TRUNK FRAMES
AUTOMATIC NUMBER IDENTIFICATION—TYPE B
EQUIPMENT DESIGN REQUIREMENTS
NO. 1 CROSSBAR, PANEL, AND 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 the circuits to be used in the engineering, manufacture, and installation of automatic number identification type B trunk frames in the decoder panel and No. 1 crossbar offices.

1.02 ANI-B step-by-step trunk and trunk frame equipments formerly covered in this specification are now included in specification J38943 which contains both ANI-B and ANI-C step-by-step equipment design requirements.

1.03 Equipment design requirements for the J95108D, N, P, R, Y, and AS units of this specification are applicable to Step-by-Step Systems, and their use for step-by-step is described in and covered by J38943.

1.04 This specification is reissued to add noncoin outgoing trunk unit J95108AM and coin outgoing trunk unit J95108AL. Both units are to be used between No. 1 crossbar and either TSP or TSPS in completing either operator assistance or special toll calls. J95108AM is arranged for loop or E&M supervision and J95108AL is arranged for E&M supervision only. The J95108AA frame is changed to accommodate the J95108AM unit and a new frame J95108AN accommodates the J95108AL unit. J95108AS is added and J95108P is rated Mfr Disc.

Capacity

1.05 The capacities of the ANI trunk frames and units are as given in Table A.

TABLE A

SYSTEM	TRUNKS PER FRAME	TRUNKS PER SUBGROUP
Panel (coin or noncoin)	18 or 13	13
Panel	26	13
No. 1 Crossbar	26 or 13	13

Description

1.06 The basic function of an ANI outgoing trunk is to provide a talking and signaling path from a local office to a CAMA tandem or toll office when both are arranged for automatic number identification. When the called number has been pulsed forward by the local office, the CAMA office signals the trunk to initiate calling number identification. Through its appearance in an outpulser connector, the trunk seizes an outpulser which in turn seizes an identifier. The identifier causes the trunk to superimpose a 5800-Hz tone on its sleeve lead. This signal passes back through the local office switch train to the calling line, through its directory number cross-connections, and into the ANI number network which is used by the identifier in determining the calling office and number. This information is registered in the outpulser which MF-outpulses it to the CAMA office through the trunk for entry on the CAMA tape. All local ANI equipment is then released except the trunk which is held for the duration of the call. Test connector relays are provided in each trunk and on each frame, enabling the test frame to seize the trunks for test purposes.

1.07 Various kinds of ANI trunks are available. The need for them is a function of the kind of local office served and the type of pulsing used

for transmitting the called number. MF outpulsing is used in all cases for the calling number. The kinds of trunks are given in Table B.

TABLE B

TYPE OF PULSING	NO. 1 CROSSBAR OFFICE	PANEL OFFICE
PCI Pulsing	Station to Station	Station to Station
MF Pulsing	Station to Station	Station to Station
	Operator Assistance or Special Toll — Coin	Operator Assistance or Special Toll — Coin
	Operator Assistance or Special Toll — Noncoin	Operator Assistance or Special Toll — Noncoin
	Operator Assistance or Special Toll — Coin — High-Low Supervision or E&M Supervision	Operator Assistance or Special Toll — Coin — Ringback Using Two Frequencies Over Tip and Ring — E&M Lead Supervision
	Operator Assistance or Special Toll — Noncoin — High-Low Supervision or E&M Supervision	Operator Assistance or Special Toll — Noncoin — Loop or E&M Lead Supervisor

1.08 There are four kinds of trunk frames. One frame is for 2-plate, single-circuit trunk units for panel and No. 1 crossbar. The three remaining frames accommodate special toll or operator assistance—coin or noncoin trunks. Two frames are arranged to mount 4-plate, single-circuit trunk units, one for No. 1 crossbar, and one for panel. The other frame is arranged to mount 3-plate, single-circuit trunk units for panel.

1.09 ***The ANI trunk frame*** uses a single-bay, bulb-angle framework 11 feet 6 inches high and 2 feet 5/8 inch long, having a sheet-metal base 10 inches wide. It is arranged for 2- by 23-inch mounting plates. Frames, 9 feet high, are not available. The miscellaneous equipment of the panel and No. 1 crossbar frames consists of a fuse panel at the top, a 2-inch jack, key, and lamp panel located 4 feet 4 inches from the floor, and two miscellaneous relay mounting plates, one located immediately below the fuse panel and the other located 10 inches from the floor. Space is provided on all trunk frames for mounting two oscillator units. Trunk connector units may or may not be mounted on the frame. The remaining space on the frame accommodates surface-wired trunk units. Fig. 1 shows a typical arrangement of the ANI trunk frames for panel and No. 1 crossbar offices.

1.10 One talking battery filter shall be furnished per two adjacent ANIT frames in panel or crossbar offices.

1.11 ***The oscillator unit*** is a one-plate, surface-wired unit. Two units serve a maximum of three adjacent ANIT frames. OSC 0 or 1 is normally used by the correspondingly designated identifier 0 or 1. If either oscillator fails, a plug inserted into the MB jack causes the other oscillator to function with either identifier and removes the defective oscillator from service. The output of the oscillators is multipled to all the trunks on the frame and to the immediately adjacent frames. This output is the 5800-Hz tone which the trunk applies to the sleeve lead for identification purposes.

1.12 The frame fuse panel in all cases is arranged to provide the fuse for the maximum capacity of trunks furnished on the trunk frame, together with the fuses required for two oscillators and the miscellaneous circuit. Arrangements are also provided for the fuses of the trunk connector unit where this unit is mounted on the trunk frame. Provision has also been made for equipping the fuse panels for talking battery filter fuse alarm.

1.13 The ANI trunks are equipped on the frame from the bottom up and are numbered 0, 1, 2, etc, in all cases. On panel and crossbar frames arranged for 26 trunks, the trunks are divided into two subgroups for outpulser access.

