJ wiring.
- G. When positive talk battery is required, provide ZH wiring; when not required, provide ZG and ZO wiring.

#### *J33013E—AT&T Co Std—Outgoing Trunk Unit— 2-Wire to No 1, 3, or 3C Toll Switchboard—From Overflow Connector Terminals—For Hospital, Fire, and Po- lice Service—Arranged To Trip Machine Ringing Without Charge*

- List 1**—Framework, assembly, wiring, and common equipment for one outgoing trunk unit per SD-31840-01, Fig 1, with Y wiring. (See Note A.) (Two mounting plates, one circuit.)
- List 2**—Wiring and equipment per SD-31840-01, Fig 1, Z apparatus only, required in addition to list 1 when used in other than No 355A offices (one list 2 per 60 lists 1).
- List 3**—Wiring and equipment per SD-31840-01, Fig 1, W apparatus only, required in addition to list 1 when trunk impedance at 1000 hertz is 1100 ohms or less.
- List 4**—Wiring and equipment per SD-31840-01, Fig 1, X apparatus only, required in addition to list 1 when trunk impedance at 1000 hertz is greater than 1100 ohms.

**Note**

- A. When automatic disconnect of connectors is specified and a trunk arranged to trip ringing without charging, or an intercept trunk and one or more trunks arranged to trip ringing without charging are required per connector group, equipment per SD-31840-01, Fig 3, is required and is covered by J33016AN.

**J33013F—AT&TCo Std — Outgoing Trunk Unit—For Special Service From Non-coin Lines to Distant Operator—With Ringback Feature**

- List 1**—Framework, assembly, wiring, and equipment for one outgoing trunk per SD-31753-01, Fig 1, with X, Y, and Z wiring. (See Note A.) (Two mounting plates, one circuit.)
- List 2**—Repeating coil per SD-31753-01, Fig 1, C apparatus only, required in addition to list 1 for use with trunks having less than 735 ohms impedance at 1000 hertz.
- List 3**—Repeating coil per SD-31753-01, Fig 1, A apparatus only, required in addition to list 1 for use with trunks having between 735 and 1100 ohms impedance at 1000 hertz.
- List 4**—Repeating coil per SD-31753-01, Fig 1, B apparatus only, required in addition to list 1 for use with trunks having greater than 1100 ohms impedance at 1000 hertz.
- List 5**—Wiring and equipment per SD-31753-01, Fig 2, required in addition to list 1 for one ringing circuit (one required per five trunks).
- List 6**—Wiring and equipment per SD-31753-01, Fig 3, required in addition to list 1 for a fuse failure make busy feature for one trunk.

**Note**

- A. This unit is wired for a maximum trunk conductor loop resistance, which may be varied at the time of installation by removing straps from across resistance furnished with the unit to suit any trunk conductor loop resistance.

**J33013K—AT&TCo Std—Outgoing Trunk Unit—For Special Service From Coin Box Lines to Central A Switchboard With Ringback Feature**

- List 2**—Repeating coil per SD-31315-01, Fig 1, F apparatus only, required in addition to list 1 or

4 for use with trunks having 1100 ohms or less impedance at 1000 hertz.

- List 3**—Repeating coil per SD-31315-01, Fig 1, H apparatus only, required in addition to list 1 or 4 for use with trunks having greater than 1100 ohms impedance at 1000 hertz.
- List 4**—Assembly, wiring, and equipment for one outgoing trunk per SD-31315-01, Fig 1 and B, with ZC wiring and apparatus and option ZX. (See Note A.) (Three mounting plates, one circuit.)

**Note**

- A. For coin station sets arranged for dial-tone-first operation, provide ZT and ZW wiring; for coin-first operation of prepay coin lines, provide ZS and ZV wiring.

**J33013L—AT&TCo Std—Outgoing Trunk Unit—To Special Service Operator at Central A Board With Ringback Feature**

- List 1**—Framework, assembly, wiring, and equipment for one outgoing trunk unit to a special service operator at the central A board per SD-31375-01, Fig 1, G, and H. (See Notes A, B, C, D, and E.) (Two mounting plates, one circuit.)
- List 2**—Equipment and wiring per SD-31375-01, Fig 1, option X only, and Fig A, with X apparatus, required in addition to list 1 when trunk is used in offices with 48 volts at the distant end and message registration is required.
- List 3**—Equipment and wiring per SD-31375-01, Fig 1, Y wiring only, and Fig A, with Y apparatus, required in addition to list 1 when trunk is used in offices with 48 volts at the distant end and where message registration is not required.
- List 4**—Equipment and wiring per SD-31375-01, Fig 1, X apparatus only, and Fig B, with X apparatus, required in addition to list 1 when trunk is used in offices with 38 volts at the distant end and message registration is required.
- List 5**—Equipment and wiring per SD-31375-01, Fig 1, Y wiring only, and Fig B, with Y apparatus, required in addition to list 1 when trunk is used in offices with 38 volts at the distant end and message registration is not required.

- List 6**—Equipment and wiring per SD-31375-01, Fig 2, required in addition to list 1 for one ringing control circuit for use in 2-party selective or 4-party semiselective ringing offices (provide one list 6 per five lists 1). (See Note E.)
- List 7**—Equipment and wiring per SD-31375-01, Fig 3, required in addition to list 1 for one ringing control circuit for use in 4-party selective ringing offices (provide one list 7 per five lists 1). (See Note E.)
- List 8**—Equipment and wiring per SD-31375-01, Fig 4, required in addition to list 1 (on the first unit per list 1 only) in 4-party selective ringing offices (provide one per office).
- List 9**—Equipment and wiring per SD-31375-01, Fig 1, G apparatus only, required in addition to list 1 for use when trunk is connected to make busy circuit.
- List 10**—Repeating coil per SD-31375-01, Fig 1, T apparatus only, required in addition to list 1 for use with trunk having 1100 ohms or less impedance at 1000 hertz.
- List 11**—Repeating coil per SD-31375-01, Fig 1, P apparatus only, required in addition to list 1 for use with trunk having greater than 1100 ohms impedance at 1000 hertz.

#### Notes

- A. The Z resistor shall be of such value that the resistance of the trunk conductor loop plus Z resistor shall not be less than 2500 ohms nor more than 3000 ohms.
- B. Wiring per SD-31375-01, Fig 1, ZI wiring only, shall be specified with list 1 when this trunk connects to rotary out-trunk switch.
- C. Wiring per SD-31375-01, Fig 1, ZH wiring only, shall be specified with list 1 when this trunk connects to other than rotary out-trunk switch.
- D. Wiring per SD-31375-01, Fig 1, H wiring only, shall be specified with list 1 when connection to make busy per list 9 is not required.
- E. The RB, RB-, RB+, and MR lamps shall be located on a miscellaneous lamp panel.

**J33013M—A&M Only—Outgoing Trunk Unit—To Manual or Toll Office—AB Toll Loop Signaling—With Toll Grade Transmission**

- List 1**—Assembly, wiring, and equipment for one-way trunk unit per SD-31698-01, Fig 1, with V, W, and ZC apparatus. (Two mounting plates, one circuit.)
- List 2**—Wiring and equipment per SD-31698-01, Fig 1, X apparatus only, required in addition to list 1 for use in a No 350A office.
- List 3**—Wiring and equipment per SD-31698-01, Fig 1, Y apparatus only, required in addition to list 1 for use in a No 360A office.
- List 4**—Repeating coil per SD-31698-01, Fig 1, U apparatus only, required in addition to list 1 for use with a trunk having 735 ohms or less impedance at 1000 hertz.
- List 5**—Repeating coil per SD-31698-01, Fig 1, T apparatus only, required in addition to list 1 for use with a trunk having between 735 and 1100 ohms impedance at 1000 hertz.
- List 6**—Repeating coil per SD-31698-01, Fig 1, P apparatus only, required in addition to list 1 for use with a trunk having greater than 1100 ohms impedance at 1000 hertz.
- List 7**—Wiring and equipment per SD-31698-01, Fig 1, ZD wiring and apparatus only, required in addition to list 2 when precise tone supply is provided in a No 350A office (omit X wiring and apparatus).

