

**INTERCEPT TRUNK FRAME
FOR AIS
WITH ANI TYPE C OR D
NO. 1, 350A, 355A, OR 35E97 OFFICES
EQUIPMENT DESIGN REQUIREMENTS
STEP-BY-STEP SYSTEMS**

1. GENERAL

SCOPE

1.01 This specification, together with the supplementary information listed herein, covers the framework, equipment, manufacture, and installation of the intercept trunk frame for an automatic intercept system (AIS) with an automatic number identification (ANI) type C or D system in a No. 1, 350A, 355A, or 35E97 office.

1.02 Whenever this section is reissued, the reasons for reissue will be specified in this paragraph.

CAPACITY

1.03 The intercept trunk frame is available in both 9-foot 0-inch and 11-foot 6-inch configurations. The frame is always equipped with a fuse panel, a switch trouble alarm and group and alarm unit, an all-trunks-busy unit, a trunk connector unit, and either a 3- or 6-capacity trunk finder shelf. A typical arrangement of the frame is shown in Fig. 1 and 2. The auxiliary intercept units, which have an appearance on the banks of the trunk finder, are equipped as required. Each auxiliary intercept unit consists of 2 auxiliary trunk circuits and 40 isolation circuits (20 per each auxiliary trunk). The outgoing trunk units, which have an appearance on the jacks of the trunk finder, are also equipped as required. When the capacity of the frame for outgoing trunks and auxiliary trunk units is exceeded, the overflow units shall be miscellaneous relay rack mounted.

DESCRIPTION

Automatic Intercept

1.04 Step-by-step No. 1, 350A, 355A, or 35E97 offices equipped with ANI type C or D may be arranged to provide intercept service from an automatic intercept center (AIC). This type of service is available in both large and small offices, whether attended or unattended. A block diagram of the operation of AIS with ANI type C or D is shown in J32008.

1.05 *Intercepting Trunk Finders:* A trunk finder shelf, having a capacity of 3 or 6 100-point step-by-step trunk finders and a maximum of 70 auxiliary intercept trunk circuits, is arranged to concentrate the traffic to 3 or 6 outgoing trunks. These trunks are connected to an AIC. Trunks from the vacant level of local and toll selectors are assigned to terminals 10 through 19. Trunks from plugging-up lines are assigned to terminals 00 through 09 and 50 through 59. The trunk finders are equipped with normal post springs which function to cause the associated outpulser to generate the proper class-of-service indication to the AIC by the outgoing trunk. Calls that reach connector terminals that have recently been changed are routed to the AIC and receive computer-generated information. This is accomplished by placing jumpers at the distributing frame between an isolation circuit and the connector terminals. Calls that reach unassigned connector terminals will receive either a local announcement (when so arranged) or an announcement from the AIC. This is accomplished at the distributing frame by the use of a shoe.

NOTICE

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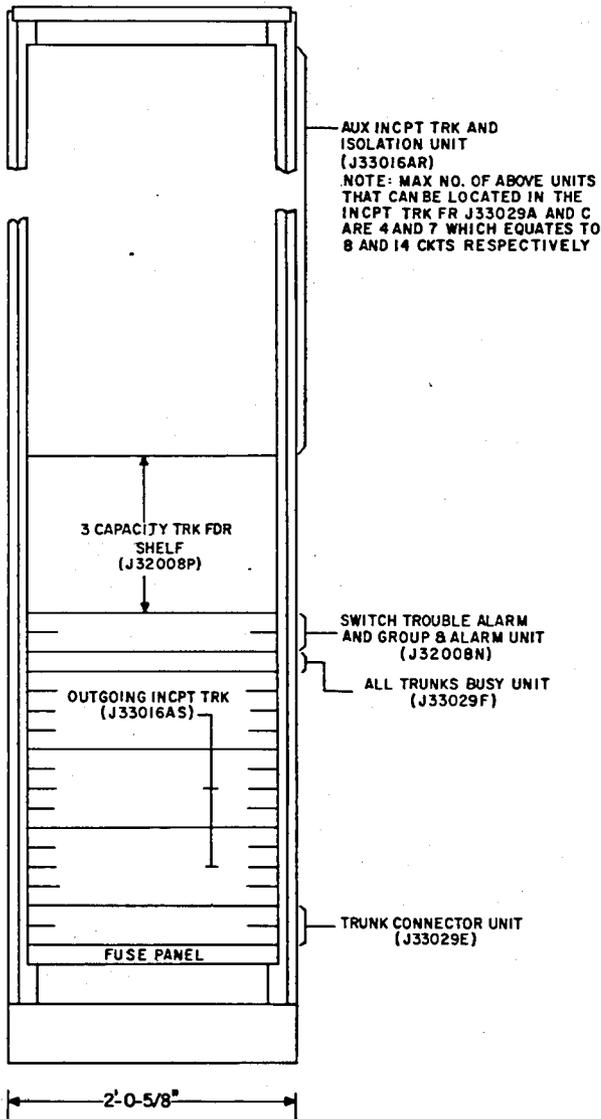