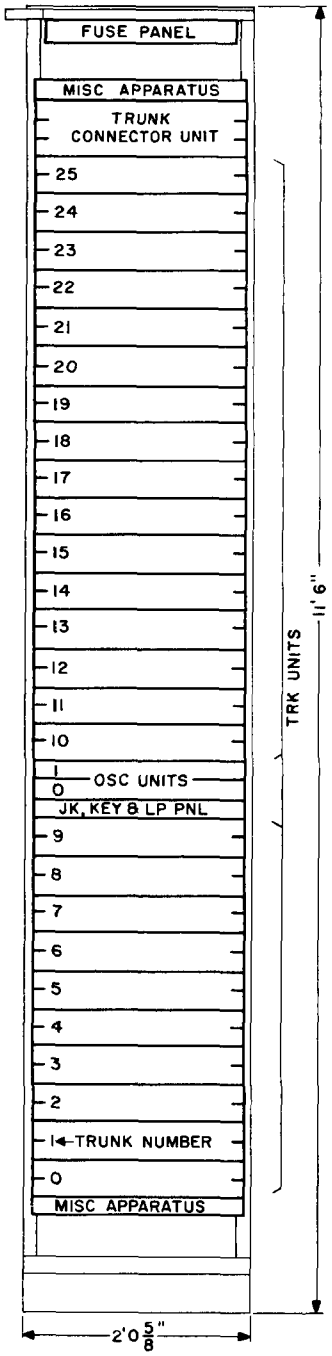

Fig. 1—Typical ANIT Frame

Trunks 0 through 12 have access to an outpulser through one set of outpulser connectors; trunks 13 through 25 have access to an outpulser through another set of connectors. On crossbar frames for 13 trunks, the 13 trunks are in one subgroup. On panel trunk frames arranged for 18 trunks, the first 13 trunks, 0 through 12 of each frame, have access to an outpulser through one set of outpulser connectors, and the remaining trunks 13 through 17 have access to an outpulser through another set of connectors common to other trunks (numbered 13 and up) on other frames. A maximum of four trunk subgroups shall be assigned for each three trunk frames. The first 13 trunks on each frame are assigned to its own subgroup, and the remaining trunks on each frame form another subgroup with a maximum of 13 trunks in that subgroup.

1.14 ***The outpulser connector equipment*** is divided into three parts as follows.

(1) The trunk connector unit.

(2) The outpulser connector unit.

(3) The outpulser connector busy unit.

1.15 ***The trunk connector*** unit for panel and No. 1 crossbar trunk frames is a 3-plate, surface-wired unit arranged for two trunk subgroups. On step-by-step trunk frames, the trunk connector unit is a 2-plate unit arranged for one subgroup. The trunk connector units associated with panel trunk frames that have a maximum of 18 trunks shall be mounted on a relay rack near the trunk frames and serve the following quantities of subgroups.

(a) One 3-plate unit arranged for two subgroups: the first subgroup accommodates the first 13 trunks on the first frame and the second subgroup accommodates the first 13 trunks on the second frame.

(b) An additional 3-plate unit is arranged for the last two subgroups: the third subgroup accommodates the first 13 trunks on the third frame and the fourth subgroup accommodates five, five, and three trunks on the first, second, and third frames, respectively.

The line verification and the permanent signal connectors, when required, will be furnished with the first trunk connector unit.

1.16 The trunk connector unit used with panel outgoing trunks to an automatic intercept center is a one-plate, surface-wired unit arranged for one trunk subgroup of three trunks. It should never be connected to the ANI outpulser connector as the first trunk subgroup to that connector. It

should be mounted on a miscellaneous relay rack as close as possible to the trunks it serves.

1.17 ***The outpulser connector unit*** is a 2-plate, surface-wired unit arranged to connect five trunk subgroups to one or two outpulsers. Additional outpulser connector units are required, depending on the number of outpulsers and trunk subgroups in an identifier group. This unit shall be mounted on relay rack near the trunk frames, as shown in Fig. 2.

1.18 ***The outpulser connector busy unit*** is a one-plate unit arranged for 10 outpulsers and 12 trunk subgroups. This unit shall be mounted on relay rack near the trunk frames, as shown in Fig. 2. This equipment makes an outpulser busy to all trunk subgroups by operating the OB relays which transfer the start lead to the next outpulser.

Floor Plan Arrangement

1.19 The preferred location of ANIT frames is with the associated outpulser frames. As ANI equipment will frequently be located in available space in existing offices, the frames may be located adjacent to others with guardrails of different width. This will necessitate provision of appropriate junction details.

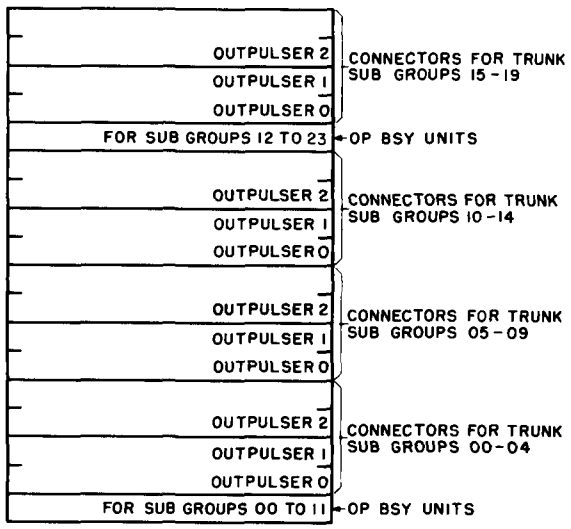

Fig. 2—Typical Arrangement of Outpulser Connectors on Relay Rack for 3 Outpulsers (4 Ultimately) and 20 Trunk Subgroups

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	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	NO. OF 2- BY 23-IN. MTG PLTS	CIRCUITS PER UNIT
ED-25529-70		Guardrail Junction Details	ED-25529-70			
ED-92171-71		Talking Battery Supply Frame Filter	ED-92171-71	SD-95821-01		
J95108A	AT&TCo Std	ANI Trunk Frame for 2-Plate, Single-Circuit Trunk Units	J95108A-( )	SD-21972-01 SD-21974-01 SD-26209-01 SD-26210-01 SD-95821-01 SD-95827-01 SD-95890-01		
J95108C	AT&TCo Std	Fuse Panel	J95108C-( )	SD-95821-01		