**J33013N—AT&T Co Std—Incoming Trunk Unit—To Toll Incoming Selector—CX Signaling, Type B, or Simplex Signaling—Controlled Ringing and Rering—With or Without Connection to Coin Control**

- List 2**—Wiring and equipment per SD-31887-01, Fig 1, C resistance lamp only, required in addition to list 1 or 7 for ringing supply resistance (one required per five lists 1 or 7).
- List 4**—Wiring and equipment per SD-31887-01, Fig A with options K and ZT, required in addition to list 1 or 7 for line seizure signal to operator. (See Note E.)
- List 5**—A&M Only—Wiring and equipment per SD-31887-01, Fig B only, required in addition to list 1 or 7 when line seizure signal to operator is not required.
- List 7**—Framework, assembly, wiring, and equipment for one incoming trunk unit per SD-31887-01, Fig 1 and E with options B, N, Q, S, U, W, Y, ZD, ZF, ZG, ZI, ZR, and ZT. (See Note E.) (Two mounting plates, one circuit.)
- List 8**—Framework, assembly, wiring, and equipment for one incoming trunk unit arranged for

connection to a coin control trunk unit per SD-31887-01, Fig 3 and E with options ZD, ZF, ZG, ZI, and ZR. (Two mounting plates, one circuit.)

**List 9**—Wiring and equipment per SD-31887-01, options G and ZQ, required in addition to list 7 for coin control feature. (See Note A.)

**List 11**—Wiring and equipment per SD-31887-01, Fig C, options ZE, ZL, and ZS, required in addition to list 8 when +48 volt talk battery and single wire control (coin service improvement, dial-tone-first) is required. (See Note B.)

**List 12**—Wiring and equipment per SD-31887-01, Fig C, options ZE, ZH, ZO, and ZS required in addition to list 7 when +48 volt talk battery and single wire coin control (coin service improvement, dial-tone-first) is required. (See Notes C and D.)

**List 13**—Reserved.

**List 14**—Wiring and equipment per SD-31887-01, Fig 2A and option ZK, required in addition to list 7 or 8 when a telephone repeater is used in the associated trunk.

**List 15**—A&M Only—Wiring and equipment per SD-31887-01, options A, ZN, and ZP required in addition to list 7 for coin control with on-hook indication feature. (See Note A.)

#### Notes

- A. Omit option B when furnishing list 9 or 15.
- B. Omit options ZD, ZF, ZG, and ZR when furnishing list 11.
- C. Omit options ZD, ZF, ZG, and ZR when furnishing list 12.
- D. Omit option B or G when furnishing list 12.
- E. Omit option ZT and provide option ZU when immediate start of ring is required.

#### **J33013P—AT&T Co Std—Incoming Trunk Unit—From Manual or Toll Office—With Repeating Coil**

**List 1**—Assembly, wiring, and equipment for one incoming trunk circuit per SD-31856-01, Fig 1. (One mounting plate, one circuit.)

**List 2**—Repeating coil per SD-31856-01, Fig 1, V apparatus only, required in addition to list 1 for

use with incoming trunk having between 735 and 1100 ohms impedance at 1000 hertz.

**List 3**—Repeating coil per SD-31856-01, Fig 1, W apparatus only, required in addition to list 1 for use with incoming trunk having less than 735 ohms impedance at 1000 hertz.

**List 4**—Repeating coil per SD-31856-01, Fig 1, X apparatus only, required in addition to list 1 for use with incoming trunk having greater than 1100 ohms impedance at 1000 hertz.

**List 5**—Pulsing relay per SD-31856-01, Fig 1, Y apparatus only, required in addition to list 1 for incoming trunks with pulsing loop of less than 1200 ohms resistance.

**List 6**—Pulsing relay per SD-31856-01, Fig 1, Z apparatus only, required in addition to list 1 for incoming trunks with pulsing loop of 1200 to 2000 ohms resistance.

#### **J33013R—AT&T Co Std — Two-Wire Outgoing Trunk Unit — From Local Selector Levels to Special Service Operator—For Flat and Message Rate Lines**

**List 1**—Assembly, wiring, and equipment for a 2-circuit unit for 2-wire outgoing trunk to special service operator, per SD-31188-01, Fig. 1 and C, with K and X apparatus and adjustment B (also see list 2). (Three mounting plates, two circuits.)

**List 2**—Assembly, wiring, and equipment for a one-circuit unit for 2-wire outgoing trunk to special service operator per SD-31188-01, Fig 1 and C, with K and X apparatus and adjustment B (also see list 1). (Two mounting plates, one circuit.)

**List 3**—Repeating coil per SD-31188-01, A apparatus only, required in addition to list 1 or 2 for use with a trunk having less than 735 ohms impedance at 1000 hertz. (See Note D.)

**List 4**—Repeating coil per SD-31188-01, B apparatus only, required in addition to list 1 or 2 for use with a trunk having between 735 and 1100 ohms impedance at 1000 hertz. (See Note D.)

**List 5**—Repeating coil per SD-31188-01, C apparatus only, required in addition to list 1 or 2 for use with a trunk having greater than 1100 ohms impedance at 1000 hertz. (See Note D.)

**List 6**—Wiring and equipment per SD-31188-01, W apparatus only, required in addition to list 1 or 2 when cord circuits at special service positions have coin or message rate charge keys

together with flashing recall feature. (See Note D.)

**List 7**—A&M Only—Wiring and equipment per SD-31188-01, MS apparatus only, required in addition to list 1 or 2 in offices requiring a motor start lead for the ringing machine (omit K apparatus). (See Note D.)

#### Notes

- A. The ringing resistance lamp and fuse shall be located on miscellaneous lamp and fuse panels. The resistance lamps in the filtered battery and ground leads are located on the unit.
- B. Where extreme circuit resistance to battery and ground at a distant office is more than 1500 ohms, Y strap shall be furnished at the position of the A resistor.
- C. Where this unit is accessible only to individual lines, relay S may be readjusted to adjustment A.
- D. When providing lists 3 through 7, two each are required with list 1, and one each with list 2.

#### **J33013T—A&M Only—Trunk Unit—For Operating Subscriber Register — For Use With 200-Point Line Finders**

- List 1**—Assembly, wiring, and equipment for one unit with one message register trunk for use with 200-point line finders per ES-30452-01, Fig 1. (One mounting plate, one circuit.)
- List 2**—Equipment per ES-30452-01, Fig 2, required in addition to list 1 to provide one message register trunk alarm release (one required per ten message register trunks).

#### **J33013W—AT&T Co Std — Two-Wire Outgoing Trunk Unit — From Local or Toll Preceding Selector Levels to No 1, 2, 7, or 7A Information Desk or to No 19 Operating Room Desk—Arranged for Supervision**

- List 2**—Wiring and equipment per SD-32170-01, Fig B (omit Fig A), required in addition to list 1 or 3 when this trunk connects to toll preceding selector.
- List 3**—Framework, assembly, wiring, and equipment for one unit of two 2-wire information trunks per SD-32170-01, Fig 2 and A, with Z wiring. (One mounting plate, two circuits.)

#### Note

- A. The trunk unit per list 1 or 3 is arranged for connection to noncall distributing-type desks that require joint control and winkoff features (Z wiring). When these units are required for connection to call distributing desks that require calling party control (Y wiring), the installer shall remove the Z wiring straps at the unit terminal strips.

#### **J33013Y—AT&T Co Std—Outgoing Trunk Unit—For Special Service—From Prepay Coin Lines to Distant Operator—With Ring-back Features**

- List 1**—Framework, assembly, wiring, and equipment for one outgoing trunk per SD-31752-01, Fig 1, with A, B, D, ZF, ZH, ZK and ZN wiring and ZN apparatus. (See Note A.) (Three mounting plates, one circuit.)
- List 2**—Wiring and equipment per SD-31752-01, Fig 1, D resistor only, required in addition to list 1 for one  $\pm 105$  volt ringing supply resistance (one required per ten trunks).
- List 3**—Repeating coil per SD-31752-01, Fig 1, G apparatus only, required in addition to list 1 for use with a trunk having less than 735 ohms impedance at 1000 hertz.
- List 4**—Repeating coil per SD-31752-01, Fig 1, F apparatus only, required in addition to list 1 for use with a trunk having between 735 and 1100 ohms impedance at 1000 hertz.
- List 5**—Repeating coil per SD-31752-01, Fig 1, H apparatus only, required in addition to list 1 for use with trunks having greater than 1100 ohms impedance at 1000 hertz.
- List 6**—Wiring and equipment per SD-31752-01, Fig 2, required in addition to list 1 for fuse failure make busy features for one trunk. (See Note B.)
- List 7**—A&M Only—Wiring and equipment per SD-31752-01, Fig 1, E apparatus only, required in addition to list 1 when this circuit is used in a No 35E97 office.
- List 8**—Wiring and equipment per SD-31752-01, Fig 3, options ZG, ZI, and ZJ, required in addition to list 1 to provide +48 volts when dial-tone-first operation is required. (See Note C.)