Fig. 1—Intercept Trunk Frame (3-Capacity Trunk Finder Shelf)—Typical Equipment Arrangement of J33029A (9 Feet 0 Inch) and J33029C (11 Feet 6 Inches)

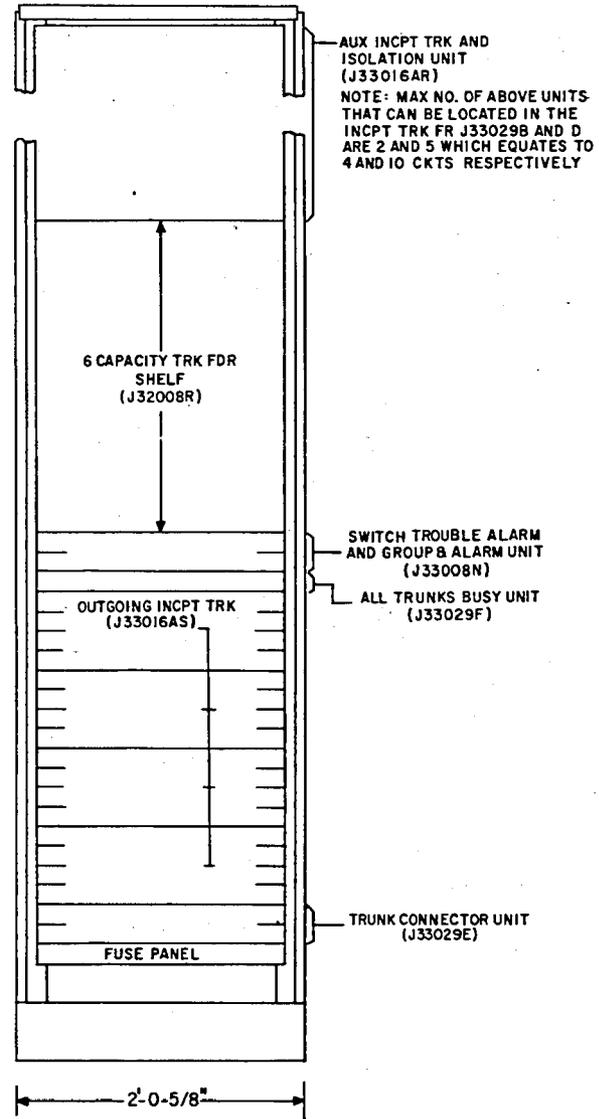


Fig. 2—Intercept Trunk Frame (6-Capacity Trunk Finder Shelf)—Typical Equipment Arrangement of J33029B (9 Feet 0 Inch) and J33029D (11 Feet 6 Inches)

The vacant selector levels will receive a machine announcement from the local office (when so arranged) or from the AIC. Plugging-up lines are answered by an operator.

1.06 Auxiliary Intercept Circuit: There are two types of auxiliary intercept units: a 2-circuit unit with 40 isolation circuits (20 per circuit) and a one-circuit unit with 10 associate isolation circuits. The 2-circuit unit is for use with

the connector multiple of a regular connector, and the single-circuit unit is for use with the connector multiple of a level hunting connector. When more than 20 isolation circuits are required, a supplementary isolation unit is available. This supplementary unit furnishes ten additional circuits which are cross-connected at the distributing frame to the associated auxiliary intercept circuit. A total of eight units may be associated with an auxiliary intercept circuit. The auxiliary intercept unit for

level hunting connectors and the supplementary isolation unit are always mounted on a miscellaneous relay rack.

1.07 A multifrequency signal supply to the AIC is required for each of the outgoing trunks.

1.08 The auxiliary intercept units, supplementary isolation unit, outgoing trunk unit, and the vacant level intercept units are covered in J33016.