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	NO. OF 2- BY 23-IN. MTG PLTS	CIRCUITS PER UNIT
J95108D	AT&TCo Std	ANI Oscillator Unit	J95108D-( )	SD-95827-01	1	1
J95108E	AT&TCo Std	ANI PCI Outgoing Trunk – No. 1 Crossbar	J95108E-( )	SD-26210-01	2	1
J95108F	AT&TCo Std	ANI MF Outgoing Trunk – No. 1 Crossbar	J95108F-( )	SD-26209-01	2	1
J95108G	A&M Only	Panel ANI PCI Outgoing Trunk Unit	J95108G-( )	SD-21974-01	2	1
J95108H	A&M Only	Panel ANI MF Outgoing Trunk Unit	J95108H-( )	SD-21972-01	2	1
J95108M	AT&TCo Std	Trunk Connector Unit – Arranged for ANI Trunk Frames With 26 ANI Trunks	J95108M-( )	SD-95890-01	3	
J95108N	AT&TCo Std	Trunk Connector and Alarm Unit – Arranged for ANI Trunk Frames With 14, 11, 10, or 8 ANI Trunks – Step-by-Step Offices Only	J95108N-( )	SD-32248-01 SD-95890-01	2	
J95108S	AT&TCo Std	ANI Trunk Frame for 4-Plate, Single-Circuit Trunk Unit – No. 1 Crossbar	J95108S-( )	SD-27554-01 SD-27555-01 SD-95821-01 SD-95827-01 SD-95890-01		
J95108W	AT&TCo Std	Fuse Panel	J95108W-( )	SD-95821-01		
J95108Y	AT&TCo Std	Trunk Connector Unit – Arranged for Use With Three Outgoing Trunks to an Automatic Intercept Center	J95108Y-( )	SD-95890-01	1	
J95108AA	A&M Only	Panel ANI Trunk Frame for 3-Plate, Single-Circuit Trunk Units	J95108AA-( )	SD-21981-01 SD-21982-01 SD-21992-01 SD-95821-01 SD-95827-01		
J95108AB	A&M Only	Fuse Panel	J95108AB-( )	SD-95821-01		

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	NO. OF 2- BY 23-IN. MTG PLTS	CIRCUITS PER UNIT
J95108AC	A&M Only	Panel ANI MF Outgoing Trunk Unit – Operator Assistance or Special Toll – Coin – High-Low Supervision to Crossbar Tandem	J95108AC-( )	SD-21981-01	3	1
J95108AJ	AT&TCo Std	Outpulser Connector Busy Unit for 10 Outpulsers and 12 Subgroups	J95108AJ-( )	SD-95890-01	2	
J95108AL	A&M Only	Panel ANI MF Outgoing Trunk Unit – Operator Assistance or Special Toll – Coin – E&M Supervision to Crossbar Tandem, TSP, or TSPS No. 1	J95108AL-( )	SD-21991-01	4	1
J95108AM	A&M Only	Panel ANI MF Outgoing Trunk Unit – Operator Assistance or Special Toll – Noncoin – Loop or E&M Supervision to Crossbar Tandem, TSP, or TSPS No. 1	J95108AM-( )	SD-21992-01	3	1
J95108AN	A&M Only	Panel ANI Trunk Frame for 4-Plate, Single-Circuit Trunk Units	J95108AN-( )	SD-21991-01 SD-95821-01 SD-95890-01		
J95108AP	AT&TCo Std	ANI MF Outgoing Trunk Unit – Operator Assistance or Special Toll – Noncoin High-Low or E&M Supervision to TSP or TSPS – No. 1 Crossbar	J95108AP-( )	SD-27813-01 SD-94820-01	4	1
J95108AR	AT&TCo Std	ANI MF Outgoing Trunk Unit – Operator Assistance or Special Toll – Coin – High-Low or E&M Supervision to TSP or TSPS – No. 1 Crossbar	J95108AR-( )	SD-27814-01 SD-94820-01	4	1
J95108AS	AT&TCo Std	Outpulser Connector Unit for Two Outpulsers and Five Trunk Subgroups	J95108AS-( )	SD-95890-01	2	

Circuit Schematic Index

CIRCUIT DRAWING	J95108 EQPT CODE
SD-21972-01	A, H
SD-21974-01	A, G
SD-21981-01	AA, AC
SD-21982-01	AA
SD-21991-01	AL, AN
SD-21992-01	AA, AM
SD-26209-01	A, F
SD-26210-01	A, E
SD-27813-01	S, AP
SD-27814-01	S, AR
SD-32248-01	N
SD-94820-01	AP, AR
SD-95821-01	ED-92171-71, A, C, S, W, AA, AB
SD-95827-01	A, D, S, AA, AN
SD-95890-01	A, M, N, S, Y, AJ, AN, AS

2. SUPPLEMENTARY INFORMATION

800-600-000—List of General Equipment Requirements
814-000-000—Step-by-Step Systems Index
815-000-000—Panel Systems Index
816-000-000—No. 1 Crossbar System Index
951-330-100—ANI System—General Descriptive Information
J38943—814-507-150—Trunk Frames (ANI—Type B and C) Step-by-Step Systems
J99226—801-025-168—Battery Filters
Floor Plan Data—Section 7.1, Sheet 48
Current Drain Data—
SD-21300-01—Panel Office—Battery Cutoff (Not available for Panel Offices—Ground Cutoff)
SD-25000-02—Crossbar No. 1 Office

3. DRAWINGS

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

Keysheets

SD-21300-01—Panel System—Battery Cutoff Office
SD-21680-01—Panel System—Ground Cutoff Office
SD-25000-01—Crossbar System No. 1

Framework

ED-25278-30—Jack, Key, and Lamp Panel
ED-25529-70—Guardrail Junctions
ED-92744-01—Bulb-Angle Frame Assembly
ED-92925-11—Fuse Panel Assembly

Equipment, Wiring, and Cabling

ED-20761-01—Panel Systems—OGT Test Board Cabling Schematic
ED-25212-01—Designation Cards
ED-25346-14—, ED-25346-15—, ED-25346-16— } Method of Running Power Feeders
ED-27114-01—Table of Wire Gauges and Types of Insulation—No. 1 Crossbar
ED-92171-71—Talking Battery Supply Filter
ED-95090-( )—Automatic Number Identification Trunk Frame—Switchboard Cabling Details
ED-99536-( )—Method of Running Power Feeders—Common System

4. EQUIPMENT

ED-25529-70—Guardrail Junction Details

Note

A. Guardrail junction details shall be furnished as required where the ANI trunk frame is adjacent to frames of other widths.