#### Notes

- A. This unit is wired for a maximum interoffice trunk conductor resistance, which may be varied at the

time of installation by removing straps from across resistances furnished with the unit to suit any trunk conductor resistance.

- B. With Issue 11D of SD-31752-01 or later, always provide list 6 in addition to list 1.
- C. When list 8 is used, omit ZF, ZH, and ZK wiring.

**J33013AA—AT&T Co Std—Two-Wire Subscriber Recording Completing Trunk Unit—High-Low Supervision—Noncoin—Arranged to Recall Subscriber and for Class-of-Service Tone**

- List 2**—Repeating coil equipment per SD-32136-01, W apparatus only, required in addition to list 1 or 9 for use with a trunk having 1100 ohms or less impedance at 1000 hertz.
- List 3**—Repeating coil equipment per SD-32136-01, U apparatus only, required in addition to list 1 or 9 for use with a trunk having greater than 1100 ohms impedance at 1000 hertz.
- List 4**—Wiring and equipment per SD-32136-01, Fig 2, less X wiring of Fig 1, required in addition to list 1 or 9 when fuse failure make busy feature is specified.
- List 5**—Wiring and equipment per SD-32136-01, Fig 3, with Z apparatus, required in addition to list 1 or 9 when arrangement for a single class-of-service tone in a No 1 or 350A office without precise tone supply is specified. (See Note C.)
- List 6**—Wiring and equipment per SD-32136-01, Fig 3, with Y apparatus, required in addition to list 1 or 9 when arrangement for a single class-of-service tone in a No 355A office or when precise tone supply in a No 1, 350A, or 355A office is specified. (See Note C.)
- List 7**—Wiring and equipment per SD-32136-01, Fig 4, with Z apparatus, required in addition to list 1 or 9 when arrangement for two class-of-service tones in a No 1 or 350A office without precise tone supply is specified. (See Note C.)
- List 8**—Wiring and equipment per SD-32136-01, Fig 4, with Y apparatus, required in addition to list 1 or 9 when arrangement for two class-of-service tones in a No 355A office or when precise tone supply in a No 1, 350A, or 355A office is specified. (See Note C.)
- List 9**—Assembly, wiring, and equipment for one 2-wire subscriber recording completing trunk per SD-32136-01, Fig 1 and B, with X wir-

ing. (See Notes A, B, and C.) (Two mounting plates, one circuit.)

**Notes**

- A. When the ringback (recall of subscriber) feature is specified, provide T wiring of SD-32136-01, Fig 1, with list 1 when both on-hook and off-hook signals are specified, and S wiring when off-hook signal only is specified.
- B. When emergency ringback is required, wiring per SD-32136-01, Fig 1, Q wiring only, shall be specified in addition to list 1.
- C. The C and B resistance lamps of SD-32136-01, Fig 5 and 6, respectively, shall be mounted on the miscellaneous relay rack in accordance with job requirements.

**J33013AB—AT&T Co Std — Two-Wire Outgoing Trunk Unit—To Rural Operator—Arranged to Hold Under Control of Subscriber or Rural Operator**

- List 1**—Framework, assembly, wiring, and equipment for one 2-wire outgoing trunk to rural operator per SD-31540-01, Fig 1 and B. (See Notes A and B.) (Two mounting plates, one circuit.)
- List 2**—Repeating coil per SD-31540-01, Fig 1, J apparatus only, required in addition to list 1 for use with a trunk having 1100 ohms or less impedance at 1000 hertz.
- List 3**—Repeating coil per SD-31540-01, Fig 1, K apparatus only, required in addition to list 1 for use with a trunk having greater than 1100 ohms impedance at 1000 hertz.

**Notes**

- A. The Z resistor shall be provided as required to compensate the trunk loop.
- B. The MR lamp shall be located on a miscellaneous lamp panel.

**J33013AE—AT&T Co Prov — Outgoing Repeater Unit — With Pulse Correction — For Loops of 2000 Ohms or Less**

- List 1**—Assembly, wiring, and equipment for one outgoing repeater trunk unit with pulse correction per SD-31892-01, Fig 1, with X wiring.

(See Note A.) (Two mounting plates, one circuit.)

**Note**

- A. The X strap at S resistor shall be cut when used with an OGT conductor loop having 0 to 1200 ohms resistance.

**J33013AG—AT&T Co Std—Outgoing Trunk Unit—From Selector Multiple and Multiple at Switchboard—For Use With Type B, CX Signaling**

**List 3**—Framework, assembly, wiring, and equipment per SD-31795-01, Fig 2 and R apparatus and Z wiring of Fig 1, required in addition to list 1, 9, or 12 or SD-31795-01, Fig 2 and Z apparatus of Fig 3, required in addition to list 2 or 10 for one pulse correction trunk unit.

**List 4**—Equipment per SD-31795-01, Fig 1 or 3, W apparatus, required in addition to list 1, 2, 9, 10, or 12 where incoming pulsing loop is over trunk conductor loops of 0 to 1200 ohms or where incoming pulsing loop is over subscriber loops.

**List 5**—Equipment per SD-31795-01, Fig 1 or 3, X apparatus, required in addition to list 1, 2, 9, 10, or 12 where incoming pulsing loop is over trunk conductor loops of 1200 to 2000 ohms.

**List 6**—Wiring and equipment per SD-31795-01, Fig 1, G apparatus only, required in addition to list 1, 9, or 12 when telephone repeaters are *not* directly connected to the transformer at this end of the trunk and a long range CX signaling circuit is used.

**List 7**—Wiring and equipment per SD-31795-01, Fig 1, Q apparatus only, or Fig 3, N apparatus only, required in addition to list 1, 2, 9, 10, or 12 when list 3 is not provided.

**List 10**—Framework, assembly, wiring, and equipment for one single-circuit OGT unit connecting to an auxiliary trunk circuit per SD-31795-01, Fig 3. (See Notes A, B, and C.) (One or two mounting plates, one circuit.)

**List 11**—Wiring and equipment per SD-31795-01, M apparatus and wiring, required in addition to list 1, 2, 9, 10, or 12 when used in a No 35E97 office.

**List 12**—Framework, assembly, wiring, and equipment for one single-circuit OGT unit connecting directly to line and balancing CX sets and transformer circuit per SD-31795-

01, Fig 1 and B, with F apparatus and ZF wiring. (See Notes A, B, and C.) (One or two mounting plates, one circuit.)

**Notes**

A. When connection to an automatic ticketing trunk circuit is not required, the installer shall connect T wiring on the terminal strip.

B. When lists 9 or 12 and 3 or lists 10 and 3 are used, the installer shall connect R or Z wiring on the terminal strip; otherwise, connect Q or N wiring.

C. The installer shall connect A, B, E, and F strapping on the terminal strip according to job requirements.

D. When telephone repeaters are connected to a transformer at this end of a trunk and a long range CX signaling circuit is used, H wiring shall be specified.

**J33013AH—AT&T Co Std—Outgoing Trunk Unit—From Selector Levels to Manual Switchboard—For Flat Rate Lines—Calling Party Control**

**List 1**—Assembly, wiring, and equipment for one 3-circuit outgoing trunk unit per SD-31692-01, Fig 1. (One mounting plate, three circuits.)

**J33013AK—AT&T Co Std—One-Way Automatic Trunk Unit—Arranged for Dial Back Operation**

**List 1**—Framework, assembly, wiring, and equipment for one unit of five selectors and five test jacks for one-way trunks. (Five mounting plates, five circuits.)