2. SUPPLEMENTARY INFORMATION

814-000-000—Numerical Index—Step-by-Step Systems
800-600-000—Checking List—General Equipment Requirements

J32008—814-415-151—Trunk Finders

J33016—814-524-150—Intercepting Trunks

J38942—814-204-151—Outpulser and Test Frame—ANI Type

J38950—814-206-150—Automatic Number Identification — Type D

J95108—814-507-151—Trunk Frames—Automatic Number Identification — Type B—Equipment Design Requirements—No. 1 Crossbar, Panel, and Step-by-Step Systems

J98609—801-620-151—Multifrequency Current Supply

J99235—801-025-166—Multifrequency Signal Generator Unit, Relay Rack Mounted, Common Systems

Floor Plan Data—Section 5.2, Sheet 84

Current Drain Data—

SD-31359-02—No. 1 Step-by-Step

SD-31364-02—No. 350A Step-by-Step

SD-31780-02—No. 355A Step-by-Step

SD-32325-02—35E97 Step-by-Step

3. DRAWINGS

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

Keysheets

SD-31359-01—No. 1 Step-by-Step

SD-31364-01—350A Step-by-Step

SD-31780-01—355A Step-by-Step

SD-32325-01—35E97 Step-by-Step

Circuits

SD-32194-02—Group and Alarm Relay Circuit

SD-32239-02—Switch Trouble Alarm Circuit

SD-35037-01—Outgoing Intercept Trunk Circuit—For

Automatic Intercept Service—Arranged for Use With ANI C or D and Operation With Trunk Finders

SD-35042-01—Auxiliary Intercept Trunk and Isolation Circuit—For Automatic Intercept Service Between Connector Numbers in Step-by-Step ANI C or D

SD-35043-01—Trunk Connector Circuit for AIS or Directory Assistance—For Use With ANI C or D

SD-35045-01—Trunk Finder Circuit for Automatic Intercept Service—For Offices Equipped With ANI C or D

Equipment

ED-30754-70—Shelf Unit Assembly

ED-31235-01—Line and Trunk Finder Unit—Method of Wiring Banks and Commutators.

ED-35010-30—Component Assembly

ED-35017-30—Reversal Detector

ED-35045-01—Trunk Finder

ED-35048-70—Shelf Unit Assembly

J32008N-()—Switch Trouble Alarm and Group and Alarm Unit for AIS—For Use With ANI Type C or D

J32008P-()—3-Capacity Trunk Finder Unit—For Automatic Intercept Service—ANI C or D

J32008R-()—6-Capacity Trunk Finder Unit—For Automatic Intercept Service—ANI C or D

J33016AR-()—Auxiliary Intercept Trunk and Isolation Unit—For ANI C or D

J33016AS-()—Outgoing Intercept Trunk Unit—For Automatic Intercept Service Arranged for Use With ANI C or D and Operation With Trunk Finders

J33029A-()—Intercept Trunk Frame to AIS—9 Feet 0 Inch High—Arranged for a 3-Capacity, 100-Point Intercept Trunk Finder Shelf—For Use With ANI C or D

J33029B-()—Intercept Trunk Frame to AIS—9 Feet 0 Inch High—Arranged for a 6-Capacity, 100-Point Intercept Trunk Finder Shelf—For Use With ANI C or D

J33029C-()—Intercept Trunk Frame to AIS—11 Feet 6 Inches High—Arranged for a 3-Capacity, 100-Point Intercept Trunk Finder Shelf—For Use With ANI C or D

J33029D-()—Intercept Trunk Frame to AIS—11

Feet 6 Inches High—Arranged for a 6-Capacity, 100-Point Intercept Trunk Finder Shelf—For Use With ANI C or D

J33029E(-)—Trunk Connector Unit for Automatic Intercept Service—For Use With ANI C or D

J33029F(-)—All-Trunks-Busy Unit for Automatic Intercept Service—For Use With ANI C or D

4. EQUIPMENT

J33029A—AT&T Co Std—Intercept Trunk Frame to AIS—9 Feet 0 Inch High—Arranged for a 3-Capacity, 100-Point Intercept Trunk Finder Shelf—For Use With ANI C or D

List 1—Framework, assembly, wiring, and common equipment for a 9-foot 0-inch (12-inch base) frame arranged for a 3-capacity, 100-point intercept trunk finder shelf.