ED-92171-71—Talking Battery Supply Frame Filter

Group 6—One filter. (See Note A.)

Note

A. In panel or crossbar offices, one talking battery filter shall be furnished per two adjacent automatic number identification trunk frames. This filter should be located under the cable rack on the first frame of a pair or on any isolated frame.

J95108A—AT&TCo Std—ANI Trunk Frame for 2-Plate, Single-Circuit Trunk Units

Equipment—J95108A-( )

List 1—Framework, assembly, wiring, and common equipment for one ANI trunk frame arranged for 26 2-plate, single-circuit trunk units. (See Notes A and B.)

	WIRE	EQUIP	NOTES
Trk Ckts, SD-21972-01, SD-21974-01, SD-26209-01, or SD-26210-01	26	0	A
Oscillator Ckt, SD-95827-01	2	0	A,B
Outpulser Connector Ckt, SD-95890-01, Fig. 1	26	0	A,C
Misc Ckt for Trk Fr, SD-95821-01:			
Fig. 1, Less Y and Z App	1	1	
Fig. 2	1	1	
Fig. 8	1	0	
Fig. 9	1	0	

List 2—Apparatus per SD-95821-01, Fig. 1, Y or Z apparatus only, required in addition to list 1 with the twelfth and twenty-fourth trunk, each furnished on the ANI trunk frame.

List 3—Jack, key, and lamp panel required for the second, fifth, eighth, etc, adjacent ANI trunk frames in each row, or for each ANIT frame with 2-party panel trunks, and on each isolated trunk frame.

List 4—Apparatus per SD-95821-01, Fig. 9 required in addition to list 3 for each ANIT frame with 2-party panel trunks.

List 5—Apparatus per SD-95821-01, Fig. 8 required in addition to list 3 for the second, fifth, eighth, etc, adjacent ANI trunk frames in each row and on each isolated trunk frame.

Notes

A. Trunk units per J95108E, F, G, or H, as required, two oscillator units per J95108D, a trunk connector unit per J95108M, and a fuse panel per J95108C are ordered separately and are mounted on the frame and connected in the shop as shown on the frame equipment drawing. (See 5.05.)

B. List 1 includes the frame local cable for that part of the wiring of the trunks, oscillators, and trunk connectors which is external to these units and interconnects them with each other and with other apparatus on the frame. The trunk wiring contained in the frame local cable is universal for the trunk circuits listed. The miscellaneous circuit wiring included in the frame local cable is universal. W and X options are administered at the frame terminal strip.

C. SD-95890-01, Fig. 1, S wiring is always furnished.

J95108C—AT&TCo Std—Fuse Panel

Equipment—J95108C-( )

List 1—Assembly, equipment, and wiring for one ANI trunk frame fuse panel accommodating 26 trunks.

	WIRE	EQUIP	NOTES
Misc Ckt for ANI Trk Fr, SD-95821-01:			
Fig. 6	1	1	
Fig. 4	37	32	
Fig. 5	2	2	

List 2—Apparatus and wiring per SD-95821-01, Fig. 7 required in addition to list 1 to arrange one fuse panel for talking battery filter fuse alarm.

J95108D—AT&TCo Std—ANI Oscillator Unit

Equipment—J95108D-( )

List 1—Assembly, wiring, and equipment for one oscillator unit per SD-95827-01, Fig. 1. (See Notes A, B, and C.)

List 2—Apparatus and wiring required in addition to list 1 for all oscillator units, except the second on ANIT frames per SD-95827-01, Fig. 2.

Notes

A. The ANI oscillator unit is surface wired.

B. Oscillator unit, J95108D, is used with ANI trunk and OITT test frames and permanent signal identification and line verification equipment.

C. That part of Z option involving the MB jack is furnished in all oscillator units, but is used only in the trunk frame application. Y option and the rest of Z option are administered externally at the terminal strip.

J95108E—AT&TCo Std—ANI PCI Outgoing Trunk—No. 1 Crossbar

Equipment—J95108E-( )

List 1—Assembly, surface wiring, and equipment for one trunk per SD-26210-01, Fig. 1, less options. (See Note A.)
List 2—Equipment and wiring required in addition to list 1 of 2-party identification, SD-26210-01, Fig. 1, Z option.

Note

A. In addition, there are options involving wiring only, as follows:

1. Wiring required in addition to list 1 when list 2 is not provided, Y option.

J95108F—AT&TCo Std—ANI MF Outgoing Trunk—No. 1 Crossbar

Equipment—J95108F-( )

List 1—Assembly, surface wiring, and equipment for one trunk per SD-26209-01, Fig. 1, less options. (See Note A.)
List 2—Equipment and wiring required in addition to list 1 for 2-party identification, Z option.

Note

A. In addition, there are options involving wiring only, as follows:

1. Wiring required in addition to list 1 when list 2 is not provided, Y option.

J95108G—A&M Only—Panel ANI PCI Outgoing Trunk Unit

Equipment—J95108G-( )

List 1—Assembly, surface wiring, and equipment for one trunk per SD-21974-01, Fig. 1, less options. (See Note A.)
List 2—Equipment and wiring required in addition to list 1 for 2-party identification, Z option.

Note

A. In addition, there are options involving wiring only, as follows:

1. Wiring required in addition to list 1 when list 2 is not provided, Y option.

J95108H—A&M Only—Panel ANI MF Outgoing Trunk Unit

Equipment—J95108H-( )

List 1—Assembly, surface wiring, and equipment for one trunk per SD-21972-01, Fig. 1, less options. (See Note A.)
List 2—Equipment and wiring required in addition to list 1 for 2-party identification, Z option.