	WIRE	EQUIP	NOTES
Trunk Ckt, SD-30889-01:			
Selector Ckt, Fig 7	5	5	
Test Jack, Fig 6	5	5	
Idle Terminal Ckt, Fig 4	1	0	
All-Trunks-Busy Ckt, Fig 3	1	0	
Tone Condenser Ckt, Fig 5	1	0	

- List 2**—Framework, assembly, wiring, and equipment for one one-way trunk unit per SD-30889-01, Fig 1. (Two mounting plates, one circuit.)
- List 3**—Wiring and equipment per SD-30889-01, Fig 2, required in addition to list 2 for one fuse failure make-busy circuit for use in No 350A and 355A offices only. (See Note A.)
- List 4**—Equipment per SD-30889-01, Fig 3, required in addition to list 1 for one all-trunks-busy circuit (one per office, No 350A and 355A offices only).
- List 5**—Equipment per SD-30889-01, Fig 4, required in addition to list 1 for one idle terminal circuit (one per each two lists 1 in a No 350A or 355A office).
- List 6**—A&M Only—Equipment per SD-30889-01, Fig 5, required in addition to list 1 for one tone condenser circuit (one per No 35E97 office). (See Note B.)
- List 7**—Wiring and equipment per SD-30889-01, Fig A, with X apparatus, required in addition to list 2 for one single-class-of-service tone circuit for No 350A offices only.
- List 8**—Wiring and equipment per SD-30889-01, Fig A, with W apparatus, required in addition to list 2 for one single-class-of-service tone circuit for No 355A offices only.
- List 9**—Wiring and equipment per SD-30889-01, Fig B, with X apparatus, required in addition to list 2 for one double-class-of-service tone circuit for No 350A offices only.
- List 10**—Wiring and equipment per SD-30889-01, Fig B, with W apparatus, required in addition to list 2 for one double-class-of-service tone circuit for No 355A offices only.
- List 11**—A&M Only—Wiring and equipment per SD-30889-01, Fig C, required in addition to list 2 for one tone repeating circuit for No 35E97 offices.
- List 3**—Wiring and equipment required in addition to list 1, 2, 4, or 5 for two fuse failure make busy circuits per SD-32199-01, two Fig 2 (omit T wiring).
- List 4**—Framework, assembly, wiring, and equipment for two outgoing trunk units to crossbar tandem offices for CAMA calls, trunk impedances up to 1100 ohms per SD-32199-01, Fig 1, with A, S, and Z apparatus and K, Q, S, T, V, and W wiring. (See Notes A, B, and C.) (Three mounting plates, two circuits.)
- List 5**—Framework, assembly, wiring, and equipment for two outgoing trunk units to crossbar tandem offices for CAMA calls, trunk impedances 1100 ohms or greater per SD-32199-01, Fig 1, with A, S, and Y apparatus and K, Q, S, T, V, and W wiring. (See Notes A, B, and C.) (Three mounting plates, two circuits.)
- List 6**—A&M Only—Wiring and equipment per SD-32199-01, one Fig 3 and two J and H apparatus, and J and N wiring, required in addition to list 4 or 5 where timed disconnect on partial dial calls is required in No 355A or 35E97 offices (omit K and Q wiring). (See Note D.)
- List 7**—A&M Only—Wiring and equipment per SD-32199-01, one Fig 3 and two J apparatus, and J and N wiring, required in addition to list 4 or 5 where timed disconnect on partial dial calls is required in No 1 or 350A offices (omit K and Q wiring). (See Note D.)
- List 8**—Wiring and equipment per SD-32199-01, Fig 1, two G apparatus and wiring only, required in addition to list 4 or 5 when the message rate trunk feature is provided.

#### Notes

#### Notes

- A. When the fuse failure make busy circuit is not required, connect Z wiring on unit terminal strip C.
- B. When list 6 is specified, the installer shall connect Y wiring on terminal strips of both units per lists 1 and 2.
- C. Unit per list 1 shall have a local cable, and unit per list 2 shall be surface wired.

- A. The V and W wiring straps between terminals of the A and B resistors shall be provided in the shop in all cases, and the installer shall leave connected or cut as indicated on the circuit schematic and wiring diagram, depending on the nature of the outside trunk.
- B. When this unit is used in a No 35E97 office, the 18AC (C) resistor, option R or M, shall be ordered separately by the telephone company and mounted and wired by the installer. Option M is required when the circuit is to function with a trunk that presents on-hook supervision during pulsing.
- C. This unit is normally wired for option Q in the shop. When this circuit is to function with a

**J33013AL—AT&T Co Std—Outgoing Trunk Unit—  
To Crossbar Tandem Offices for CAMA  
Calls**

trunk that presents on-hook supervision during pulsing, the installer shall remove option Q and add wiring per option N.

- D. Provide list 6 or 7 only when this trunk terminates in an incoming trunk that is associated with a 3-digit incoming register circuit at the crossbar tandem office.

**J33013AM—AT&T Co Std—Two-Wire Recording Completing Trunk or Outgoing Trunk to Manual or Toll Office—Loop Signaling**

**List 1**—Assembly, wiring, and equipment for one 2-circuit trunk unit for B-type transmission battery supply per SD-31925-01, Fig 1 and B and R wiring (also see list 2). (Three mounting plates, two circuits.)

**List 2**—Assembly, wiring, and equipment for one one-circuit trunk unit for B-type transmission battery supply per SD-31925-01, Fig 1 and B and R wiring. (Two mounting plates, one circuit.)

**List 3**—Repeating coil per SD-31925-01, Fig 1, Y apparatus only, required in addition to list 1 or 2 for use with a trunk having less than 735 ohms impedance at 1000 hertz. (See Note A.)

**List 4**—Repeating coil per SD-31925-01, Fig 1, W apparatus only, required in addition to list 1 or 2 for use with a trunk having between 735 and 1100 ohms impedance at 1000 hertz. (See Note A.)

**List 5**—Repeating coil per SD-31925-01, Fig 1, T apparatus only, required in addition to list 1 or 2 for use with a trunk having greater than 1100 ohms impedance at 1000 hertz. (See Note A.)

**List 6**—Wiring and equipment per SD-31925-01, Fig 2, required in addition to list 1 or 2 for the fuse failure make busy feature for one trunk (omit R wiring). (See Note A.)

**List 7**—Wiring and equipment per SD-31925-01, Fig 3, required in addition to list 1 or 2 for single-class-of-service tone. (See Note A.)

**List 8**—Wiring and equipment per SD-31925-01, Fig 4, required in addition to list 1 or 2 for two class-of-service tones. (See Note A.)

**List 9**—A&M Only—Wiring and equipment per SD-31925-01, Fig 3 or 4, H wiring and apparatus only, required in addition to list 7 or 8 for use with No 1 or 350A offices. (See Note A.)

**List 10**—Wiring and equipment per SD-31925-01, Fig 3 or 4, J wiring and apparatus only, re-

quired in addition to list 7 or 8 for No 355A and 360A offices.

**List 11**—Wiring and equipment per SD-31925-01, Fig 3 or 4, E wiring and apparatus only, required in addition to list 7 or 8 for use with No 1 or 350A offices. (See Note A.)

**Notes**

A. When specifying any of lists 3 through 11, order two for use with each list 1, and order one for use with each list 2.

B. Connections for wiring options F, G, K, and M shall be made at the unit terminal strip by the installer to meet job requirements.

**J33013AN—AT&T Co Std—Outgoing Trunk Unit—Battery and Ground Pulsing — To CAMA Office**

**List 9**—Framework, assembly, wiring, and equipment for two outgoing trunk units, battery and ground pulsing to CAMA office trunk impedances up to 1100 ohms, per SD-32240-01, Fig 1, with M, R, W, ZB, ZC, ZD, ZF, and ZL apparatus and F, M, R, ZB, ZC, ZF, ZL, and ZM wiring. (See Notes A and B.) (Three mounting plates, two circuits.)

**List 10**—Framework, assembly, wiring, and equipment for two outgoing trunk units, battery and ground pulsing to CAMA office trunk impedances 1100 ohms or greater, per SD-32240-01, Fig 1, with M, R, V, ZB, ZC, ZD, ZF, and ZL apparatus and F, M, R, ZB, ZC, ZF, ZL, and ZM wiring. (See Notes A and B.) (Three mounting plates, two circuits.)

**List 11**—Wiring and equipment per SD-32240-01, Fig 1, two A and B apparatus and wiring only, required in addition to list 9 or 10 where timed disconnect on partial dial calls is required in a No 355A or 35E97 office (omit option ZC).

**List 12**—Wiring and equipment per SD-32240-01, Fig 1, two B apparatus and wiring only, required in addition to list 9 or 10 where timed disconnect on partial dial calls is required in a No 1 or 350A office (omit option ZC).

**Notes**

A. When this unit is used in a No 35E97 office, the S resistor (option Z) shall be ordered separately by

the telephone company and mounted and wired by the installer.