	WIRE	EQUIP	NOTES
Gr & Alm Rel Ckt, SD-32194-02:			
App Fig. 1 & 13, Opt W	1	0	
App Fig. 2	5	0	
Sw Tbl Alm Ckt, SD-32239-02:			
App Fig. 1 & 4, Opt W	1	0	
App Fig. 5	1	1	
Og Incpt Trk Ckt, SD-35037-01:			
App Fig. 1, Opt Y & Z	3	0	
Aux Incpt & Islt Ckt, SD-35042-01:			
App Fig. 1, 3 & 4	8	0	
App Fig. 2	160	0	
App Fig. 7	16	0	
App Fig. 8	3	0	
App Fig. 9 & 10	1	0	
Trk Conn Ckt, SD-35043-01:			
App Fig. 1	3	0	
App Fig. 2	2	0	
Trk Fdr Ckt, SD-35045-01:			
App Fig. 2	3	0	

Notes

A. Framework per ED-91837-71, Group 11 shall be specified in addition to list 1 for offices requiring a 12-inch base and a 5-inch cable rack. (Omit ED-91837-71, Group 9.)

B. Framework per ED-91710-76, Group 1 shall be specified in addition to list 1 for offices requiring a 10-inch base. (Omit ED-91837-71, Group 9.)

C. The auxiliary intercept and isolation units (J33016AR) shall be mounted directly above the trunk finder shelf, as required, and additional units shall be equipped on a miscellaneous relay rack frame.

D. This frame is intended to be used in those offices which do not have a forecasted growth beyond three trunks to the AIC. When more than three outgoing intercept trunk units (J33016AS) are required initially or when the future projection of the office is more than three trunks, a frame per J33029B should be provided. However, on a job basis it is possible for a 3-capacity trunk finder intercept frame (J33029A) to grow beyond a 3-trunk system by providing an additional 3-capacity trunk finder shelf (J32008P) and the necessary trunks (J33016AS) on a miscellaneous relay rack frame.

J33029B—AT&T Co Std—Intercept Trunk Frame to AIS—9 Feet 0 Inch High—Arranged for a 6-Capacity, 100-Point Intercept Trunk Finder Shelf—For Use With ANI C or D

List 1—Framework, assembly, wiring, and common equipment for a 9-foot 0-inch (12-inch base) frame arranged for a 6-capacity, 100-point intercept trunk finder shelf.

	WIRE	EQUIP	NOTES
Gr & Alm Rel Ckt, SD-32194-02:			
App Fig. 1 & 13, Opt W	1	0	
App Fig. 2	5	0	
Sw Tbl Alm Ckt, SD-32239-02:			
App Fig. 1 & 4, Opt W	1	0	
App Fig. 5	1	1	
Og Incpt Trk Ckt, SD-35037-01:			
App Fig. 1, Opt Y & Z	4	0	
Aux Incpt & Islt Ckt, SD-35042-01:			
App Fig. 1, 3 & 4	4	0	
App Fig. 2	80	0	
App Fig. 7	8	0	
App Fig. 8	3	0	
App Fig. 9 & 10	1	0	
Trk Conn Ckt, SD-35043-01:			
App Fig. 1	6	0	
App Fig. 2	2	0	
Trk Fdr Ckt, SD-35045-01:			
App Fig. 2	6	0	

Notes

- A. Framework per ED-91837-71, Group 11 shall be specified in addition to list 1 for offices requiring a 12-inch base and a 5-inch cable rack. (Omit ED-91837-71, Group 9.)
- B. Framework per ED-91710-76, Group 1 shall be specified in addition to list 1 for offices requiring a 10-inch base. (Omit ED-91837-71, Group 9.)
- C. The auxiliary intercept trunk and isolation unit (J33016AR) shall be located directly above the trunk finder shelf as required. Additional units shall be located on a miscellaneous relay rack frame.
- D. When more than four outgoing intercept trunk units are required, the additional units shall be located on a miscellaneous relay rack frame.

J33029C—AT&T Co Std—Intercept Trunk Frame to AIS—11 Feet 6 Inches High—Arranged for a 3-Capacity, 100-Point Intercept Trunk Finder Shelf—For Use With ANI C or D

List 1—Framework, assembly, wiring, and common equipment for an 11-foot 6-inch (12-inch base) frame arranged for a 3-capacity, 100-point intercept trunk finder shelf.