Note

A. In addition, there are options involving wiring only as follows:

1. Wiring required in addition to list 1 when list 2 is not provided, Y option.

J95108M—AT&TCo Std—Trunk Connector Unit—Arranged for ANI Trunk Frames With 26 ANI Trunks

Equipment—J95108M-( )

List 1—Assembly, wiring, and equipment for one trunk connector unit arranged for two trunk subgroups of 13 trunks each and equipped for one subgroup per SD-95890-01, 13 Fig. 1 and one Fig. 3. (See Note C.)
List 2—Assembly, wiring, and equipment required in addition to list 1 for the second subgroup of 13 trunks per SD-95890-01, 13 Fig. 1 and one Fig. 3. (See Note C.)
List 3—Wiring and equipment required in addition to list 1 to equip subgroup 00 with one line verification trunk connector per SD-95890-01, Fig. 2, less Z option.
List 4—Wiring and equipment required in addition to list 3 to equip subgroup 00 with one permanent signal identification trunk connector per SD-95890-01, Fig. 2, Z option only.

Notes

A. The leads from the TP- relay terminals to the trunk units shall be included in the frame local cable when the trunk connector unit is mounted on the trunk frame or shall be included in switchboard cable when the trunk connector unit is mounted on a miscellaneous relay rack.

B. Trunk connector units mounted on miscellaneous relay rack shall be fused from a miscellaneous fuse bay.

C. S wiring per SD-95890-01, Fig. 1, is always furnished.

J95108N—AT&TCo Std—Trunk Connector and Alarm Unit—Arranged for ANI Trunk Frames With 14, 11, 10, or 8 ANI Trunks—Step-by-Step Offices Only

Equipment—J95108N-( )

List 2—Wiring and equipment per SD-95890-01, Fig. 2 less Z option, required in addition to list 12, to equip subgroup 00 with one line verification circuit connector.

List 5—Wiring and equipment required in addition to list 12 for one subgroup of 14 trunks per SD-95890-01, 14 Fig. 1. (See Note C.)

List 6—Wiring and equipment required in addition to list 12 for one subgroup of 11 trunks per SD-95890-01, 11 Fig. 1. (See Note C.)

List 7—Wiring and equipment required in addition to list 12 for one subgroup of 10 trunks per SD-95890-01, 10 Fig. 1. (See Note C.)

List 8—Wiring and equipment required in addition to list 12 for one subgroup of 8 trunks per SD-95890-01, 8 Fig. 1. (See Note C.)

List 9—Wiring and equipment per SD-32248-01, Fig. 12, required in addition to list 12 when alarm indication is required for more than one potential on the frame fuse panel.

List 10—A&M Only—Wiring and equipment per SD-32248-01, Fig. 10, Z option only, required in addition to list 12 when this unit is used in a 35-E-97 office.

List 11—Wiring and equipment per SD-95890-01, Fig. 3, with T and U options, required in addition to list 12 for each subgroup of trunks in offices arranged for ANI-B.

List 12—Assembly, wiring, and common equipment per SD-32248-01, Fig. 10, less Z option, for one trunk connector and alarm unit arranged for a maximum of 14 trunks.

List 13—Wiring and equipment per SD-95890-01, Fig. 2, Z option only, required in addition to list 12 to equip subgroup 00 with one permanent signal identification trunk connector in a step-by-step office arranged for TOUCH-TONE® or common control.

List 14—Wiring and equipment per SD-95890-01, Fig. 3, with U option, required in addition to list 12 for each subgroup of trunks in offices arranged for ANI-C.

Notes

A. The trunk connector and alarm unit per list 12 is intended to be mounted on each ANIT frame and connected in the shop as shown on the step-by-step frame layout in J38943. List 2 is furnished on one trunk frame only in each identifier group containing the 00 trunk subgroup.

B. The leads from the TP- relay terminals to the trunk units are included in the frame local cable. Similarly, the switchboard cable leads from the LV relay to the line verification circuit are connected directly to the terminals of the LV relay.

C. List 12 includes the second or lower mounting plate for the unit.

D. S wiring per SD-95890-01, Fig. 1, is always furnished.

J95108S—AT&TCo Std—ANI Trunk Frame for 4-Plate, Single-Circuit Trunk Unit—No. 1 Crossbar

Equipment—J95108S-( )

List 1—Framework, assembly, wiring, and common equipment for one ANI trunk frame arranged for 13 4-plate single-circuit trunk units.

	WIRE	EQUIP	NOTES
Trunk Ckt, SD-27813-01: Fig. 1, 3, 4, or SD-27814-01, Fig. 1, 3, 4	13	0	A,B,C
Oscillator Ckt, SD-95827-01: Fig. 1	2	0	A,B
Outpulser Connector Ckt, SD-95890-01: Fig. 1	13	0	A,B,C
Misc Ckt for Trunk Frame, SD-95821-01:			
Fig. 1	1	0	
Fig. 6	1	0	
Fig. 8	1	0	
Fig. 11, S and T Options	1	1	

List 2—Apparatus per SD-95821-01, Fig. 1, with Z apparatus less Y apparatus, required in addition to list 1, when any loop (high low supv) signaling trunk is equipped on frame.

List 3—Jack, key, and lamp panel and apparatus per SD-95821-01, Fig. 8, required in addition to list 1 for the second, fifth, eighth, etc, adjacent ANI trunk frames in each row and on each isolated trunk frame.

Notes

A. Trunk units per J95108AP or J95108AR as required, two oscillator units per J95108D, one trunk connector unit per J95108M, and one fuse panel per J95108W are ordered separately and are mounted and connected in the shop as shown on the frame equipment drawing. (See 5.03.)

B. List 1 includes the frame local cable for that part of the wiring of the trunks, oscillators, trunk connectors, and fuse panel which are external to these units and interconnects them with each other and with other apparatus on the frame. The trunk wiring in the frame local cable includes the wiring for all trunk circuits listed. The miscellaneous circuit wiring included in the frame local cable is universal.

C. S wiring per SD-95890-01, Fig. 1, is always furnished.

J95108W—AT&TCo Std—Fuse Panel

Equipment—J95108W-( )

List 1—Assembly, equipment, and wiring for one ANI trunk frame fuse panel accommodating 13 trunks.