B. The following nonrecord installer-added options J, K, X, and Y, and record options G and H are to be furnished as follows:

1. Options H, X, and Y required when the CAMA incoming trunk is accessed via a code selector circuit with a loop of 0 through 500 ohms.
2. Options H, J, X, and Y required when the CAMA incoming trunk is accessed via a code selector circuit with a loop greater than 500 ohms.
3. Options G, J, X, and Y required when the CAMA incoming trunk is accessed via an incoming repeater circuit.
4. Options H, K, X, and Y required when the CAMA incoming trunk is accessed directly with open wire or less than 8 miles of cable.
5. Options H, K, and X required when the CAMA incoming trunk is accessed directly with 8 to 14 miles of cable.
6. Options H and K required when the CAMA incoming trunk is accessed directly with 14 to 32 miles of cable.

**J33013AP—AT&T Co Std—Outgoing Trunk Unit—  
E and M Lead Signaling—To CAMA  
Office, TSP, or TSPS No 1**

**List 6**—Assembly, wiring, and equipment for one outgoing trunk unit, E and M signaling to CAMA offices, TSP or TSPS No 1 or No 4 ESS per SD-32241-01, Fig 1, with M, T, U, X, ZB, ZD, ZE, and ZH wiring and J, M, S, U, X, ZD, ZE, and ZH apparatus. (See Note A.) (One mounting plate, one circuit.)

**List 7**—Wiring and equipment per SD-32241-01, Fig 1, Q wiring and N and Q apparatus only, required in addition to list 6 where timed disconnect on partial dial calls is required in a No 355A or 35E97 office (omit option M). (See Note B.)

**List 8**—Wiring and equipment per SD-32241-01, Fig 1, Q wiring and apparatus only, required in addition to list 6 where timed disconnect on

partial dial calls is required in a No 1 or 350A office (omit option M). (See Note B.)

**List 9**—Wiring and equipment per SD-32241-01, Fig 1, W wiring and apparatus only, required in addition to list 6 when carrier or voice frequency repeaters are used.

**Notes**

A. When this unit is used in a No 35E97 office, the S resistor (option Z) shall be ordered separately by the telephone company and mounted and wired by the installer.

B. Provide list 7 or 8 only when this trunk terminates in an incoming trunk that is associated with a 3-digit incoming register circuit at the crossbar tandem office.

**J33013AR—A&M Only—Incoming Trunk Unit—To  
Toll Incoming Selector—CX Signaling,  
Type B, or Simplex Signaling**

**List 1**—Framework, assembly, wiring, and equipment for one incoming trunk unit with idle circuit termination when a voice repeater is used in the associated trunk per SD-31865-01, Fig 1, 2, and B and option Q and R and providing for optional feature including connection to supplementary unit per J33013AY for SD-31865-01, Fig 3, by installer connections at the unit terminal strip. (See Note A.) (One mounting plate, one circuit.)

**Note**

A. When units per list 1 are associated with a No 4A or 4M toll crossbar distant office or a No 5 crossbar office, one timed off-hook 8-circuit unit per J33013AY for SD-31865-01, Fig 3, shall be furnished for each eight or a fraction trunk units, connected by installer wiring between the unit terminal strips. Each unit per J33013AY shall be located within or adjacent to the area occupied by the associated trunk units insofar as possible, or otherwise as close to the trunk units as possible.

**J33013AS—AT&T Co Std—Outgoing Trunk Unit—  
From Selector Multiple—For Informa-  
tion, Repair, Official PBX, or Intercept-  
ing Service—Arranged for E and M  
Lead Supervision**

**List 3**—A&M Only—Equipment per SD-32311-01, Fig 1, S and Y apparatus and Y wiring only,

required in addition to list 6 or 7 when a ringing tone capacitor is required for No 35E97 offices, when a vibrator-type ringing machine is provided. (See Note G.)

**List 4**—A&M Only—Equipment per SD-32311-01, Fig 1, T and Y apparatus and Y wiring only, required in addition to list 6 or 7 when a ringing tone capacitor is required for No 35E97 offices when a rotary-type ringing machine or subcycle is provided. (See Note G.)

**List 5**—Equipment per SD-32311-01, Fig 1, V apparatus only, required in addition to list 6 or 7 when a ringing tone capacitor is required in other than No 35E97 offices.

**List 6**—Framework, assembly, wiring, and equipment per SD-32311-01, Fig 1, with J and ZA apparatus and B and G wiring, with N, W, and X wiring to the unit terminal strip, for use when traffic terminates in other than a call-distributing type desk. (One mounting plate, one circuit.)

**List 7**—Framework, assembly, wiring, and equipment per SD-32311-01, Fig 1, with C and ZA apparatus and B and G wiring, with W and X wiring to the unit terminal strip, for use when traffic terminates in a call-distributing type desk. (See Note H.) (One mounting plate, one circuit.)

**List 8**—Wiring and equipment per SD-32311-01, Fig 3, M and Z wiring, G wiring omitted, required in addition to list 6 when the fuse failure make-busy feature is required with option J.

**List 9**—Wiring and equipment per SD-32311-01, Fig 3, M wiring and with wiring to the unit terminal strip for installer, Z wiring for trunks not associated with a last trunk make-busy register, omit G wiring, required in addition to list 7 when the fuse failure make-busy feature is required with option C.

**List 10**—A&M Only—Equipment and wiring required in addition to list 7 for a No 35E97 office when operated with a crossbar No 5 automatic call distributor (ACD) office per SD-32311-01, Fig 1, Y apparatus and wiring only. (See Notes G and H.)

#### Notes

A. If connection to the transfer and make-busy circuit is required when this circuit is in a group of circuits to be transferred or made busy and is *not*

used as the circuit to control transfer, the installer shall connect Q wiring to the unit terminal strip.

B. If connection to the transfer and make-busy circuit is required when this circuit is in a group of circuits to be transferred or made busy and is used as the circuit to control transfer, the installer shall connect R wiring to the unit terminal strip.

C. The RT resistance lamp per SD-32311-01, Fig 2, shall be located on a miscellaneous fuse and lamp panel and associated W installer wiring provided (No 1 or 350A offices).

D. When this unit is used in No 355A or 35E97 offices, the installer shall connect X installer wiring to the unit terminal strip.

E. When this unit is used in a No 35E97 office, the 82C (S) resistor, option Y, shall be ordered separately by the telephone company and mounted and wired by the installer.

F. When connection to a park-on unit is required, SD-32311-01, Fig 1, D wiring only, shall be specified in addition to list 6 or 7.

G. When this unit is to connect with a crossbar No 5 ACD office, lists 3, 4, and 5 are not to be ordered. List 10 and list 3 or 4 must never be furnished together.

H. When this unit is to connect with a crossbar No 5 ACD office, option B per list 7 must be omitted and option A furnished.

**J33013AT—AT&T Co Std—Outgoing Trunk Unit—From Connector Multiple—For Official PBX, Repair, Verification Request, or Information Services—Arranged for E and M Lead Supervision**

**List 2**—A&M Only—Equipment per SD-32312-01, Fig 1, R apparatus only, required in addition to list 1 or 7 when a ringing tone capacitor is required for a No 35E97 office when a vibrator-type ringing machine is provided.

**List 3**—A&M Only—Equipment per SD-32312-01, Fig 1, S apparatus only, required in addition to list 1 or 7 when a ringing tone capacitor is required for a No 35E97 office when a rotary-type ringing machine or subcycle is provided.

**List 4**—Equipment per SD-32312-01, Fig 1, T apparatus only, required in addition to list 1 or 7 when a ringing tone capacitor is required in other than No 35E97 offices.

**List 6**—Wiring and equipment per SD-32312-01, Fig 1, Z wiring and apparatus only, required in addition to list 1 or 7 when used for verification request or official PBX.

**List 7**—Framework, assembly, wiring, and equipment for one outgoing trunk unit per SD-32312-01, Fig 1 with N wiring and apparatus, V, M, and F wiring, and X, Y, and G wiring to the unit terminal strip.

**List 8**—Wiring and equipment per SD-32312-01, Fig 1, W and K wiring and W apparatus only, required in addition to list 7 when the fuse failure make-busy feature is required (omit V and M wiring).

#### Notes

A. The RT resistance lamp per SD-32312-01, Fig 2, shall be located on a miscellaneous fuse and lamp panel and associated X installer wiring shall be provided.

B. When this unit is used in No 355A or 35E97 offices, the installer shall connect Y wiring to the unit terminal strip.

C. When connectors are arranged for automatic disconnects on calling party holds and list 6 has not been provided, G wiring shall be added at the unit terminal strip.