	WIRE	EQUIP	NOTES
Misc Ckt for ANI Trk Fr, SD-95821-01:			
Fig. 4	31	As Reqd	
Fig. 5	2	As Reqd	
Fig. 6	1	1	

List 2—Apparatus and wiring per SD-95821-01, Fig. 7, required in addition to list 1 to arrange fuse panel for talking battery filter fuse alarm.

J95108Y—AT&TCo Std—Trunk Connector Unit—Arranged for Use With Three Outgoing Trunks to an Automatic Intercept Center

Equipment—J95108Y-( )

List 1—Assembly and wiring for one trunk connector unit arranged for one trunk subgroup of three trunks and equipped per SD-95890-01, three Fig. 1, with R option, and one Fig. 3, with U option.

List 2—Wiring and equipment required in addition to list 1 to connect to trouble ticketer frame, per SD-95890-01, Fig. 3, Q option only.

J95108AA—A&M Only—Panel ANI Trunk Frame for 3-Plate, Single-Circuit Trunk Units

Equipment—J95108AA-( )

List 2—Apparatus per SD-95821-01, Fig. 1, Z apparatus only, required in addition to list 5 with the twelfth trunk furnished on the next ANI trunk frame.

List 3—Jack, key, and lamp panel and apparatus per SD-95821-01, Fig. 8, required in addition to list 5 for second, fifth, eighth, etc, adjacent ANI trunk frames in each row, or for each ANI trunk frame with 2-party panel trunks, and on each isolated trunk frame.

List 4—Apparatus per SD-95821-01, Fig. 9, required in addition to list 3 for each ANIT frame with 2-party panel trunks.

List 5—Framework, assembly, wiring, and common equipment for one ANI trunk frame arranged for 18 3-plate, single-circuit trunk units. (See Notes A and B.)

	WIRE	EQUIP	NOTES
Trk Ckt, SD-21981-01, or SD-21992-01	18	0	A
Oscillator Ckt, SD-95827-01	2	0	A,B,C
Misc Ckt for Trk Fr, SD-95821-01:			
Fig. 1, Less Y and Z App	1	1	
Fig. 9	1	0	
Fig. 10 with V and R Options	1	1	

Notes

A. Trunk units per J95108AC or J95108AM, as required, two oscillator units per J95108D, and a fuse panel per J95108AB are ordered separately and are mounted on the frame and connected in the shop as shown on the frame equipment drawing.

B. List 5 includes the frame local cable for that part of the wiring of the trunks and oscillators which is external to these units and interconnects them with each other and with other apparatus on the frame. A set of multipled leads (ring, ground, and ±105) associated with the power ringing circuit are also provided for each group of five trunks 0 to 4, 5 to 9, 10 to 14, and an additional set for the remaining three trunks 15 to 17 on the frame. These multiples connect each group of trunks to its own (RB) ringing lamp located on the miscellaneous fuse bay. W and X options for the miscellaneous circuit are administered at the frame terminal strip.

C. The oscillator units shall be furnished and equipped on the basis of two units for each three adjacent ANI trunk frames in the same lineup and located on the second, fifth, eighth, etc, frames and each isolated ANI trunk frame.

J95108AB—A&M Only—Fuse Panel

Equipment—J95108AB-( )

List 1—Assembly, equipment, and wiring for one ANI trunk frame fuse panel accommodating 18 trunks.

	WIRE	EQUIP	NOTES
Misc Ckt for ANI Trk Fr, SD-95821-01:			
Fig. 4	43	40	
Fig. 5	2	2	
Fig. 6	1	1	

List 2—Equipment and wiring per SD-95821-01, Fig. 7, required in addition to list 1 to arrange one fuse panel for talking battery filter fuse alarm.

J95108AC—A&M Only—Panel ANI MF Outgoing Trunk Unit—Operator Assistance or Special Toll—Coin—High-Low Supervision to Crossbar Tandem

Equipment—J95108AC-( )

List 1—Assembly, equipment, and wiring for one trunk unit per SD-21981-01, Fig. 1, less Y and Z options, with Q, R, and S wiring. (See Notes B and C.)

List 2—Equipment and wiring per SD-21981-01, Fig. 1, Y option only, required in addition to list 1 for operator assistance trunk where calling customer dials zero only. (See Note A.)

Notes

A. In addition, there are options involving wiring only as follows.

1. Provide Z wiring in addition to list 1 when list 2 is not furnished for special toll trunk where calling customer dials called station number.

B. The installer shall remove the wiring straps between terminals of the CR1 and CR2 resistors as follows:

WHEN OUTGOING TRUNK LOOP RESISTANCE IS	REMOVE STRAPS
0 to 500 ohms	Q, R, S
501 to 1000 ohms	R, S
1001 to 1500 ohms	R
1501 to 2000 ohms	Q, S
2001 to 2500 ohms	Q
Over 2500 ohms	None

C. Equipment per SD-21981-01, Fig. 2, shall be located on the miscellaneous fuse bay.

J95108AJ—AT&TCo Std—Outpulser Connector Busy Unit for 10 Outpulsers and 12 Trunk Subgroups

Equipment—J95108AJ-( )

List 1—Assembly, equipment, and wiring for one OP busy unit arranged for 10 outpulsers and 12 trunk subgroups, equipped for one outpulser and 12 subgroups, per SD-95890-01, Fig. 5.

List 2—Wiring and equipment required in addition to list 1 for each additional outpulser, per SD-95890-01, Fig. 5.

J95108AL—A&M Only—Panel ANI MF Outgoing Trunk Unit—Operator Assistance or Special Toll—Coin—E&M Supervision to Crossbar Tandem, TSP, or TSPS No. 1

Equipment—J95108AL-( )

List 1—Assembly, equipment, and surface wiring for one trunk unit per SD-21991-01, Fig. 1. (See Notes A and B.)

List 2—Equipment and wiring per SD-21991-01, Fig. 1, Z option only, required in addition to list 1 for special toll trunk where calling customer dials called station number.

List 3—Equipment and wiring per SD-21991-01, Fig. 1, Y option only, required in addition to list 1 when list 2 is not furnished for operator assistance trunk where calling customer dials zero only.

List 4—Equipment and wiring per SD-21991-01, Fig. 3, required in addition to list 1 when automatic return of initial deposit is required. (See Note A.)

Notes

A. In addition, there are options involving wiring only as follows:

1. Provide V wiring in addition to list 1 where automatic number identification is provided.

2. Provide T wiring in addition to list 1 where automatic number identification is not required.

3. Provide S wiring in addition to list 1 when automatic return of initial deposit is not required.

B. Equipment per SD-21991-01, Fig. 2 shall be located on the miscellaneous fuse bay.

C. Job records need not be maintained for options T and V.

J95108AM—A&M Only—Panel ANI MF Outgoing Trunk Unit—Operator Assistance or Special Toll—Noncoin—Loop or E&M Supervision to Crossbar Tandem, TSP, or TSPS No. 1

Equipment—J95108AM-( )

List 1—Assembly, equipment, and surface wiring for one trunk unit per SD-21992-01, Fig. 1. (See Notes A through E and G.)

List 2—Equipment and local cable in addition to list 1 for E&M lead signaling.

	WIRE	EQUIP	NOTES
SD-21992-01, Fig. 2	1	1	

List 3—Equipment and local cable in addition to list 1 for loop signaling.

	WIRE	EQUIP	NOTES
SD-21992-01, Fig. 3, with Q, R & S Wiring (See Note F)	1	1	

List 4—Equipment and wiring per SD-21992-01, Fig. 1, X option only, required in addition to list 1 for operator assistance trunk where calling party dials zero only. (See Note B.)

List 5—Equipment and wiring per SD-21992-01, Fig. 1, Z option only, required in addition to list 1 for automatic identification of station with 2-party service. (See Note C.)

Notes

A. Equipment per SD-21992-01, Fig. 4 shall be located on the miscellaneous fuse bay.

B. Provide W wiring in addition to list 1 for special toll trunk where calling party dials called station number.

C. Provide Y wiring in addition to list 1 when list 5 is not furnished for automatic number identification without 2-party service.

D. Provide N wiring in addition to list 1 for restricted ringback.

E. Provide M wiring in addition to list 1 for unrestricted ringback.

F. Office wiring list records need not be maintained for options Q, R, and S.

G. The signaling on this trunk is convertible from loop signaling to E&M signaling. When conversion is desired the top mounting plate containing the supervisory apparatus must be replaced. This plate shall be shipped to the installer for conversion.

J95108AN—A&M Only—Panel ANI Trunk Frame for 4-Plate, Single-Circuit Trunk Units

Equipment—J95108AN-( )

List 1—Framework, assembly, wiring, and common equipment for one ANI trunk frame arranged for 13 4-plate, single-circuit trunk units. (See Notes A and B.)

	WIRE	EQUIP	NOTES
Trunk Circuit, SD-21991-01	13	0	A
Outpulser Connector Circuit, SD-95890-01: Fig. 1	13	0	A
OSC Circuit, SD-95827-01	2	0	A,B
Misc Circuit for Trunk Frame, SD-95821-01:			
Fig. 4	34	As Reqd	
Fig. 5	2	As Reqd	
Fig. 6	1	1	
Fig. 7	1	0	
Fig. 1, Less Y & Z App	1	1	
Fig. 8	1	0	
Fig. 10 with R Option	1	1	

List 2—Jack, key, and lamp panel and apparatus per SD-95821-01, Fig. 8, required in addition to list 1 for the second, fifth, eighth, etc, adjacent ANI trunk frames in each row and on each isolated trunk frame.

List 3—Equipment per SD-95821-01, Fig. 7, required in addition to list 1 to arrange one fuse panel for talking battery filter fuse alarm.

Notes

A. Trunk units per J95108AL, as required, two oscillator units per J95108D, and a trunk connector unit per J95108M are ordered separately and are mounted on the frame and connected in the shop as shown on the frame equipment drawing. (See 5.06.)

B. List 1 includes the frame local cable for that part of the wiring of the trunks, oscillators, and trunk connector which is external to these units and interconnects them with each other and with other apparatus on the frame. The trunk wiring contained in the frame local cable includes the wiring for all trunk circuits listed. The miscellaneous circuit wiring included in the frame local cable is universal.

J95108AP—AT&TCo Std—ANI MF Outgoing Trunk Unit—Operator Assistance of Special Toll—Noncoin—High-Low or E&M Supervision to TSP or to TSPS—No. 1 Crossbar

Equipment—J95108AP-( )

List 1—Assembly, common equipment, and wiring for one trunk unit per SD-27813-01, Fig. 1. (See Notes A and D.)

List 2—Equipment and wiring per SD-27813-01, Fig. 3, when high-low supervision is required.

List 3—Equipment and wiring per SD-27813-01, Fig. 4, and SD-94820-01, Fig. 2, when E&M supervision is required.

List 4—Equipment and wiring per SD-27813-01, Fig. 1, Z option only, required in addition to list 1 when automatic number identification of stations on 2-party lines is required.

Notes

A. In addition there are options involving wiring only as follows:

1. Wiring required in addition to list 1 when list 4 is not provided, Y option.
2. Wiring required in addition to list 2 when restricted ringback is required, R option.
3. Wiring required in addition to list 3 when unrestricted ringback is required, S option.

B. Job records need not be maintained for M, N, Q, T, V, W, and X options.

C. One resistance lamp per SD-27813-01, Fig. 2, shall be provided per max 5 lists 1 and shall be located on the miscellaneous fuse bay.

D. A&M Only—The signaling on this trunk is convertible from high-low supervision to E&M supervision. When conversion is desired by the telephone company on a job where the trunk was initially installed with high-low supervision, the top mounting plate containing the supervisory apparatus must be replaced. The replacing plate shall be the top plate on J95108AP-( ) equipped and stamped by the

J95108AR—AT&TCo Std—ANI MF Outgoing Trunk Unit—Operator Assistance or Special Toll—Coin—High-Low or E&M Supervision to TSP or TSPS—No. 1 Crossbar

Equipment—J95108AR-( )

List 1—Assembly, common equipment, and wiring for one trunk unit per SD-27814-01, Fig. 1. (See Notes C and D.)