#### **J33013AU—AT&T Co Std—Pulse Generator and Counting Unit—For Use With Intercepting Trunks—Arranged for E and M Lead Supervision**

**List 1**—Framework, assembly, wiring, and equipment for two pulse generators per SD-32310-01, two Fig 1, with W and Z wiring. (See Note A.) (Four mounting plates, two circuits.)

**List 2**—Equipment per SD-32310-01, Fig 1, Y apparatus only, omit Z wiring, required in addition to list 1 for use in No 35E97 offices.

#### Note

A. This unit requires the space of five mounting plates with area for the middle plate vacant.

#### **J33013AW—AT&T Co Std—Subscriber Recording Completing Trunk Unit—High-Low Supervision—Coin Control Over Tip and Ring—With or Without Class-of-Service Tone**

**List 2**—Wiring and equipment per SD-32300-01, Fig 2 and 3, with W and V wiring to the unit terminal strip, omit Y wiring, required in addition to list 1, 13, or 14 for a No 1, 350A, 355A, or 360A office when class-of-service tone is required. (See Note C.)

**List 3**—A&M Only—Wiring and equipment per SD-32300-01, Fig 2 and 4, omit Y wiring, required in addition to list 1, 13, or 14 for No 35E97 offices when class-of-service tone is required.

**List 4**—Wiring and equipment per SD-32300-01, Fig 2 and 5, required in addition to list 1, 13, or 14 for a No 1, 350A, 355A, 360A, or 35E97 office when automatic return of initial coin upon operator answer is required.

**List 5**—Wiring and equipment per SD-32300-01, Fig 2, 3, and 5, with W and V wiring to the unit terminal strip, omit Y wiring, required in addition to list 1, 13, or 14 for a No 1, 350A, 355A, or 360A office when automatic return of initial coin upon operator answer and class-of-service tone together are required. (See Note C.)

**List 6**—A&M Only—Wiring and equipment per SD-32300-01, Fig 2, 4, and 5, omit Y wiring, required in addition to list 1, 13, or 14 for No 35E97 offices when automatic return of initial coin upon operator answer and class-of-service tone are required together.

**List 7**—A&M Only—Wiring and equipment per SD-32300-01, Fig 1, Z apparatus and wiring only, required in addition to list 1, 13, or 14 for use in No 35E97 offices.

**List 8**—A&M Only—Equipment per SD-32300-01, Fig 1, Q apparatus only, omit R apparatus, required in addition to list 1, 13, or 14 for No 35E97 offices when subcycle or rotary-type ringing is used.

**List 9**—A&M Only—Equipment per SD-32300-01, Fig 1, P apparatus only, omit R apparatus, required in addition to list 1, 13, or 14 for No 35E97 offices when vibrator-type ringing is used.

**List 10**—Repeating coil per SD-32300-01, Fig 1, T apparatus only, required in addition to list 1, 13, or 14 for use with a trunk having 1100 ohms or less impedance at 1000 hertz.

**List 11**—Repeating coil per SD-32300-01, Fig 1, S apparatus only, required in addition to list 1, 13, or 14 for use with a trunk having greater than 1100 ohms impedance at 1000 hertz.

**List 14**—Framework, assembly, wiring, and equipment for one subscriber recording completing trunk less repeating coil for use in a No 1, 350A, 355A, 360A, or 35E97 office not arranged for automatic return of initial coin on operator-answer or class-of-service tone per SD-32300-01, Fig 1, with B, F, R, and ZI apparatus, and B, F, Y, and ZI wiring, and wiring to the unit terminal strip for external Fig 6 and 7. (See Notes A, B, and D.) (Three mounting plates, one circuit.)

**List 15**—Wiring and equipment per SD-32300-01, Fig 1, option ZB, required in addition to list 14 when coin control on tip and ring is required. (See Note D.)

#### Notes

- A. The R and RT resistance lamps per SD-32300-01, Fig 6 and 7, respectively, shall be mounted on a miscellaneous fuse and lamp panel bay.
- B. When list 1 is used in a No 1, 350A, or 360A office, the installer shall connect required installer wiring to the unit terminal strip for Fig 7 or, when used in a No 355A or 35E97 office, shall connect X installer wiring.
- C. When class-of-service tone or automatic return of initial coin upon operator answer and class-of-service tone are required together, the installer shall connect at the unit terminal strip W wiring for a No 1 or 350A office or V wiring for a No 355A office. When a precise tone supply is required in any No 1, 350A, 355A, or 360A office, the V wiring connection must be made.
- D. Provide ZA wiring when positive talk battery is required; when not required, provide A wiring. For coin control on tip only, provide ZC wiring.

**J33013AY—AT&TCo Std—Timed Off-Hook Signal Unit — Supplementary to Trunk Units—For SD-30901-01 or SD-31775-01 or SD-31865-01 Associated With No 4A or 4M Toll Crossbar or No 5 Toll Crossbar Offices**

**List 1**—A&M Only—Assembly, wiring, and equipment for a timed off-hook signal unit

equipped with eight circuits per SD-31865-01, Fig 3. (See Notes A, B, and C.) (One mounting plate, eight circuits.)

**List 2**—Assembly, wiring, and equipment for a timed off-hook signal unit equipped with eight circuits per SD-30901-01, Fig 5, or SD-31775-01, Fig 5 with YC wiring. (See Notes A, B, and C.) (One mounting plate, eight circuits.)

#### Notes

- A. This unit shall be connected with associated trunk units by installer wiring between the unit terminal strips; additional wiring to be added to existing units for this purpose is indicated in the trunk circuit cross-connecting figures.
- B. List 1 is for use with trunk unit J33013AR and list 2 is for use with J33014G and J39210T when connecting to 4A or 4M toll crossbar or No 5 toll crossbar office arranged for trunk integrity check.
- C. Locate this unit within or adjacent to the area occupied by the associated trunk units insofar as possible, or otherwise as close to the trunk units as possible.

**J33013BA—AT&TCo Std—Auxiliary Trunk Unit Arranged To Restrict Service With Recorded Announcement**

**List 1**—Assembly, wiring, and equipment per SD-32500-01, Fig 1, for three auxiliary trunk circuits when a recorded announcement is not required. (See Note A.) (One mounting plate, three circuits.)

**List 2**—Equipment and wiring per SD-32500-01, Fig 2, required in addition to list 1 when a recorded announcement is required.

#### Note

- A. Provide Z wiring with list 1 when list 2 has not been provided.

**J33013BB—AT&TCo Std—Two-Wire Subscriber Recording Completing Trunk Unit—Outgoing to Toll Switchboard—High-Low Supervision—Arranged for Coin Control**

**List 1**—Assembly, wiring, and equipment per SD-32168-01, Fig 1 and B with options G, K, S,

and ZD for one subscriber recording completing trunk. (See Notes A, B, and D.) (Two mounting plates, one circuit.)

- List 2**—Equipment and wiring per SD-32168-01, Fig 1, option Y only, required in addition to list 1 when trunk impedance is 1100 ohms or less at 1000 hertz.
- List 3**—Equipment and wiring per SD-32168-01, Fig 1, option Z only, required in addition to list 1 when trunk impedance is greater than 1100 ohms at 1000 hertz.
- List 4**—Equipment and wiring per SD-32168-01, option H only, required in addition to list 1 when coin control is required (omit option G).
- List 5**—Equipment and wiring per SD-32168-01, Fig 5 and option N, required in addition to list 1 when automatic return of initial coin is required.
- List 6**—Equipment and wiring per SD-32168-01, Fig 6, required in addition to list 1 when automatic return of initial coin is not required.

#### Notes

- A. The resistance lamps in Fig 2 and 3 of SD-32168-01 shall be located on a miscellaneous fuse and lamp panel.
- B. Provide option R when class-of-service tone is required (omit option S).
- C. Class-of-service tone per SD-32168-01, Fig 7, is provided on J33013BC.
- D. Provide option J when positive talking battery is required (omit option K).

#### **J33013BC—AT&T Co Std—Class-of-Service Tone Unit—For Use With Maximum Three Subscriber Recording Completing Trunks per J33013BB**

- List 1**—Assembly, wiring, and equipment per SD-32168-01, Fig 7, for one class-of-service tone unit. (One mounting plate, one, two, or three circuits.)
- List 2**—Equipment and wiring per SD-32168-01, Fig 7, required in addition to list 1 for one additional class-of-service tone circuit (maximum two lists 2).
- List 3**—Equipment and wiring per SD-32168-01, Fig 7, option F only, required in addition to lists 1 and 2 when this unit is used in a No 1 or 350A office where precise tone is not required. (See Note A.)

#### Note

- A. Provide E wiring only when this unit is used in a No 355A office or when this unit is used in a No 1, 350A, or 355A office where precise tone is provided.

#### **J33013BD—AT&T Co Std—Trunk Circuit Unit—For 911 Emergency Service**

- List 1**—Framework, assembly, wiring, and equipment for one 911 emergency service trunk unit arranged for local selector access and equipped for incoming selector access per SD-35004-01, Fig 1 with options K, R, W, ZN, ZL, and ZQ. (See Notes A, B, C, and D.) (Three mounting plates, two circuits.)
- List 2**—Wiring and equipment per SD-35004-01, Fig 2, required in addition to list 1 for local selector access when digits are to be absorbed in the trunk. (See Notes E and F.)
- List 3**—Wiring and equipment per SD-35004-01, Fig 3, required in addition to list 1 for a resistance lamp on a 1-per-5-unit basis.
- List 4**—Wiring and equipment per SD-35004-01, Fig 4, with option N, required in addition to list 1 for an alarm timer circuit on a one-per-trunk-group basis. (See Note G.)
- List 5**—Wiring and equipment per SD-35004-01, option ZP, required in addition to list 1 when nonprecise low tone (LT 2) is required for direct trunk with metallic facility to 911 service (omit option ZQ).

#### Notes

- A. When reverse battery to the emergency bureau is required, option V must be furnished and option W must be omitted.
- B. When local selector access is required, option ZF must be furnished.
- C. When local selector access with emergency ring-back is required, options J and ZF and J33013BE-( ) must be furnished and option K omitted.
- D. When sleeve battery resistor for No 35E97 offices is required, option Q must be furnished.
- E. When the number of digits to be absorbed in the trunk is one, option T must be furnished and option R omitted.

F. When the number of digits to be absorbed in the trunk is two, option S must be furnished and option R omitted.

G. When the alarm leads are to be paired with ground, option M must be furnished and option N omitted.

**J33013BE—AT&T Co Std—Emergency Ringback Unit—For Use With 911 Emergency Service Trunk Unit per J33013BD**

**List 1**—Framework, assembly, wiring, and equipment for one emergency ringback unit equipped for ac-dc ringing and coin-first pay stations per SD-35004-01, Fig 5 with options E and G. (See Note A.) (Two mounting plates, one circuit.)

**List 2**—Wiring and equipment per SD-35004-01, option F, required in addition to list 1 when emergency ringback with superimposed ringing is required (omit option E).

**List 3**—Wiring and equipment per SD-35004-01, Fig 6, required in addition to list 1 for an interrupter relay on a 1-per-10-unit basis.

**Note**

A. When dial-tone-first pay stations rather than coin-first pay stations are required, option H must be furnished and option G omitted.

**J33013BF—AT&T Co Std — Outgoing Trunk Unit—For ONI Operation With E and M Lead Signaling to TSPS No 1**

**List 1**—Assembly, wiring, and equipment for one outgoing trunk unit for ONI operation with E and M lead signaling to TSPS No 1 per SD-35059-01, Fig 1 options T and Q. (One mounting plate, one circuit.)

**List 2**—Wiring and equipment per SD-35059-01, Fig 1, option V only, required in addition to list 1 for use in a No 35E97 office.

**List 3**—Wiring and equipment per SD-35059-01, option S required in addition to list 1 when restricted ringback is required on noncoin calls and unrestricted ringback is required on postpaid calls (omit option T).

**Note**

A. Furnish option R and omit option T when restricted ringback is required on all calls.

**J33013BG—AT&T Co Std—Outgoing Trunk Unit—For ONI Operation With Loop Signaling to TSPS No 1**

**List 1**—Assembly, wiring, and equipment for one outgoing trunk unit for ONI operation with loop signaling to TSPS No 1 per SD-35059-01, Fig 1 and 2. (See Note A.) (Two mounting plates, one circuit.)

**List 2**—Wiring and equipment per SD-35059-01, Fig 1, option V only, required in addition to list 1 for use in a No 35E97 office.

**List 3**—Repeating coil per SD-35059-01, Fig 2, X apparatus only, required in addition to list 1 for use with a trunk having 1100 ohms or less impedance at 1000 hertz.

**List 4**—Repeating coil per SD-35059-01, Fig 2, W apparatus only, required in addition to list 1 for use with a trunk having greater than 1100 ohms impedance at 1000 hertz.

**List 5**—Wiring and equipment per SD-35059-01, option S required in addition to list 1 when restricted ringback is required on noncoin calls and unrestricted ringback is required on postpaid calls (omit option B).

**Note**

A. Job records need not be maintained for options Z and Y.

B. Furnish option R and omit option T when restricted ringback is required on all calls.

**5. GENERAL NOTES AND INDEXES**

**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
J33013B	A&M Only	7	—
L3 & L4	Mfr Disc	2	—
J33013C,L1	Mfr Disc	2	J33013C,L5
L2	Mfr Disc	5	L15
L3	Mfr Disc	9	—
L5	Mfr Disc	9	L16
L6 thru L13 & L15	Mfr Disc	10	L18 thru L26
J33013D,L1	Mfr Disc	6	J33013D,L2
L4	Mfr Disc	9	—

EQUIPMENT	RATING	DETAILS LAST SHOWN IN ISSUE	REPLACING EQUIPMENT	EQUIPMENT	RATING	DETAILS LAST SHOWN IN ISSUE	REPLACING EQUIPMENT
L9 & L10	Mfr Disc	6	—	J33013AK,L6			
L12	Mfr Disc	9	L17	& L11	A&M Only	2	—
L15	Mfr Disc	6	—	J33013AL,L1	Mfr Disc	6	J33013AL,L4
L16	Mfr Disc	9	—	L2	Mfr Disc	6	& L5
J33013G	Mfr Disc	3	J33013AR	L6	A&M Only	7	—
J33013H	Mfr Disc	2	J33013AM	L7	A&M Only	7	—
J33013J	Mfr Disc	2	J33013AM	J33013AM,L9	A&M Only	4	—
J33013K,L1	Mfr Disc	8	J33013K,L4	J33013AN,L1			J33013AN,
J33013M	A&M Only	10	—	& L2	Mfr Disc	4	L3 & L4
J33013N,L1			J33013N,L7	L3			J33013AN,
& L3	Mfr Disc	5	& L9	& L4	Mfr Disc	4	L5 & L6
L5	A&M Only	1	—	L5			J33013AN,
L6	Mfr Disc	9	J33013N,L14	& L6	Mfr Disc	4	L7 & L8
L10	Mfr Disc	9	J33013N,L15	L7	Mfr Disc	6	J33013AN,
L15	A&M Only	10	—	L8	Mfr Disc	6	L9 & L10
J33013R,L7	A&M Only	1	—	L1	Mfr Disc	4	L2
J33013S	Mfr Disc	2	J33017AS	L2 & L3	Mfr Disc	4	L3 & L4
J33013T	A&M Only	1	—	L4	Mfr Disc	6	L5
J33013U	Mfr Disc	1	J33013AB	L5	Mfr Disc	6	L6
J33013W,L1	Mfr Disc	4	J33013W,L3	J33013AR	A&M Only	7	—
J33013Y,L7	A&M Only	2	—	J33013AS,			
J33013AA,L1	Mfr Disc	9	J33013,L9	L1 & L2	Mfr Disc	4	—
J33013AA,			J33013AA,	L3 & L4	A&M Only	4	—
L1	Mfr Disc	9	L9	L10	A&M Only	10	—
J33013AC	Mfr Disc	4	J33013W	J33013AT,L1	Mfr Disc	6	J33013AT,L7
J33013AD	Mfr Disc	4	J33013W	L2 & L3	A&M Only	4	—
J33013AF	Mfr Disc	9	—	L5	Mfr Disc	6	J33013AT,L8
J33013AG,L1			J33013AG,	J33013AW,L1	Mfr Disc	9	—
& L2	Mfr Disc	4	L9 & L10	L3, L6, L7			
L8	Mfr Disc	6	—	L8 & L9	A&M Only	10	—
L9	Mfr Disc	6	J33013AG	L12	Mfr Disc	8	—
J33013AJ	Mfr Disc	8	J33013BB,	L13	Mfr Disc	8	J33013AW,L14
			J33013BC	J33013AY,L1	A&M Only	8	—