List 2—Equipment and wiring per SD-27814-01, Fig. 3, required when high-low supervision is used.

List 3—Equipment and wiring per SD-27814-01, Fig. 4 and SD-94820-01, Fig. 2, required when E&M supervision is used. (See Note E.)

List 4—Equipment and wiring required in addition to list 1 when initial coin deposit is to be returned automatically per SD-27814-01, Fig. 5.

List 5—Equipment and wiring required in addition to list 1 when dial tone first operation is required per SD-27814-01, Fig. 6. (See Note E.)

Notes

A. In addition there are options involving wiring only as follows:

1. Q option is required in addition to list 2 when trunks are used for access to a traffic service position in crossbar tandem (TSP).

2. R option is required in addition to list 2 when trunks are used for access to a Traffic Service Position System (TSPS).

B. Job records need not be maintained for S, T, V, W, X, Y, and Z options.

C. Resistance lamp per SD-27814-01, Fig. 2, shall be provided once per five list 1 and located on miscellaneous fuse bay.

D. The signaling on this trunk is convertible from high-low supervision to E&M supervision. When conversion is desired by the telephone company on a job where the trunk was initially installed with high-low supervision, the top mounting plate containing the supervisory apparatus must be replaced. The replacing plate shall be the top plate on J95108AR-( ) equipped and stamped by the shop per the applicable lists on the equipment drawing. This plate plus wiring shall be shipped to the installer for conversion.

E. When list 3 is specified, the dual channel receiver unit J23058AJ-( ) must be provided.

F. Resistance lamp per SD-27814-01, Fig. 7, shall be provided once per each list 5 and located on the miscellaneous fuse bay.

J95108AS—AT&TCo Std—Outpulser Connector Unit for Two Outpulsers and Five Trunk Subgroups

Equipment—J95108AS-( )

List 1—Assembly, wiring, and equipment for one outpulser connector unit arranged for two outpulsers and equipped for one outpulser and five trunk subgroups per SD-95890-01, 5 App Fig. 4 with M option. (See 5.02 and Notes A, B, and C.)

List 2—Wiring and equipment per SD-95890-01, 5 App Fig. 4, with M option, required in addition to list 1 for the second outpulser associated with the same five trunk subgroups. (See Notes A, B, and C.)

Notes

A. Provide R wiring when outpulsing of called number to an automatic intercept center is required. Otherwise provide S wiring.

B. Provide Q wiring when outpulser start and trunk number identification of ANI-B intercept trunk is required.

C. Provide T wiring when outpulser start and trunk number identification of ANI-B trunks is required.

5. GENERAL NOTES

Wiring and Cabling

5.01 ED-27114-01 covers the types and gauges of all wire and cable used in the manufacture and installation of the ANI trunk frame.

5.02 The outpulser connector unit and the outpulser connector busy unit shall be mounted on

the relay rack near the ANI trunk frames. Spare space should be allowed for the ultimate growth in the number of outpulsers and trunk subgroups. It is suggested that all the outpulser connector units for all outpulsers associated with the same trunk subgroups should be mounted together. The outpulser connector busy units should be interspersed as shown in Fig. 2.

5.03 The ANI trunk frames are equipped with a frame local cable which contains all the external leads that interconnect the trunk units with each other and with other apparatus on the frame.

5.04 On panel and crossbar trunk frames, the trunk multiple which is part of the frame local cable contains a maximum of four class leads CLA, CLB, CLC, and CLD. These leads terminate on each trunk unit terminal strip A and the miscellaneous terminal strip MC. These leads should be strapped, as required, to the class leads 1 to 8 for station-to-station trunks or to class leads 9 to 18 for person-to-person trunks from the OITT frame on the same frame terminal strip and each trunk should be strapped to the appropriate CLA, CLB, CLC, or CLD lead on the unit terminal strips.

5.05 The oscillator units shall be furnished and equipped on the basis of two units for each three adjacent ANI trunk frames in the same lineup and located on the second, fifth, eighth, etc, such frames, and on each isolated ANI trunk frame.

5.06 On frames requiring fuse panels, battery and ground feeders shall be provided in accordance with the battery and ground feeder drawing listed for the system with which these feeders are to be associated. A No. 6 lead shall be connected from the battery feeder to the talking battery supply filter. One No. 6 lead shall be connected from the battery filter to each associated fuse panel.

5.07 J95108AK is unassigned.

List of A&M Only and Mfr Disc. Equipment

EQUIPMENT	RATING	DETAILS LAST SHOWN IN ISSUE	REPLACING EQUIPMENT
J95108B	Mfr Disc.	2 Appx 5	
J95108G	A&M Only	1	—
J95108H	A&M Only	1	—
J95108J	Mfr Disc.	2	J38943M
J95108K	Mfr Disc.	2	J38943N
J95108L	Mfr Disc.	2	J38943J
J95108N,L1	Mfr Disc.	2	J95108N,L3
L3	Mfr Disc.	2	J95108N,L4 through L8 and L11
L4	Mfr Disc.	3	J95108N,L12
L10	A&M Only	3	—
J95108P	Mfr Disc.	8	J95108AS
J95108R	Mfr Disc.	5	J95108AJ
J95108T	Mfr Disc.	7	J95108AP
J95108U	Mfr Disc.	7	J95108AR
J95108AA	A&M Only	2	—
L1	Mfr Disc.	8	J95108AA, L5, L6, L7
J95108AB	A&M Only	2	—
J95108AC	A&M Only	2	—
J95108AD	Mfr Disc.	8	J95108AM
J95108AE	Mfr Disc.		J38943L
J95108AF	Mfr Disc.		J38943R
J95108AG	Mfr Disc.		J38943K
J95108AH	Mfr Disc.		J38943P
J95108AL	A&M Only	9	—
J95108AM	A&M Only	9	—
J95108AN	A&M Only	9	—

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

Bell Telephone Laboratories, Incorporated

Dept 5224