## 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
J33013A	Std	Outgoing Trunk Unit—From Local Selector Levels to Distant Manual Switchboard Arranged for Calling Party Control	J33013A-( )	SD-32167-01
J33013B	A&M Only	Incoming Trunk Unit—From Toll Switchboard with Rering and Manual Start Machine Ringing—With or Without Coin Control and Tone for Intercepting Completing Operator	J33013B-( )	SD-31703-01
J33013C	Std	Recording Completing Trunk Unit—CX Signaling, Type B—Arranged for Class-of-Service Tone	J33013C-( )	SD-31888-01
J33013D	Std	Recording Completing Trunk Unit—With or Without Coin—With Ringback—CX Signaling, Type B, or Simplex Signaling	J33013D-( )	SD-32042-01
J33013E	Std	Outgoing Trunk Unit—2-Wire to No 1, 3, or 3C Toll Switchboard—From Overflow Connector Terminals For Hospital, Fire, and Police Service—Arranged To Trip Machine Ringing Without Charge	J33013E-( )	SD-31840-01
J33013F	Std	Outgoing Trunk Unit—For Special Service From Noncoin Lines to Distant Operator—With Ringback Feature	J33013F-( )	SD-31753-01
J33013K	Std	Outgoing Trunk Unit—For Special Service From Coin Box Lines to Central A Switchboard With Ringback Feature	J33013K-( )	SD-31315-01
J33013L	Std	Outgoing Trunk Unit—To Special Service Operator at Central A Board With Ringback Feature	J33013L-( )	SD-31375-01
J33013M	A&M Only	Outgoing Trunk Unit—To Manual or Toll Office—AB Toll Loop Signaling—With Toll Grade Transmission	J33013M-( )	SD-31698-01

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING
J33013N	Std	Incoming Trunk Unit—To Toll Incoming Selector—CX Signaling, Type B, or Simplex Signaling—Controlled Ringing and Rering—With or Without Connection to Coin Control	J33013N-( )	SD-31887-01
J33013P	Std	Incoming Trunk Unit—From Manual or Toll Office—With Repeating Coil	J33013P-( )	SD-31856-01
J33013R	Std	Two-Wire Outgoing Trunk Unit—From Local Selector Levels to Special Service Operator—For Flat and Message Rate Lines	J33013R-( )	SD-31188-01
J33013T	A&M Only	Trunk Unit—For Operating Subscriber Register—For Use With 200-Point Line Finders	J33013T-( )	ES-30452-01
J33013W	Std	Two-Wire Outgoing Trunk Unit—From Local or Toll Preceding Selector Levels to No 1, 2, 7, or 7A Information Desk or to No 19 Operating Room Desk—Arranged for Supervision	J33013W-( )	SD-32170-01
J33013Y	Std	Outgoing Trunk Unit—For Special Service—From Prepay Coin Lines to Distant Operator—With Ring-back Features	J33013Y-( )	SD-31752-01
J33013AA	Std	Two-Wire Subscriber Recording Completing Trunk Unit—High-Low Supervision—Noncoin—Arranged To Recall Subscriber and for Class-of-Service Tone	J33013AA-( )	SD-32136-01
J33013AB	Std	Two-Wire Outgoing Trunk Unit—To Rural Operator—Arranged To Hold Under Control of Subscriber or Rural Operator	J33013AB-( )	SD-31540-01
J33013AE	Prov	Outgoing Repeater Unit—With Pulse Correction—For Loops of 2000 Ohms or Less	J33013AE-( )	SD-31892-01
J33013AG	Std	Outgoing Trunk Unit—From Selector Multiple and Multiple at Switchboard—For Use With Type B, CX Signaling	J33013AG-( )	SD-31795-01

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING
J33013AH	Std	Outgoing Trunk Unit—From Selector Levels to Manual Switchboard—For Flat Rate Lines—Calling Party Control	J33013AH-( )	SD-31692-01
J33013AK	Std	One-Way Automatic Trunk Unit—Arranged for Dial Back Operation	J33013AK-( )	SD-30889-01
J33013AL	Std	Outgoing Trunk Unit—To Crossbar Tandem Offices for CAMA Calls	J33013AL-( )	SD-32199-01
J33013AM	Std	Two-Wire Recording Completing Trunk or Outgoing Trunk to Manual or Toll Office—Loop Signaling	J33013AM-( )	SD-31925-01
J33013AN	Std	Outgoing Trunk Unit—Battery and Ground Pulsing—To CAMA Office	J33013AN-( )	SD-32240-01
J33013AP	Std	Outgoing Trunk Unit—E and M Lead Signaling—To CAMA Office, TSP or TSPS No 1	J33013AP-( )	SD-32241-01
J33013AR	A&M Only	Incoming Trunk Unit—To Toll Incoming Selector—CX Signaling, Type B, or Simplex Signaling	J33013AR-( )	SD-31865-01
J33013AS	Std	Outgoing Trunk Unit—From Selector Multiple—For Information, Repair, Official PBX, or Intercepting Service—Arranged for E and M Lead Supervision	J33013AS-( )	SD-32311-01
J33013AT	Std	Outgoing Trunk Unit—From Connector Multiple—For Official PBX, Repair, Verification Request, or Information Services—Arranged for E and M Lead Supervision	J33013AT-( )	SD-32312-01
J33013AU	Std	Pulse Generator and Counting Unit—For Use With Intercepting Trunks—Arranged for E and M Lead Supervision	J33013AU-( )	SD-32310-01
J33013AW	Std	Subscriber Recording Completing Trunk Unit—High-Low Supervision—Coin Control Over Tip and Ring—With or Without Class-of-Service Tone	J33013AW-( )	SD-32300-01

EQUIPMENT CODE	AT&T RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING
J33013AY	Std	Timed Off-Hook Signal Unit— Supplementary to Trunk Units— For SD-30901-01 or SD-31775-01 or SD-31865-01 Associated With No 4A or 4M Toll Crossbar or No 5 Toll Crossbar Offices	J33013AY-( )	SD-30901-01 SD-31775-01 SD-31865-01
J33013BA	Std	Auxiliary Trunk Unit Arranged To Restrict Service With Recorded Announcement	J33013BA-( )	SD-32500-01
J33013BB	Std	Two-Wire Subscriber Recording Completing Trunk Unit—Outgoing to Toll Switchboard—High-Low Supervision—Arranged for Coin Control	J33013BB-( )	SD-32168-01
J33013BC	Std	Class-of-Service Tone Unit—For Use With Maximum Three Sub- scriber Recording Completing Trunks per J33013BB	J33013BC-( )	SD-32168-01
J33013BD	Std	Trunk Circuit Unit—For 911 Emergency Service	J33013BD-( )	SD-35004-01
J33013BE	Std	Emergency Ring back Unit—For Use With 911 Emergency Service Trunk Unit per J33013BD	J33013BE-( )	SD-35004-01
J33013BF	Std	Outgoing Trunk Unit—For ONI Opera- tion With E and M Lead Signaling to TSPS No 1	J33013BF-( )	SD-35059-01
J33013BG	Std	Outgoing Trunk Unit—For ONI Opera- tion With Loop Signaling to TSPS No 1	J33013BG-( )	SD-35059-01

## Circuit Schematic Index

CIRCUIT DRAWING	J33013 EQUIP CODE	CIRCUIT DRAWING	J33013 EQUIP CODE
ES-30452-01	T	SD-31753-01	F
SD-30889-01	AK	SD-31775-01	AY
SD-30901-01	AY	SD-31795-01	AG
SD-31188-01	R	SD-31840-01	E
SD-31315-01	K	SD-31856-01	P
SD-31375-01	L	SD-31865-01	AR,AY
SD-31540-01	AB	SD-31887-01	N
SD-31692-01	AH	SD-31888-01	C
SD-31698-01	M	SD-31892-01	AE
SD-31703-01	B	SD-31925-01	AM
SD-31752-01	Y	SD-32042-01	D

CIRCUIT DRAWING	J33013 EQUIP CODE
SD-32136-01	AA
SD-32167-01	A
SD-32168-01	BB,BC
SD-32170-01	W
SD-32199-01	AL
SD-32240-01	AN
SD-32241-01	AP
SD-32300-01	AW
SD-32310-01	AU
SD-32311-01	AS
SD-32312-01	AT
SD-32500-01	BA
SD-35004-01	BD,BE
SD-35059-01	BF,BG

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