	WIRE	EQUIP	NOTES
Gr & Alm Rel Ckt, SD-32194-02:			
App Fig. 1 & 13, Opt W	1	0	
App Fig. 2	5	0	
Sw Tbl Alm Ckt, SD-32239-02:			
App Fig. 1 & 4, Opt W	1	0	
App Fig. 5	1	1	
Og Incpt Trk Ckt, SD-35037-01:			
App Fig. 1, Opt Y & Z	3	0	
Aux Incpt & Islt Ckt, SD-35042-01:			
App Fig. 1, 3 & 4	14	0	
App Fig. 2	280	0	
App Fig. 7	28	0	
App Fig. 8	3	0	
App Fig. 9 & 10	1	0	
Trk Conn Ckt, SD-35043-01:			
App Fig. 1	3	0	
App Fig. 2	2	0	
Trk Fdr Ckt, SD-35045-01:			
App Fig. 2	3	0	

Notes

- A. Framework per ED-91710-73, Group 2 shall be specified in addition to list 1 for offices requiring a 10-inch base. (Omit ED-91837-71, Group 7.)
- B. The auxiliary intercept and isolation units (J33016AR) shall be mounted directly above the trunk finder shelf, as required, and additional units shall be equipped on a miscellaneous relay rack frame.

- C. The frame is intended to be used in those offices which do not have a forecasted growth beyond three trunks to the AIC. When more than three outgoing intercept trunk units (J33016AS) are required initially or when the future projection of the office is more than three trunks, a frame per J33029D should be provided. However, on a job basis it is possible for a 3-capacity trunk finder intercept frame (J33029C) to grow beyond a 3-trunk system by providing an additional 3-capacity trunk finder shelf (J32008P) and the necessary trunks (J33016AS) on a miscellaneous relay rack frame.

J33029D—AT&TCo Std—Intercept Trunk Frame to AIS—11 Feet 6 Inches High—Arranged for a 6-Capacity, 100-Point Intercept Trunk Finder Shelf—For Use With ANI C or D

List 1—Framework, assembly, wiring, and common equipment for an 11-foot 6-inch (12-inch base) frame arranged for a 6-capacity, 100-point intercept trunk finder shelf.

	WIRE	EQUIP	NOTES
Gr & Alm Rel Ckt, SD-32194-02:			
App Fig. 1 & 13, Opt W	1	0	
App Fig. 2	5	0	
Sw Tbl Alm Ckt, SD-32239-02:			
App Fig. 1 & 4, Opt W	1	0	
App Fig. 5	1	1	
Og Incpt Ckt, SD-35037-01:			
App Fig. 1, Opt Y & Z	4	0	
Aux Incpt & Islt Ckt, SD-35042-01:			
App Fig. 1, 3 & 4	10	0	
App Fig. 2	200	0	
App Fig. 7	20	0	
App Fig. 8	3	0	
App Fig. 9 & 10	1	0	
Trk Conn Ckt, SD-35043-01:			
App Fig. 1	6	0	
App Fig. 2	2	0	
Trk Fdr Ckt, SD-35045-01:			
App Fig. 2	6	0	

Notes

- A. Framework per ED-91710-73, Group 2 shall be specified in addition to list 1 for offices requiring a 10-inch base. (Omit ED-91837-71, Group 7.)
- B. The auxiliary intercept trunk and isolation unit (J33016AS) shall be located directly above the trunk finder shelf, as required. Additional units shall be located on a miscellaneous relay rack frame.
- C. When more than four outgoing intercept trunk units are required, the additional units shall be located on a miscellaneous relay rack frame.

J33029E—AT&TCo Std—Trunk Connector Unit for Automatic Intercept Service—For Use With ANI C or D

List 1—Assembly, wiring, and equipment for one trunk connector unit for automatic intercept service arranged for two outpulsers, one trunk subgroup, and six trunk preference relays, and equipped for one outpulser, one trunk subgroup, and three trunk preference relays, per SD-35043-01, three Fig. 1, one Fig. 2, 4, and 5, and options T, W, and Z. (See Note A.)

List 2—Wiring and equipment required in addition to list 1 per SD-35043-01, three Fig. 1 and option T, when more than three AIS outgoing intercept trunks are required.

List 3—Wiring and equipment required in addition to list 1 per SD-35043-01, one Fig. 2 and 4 and options W and Z, for the second outpulser. (See Note A.)

Note

- A. Wiring per SD-35043-01, option X is required in addition to list 1 or 3 when the first circuit of the unit has a preceding subgroup in the outpulser preference chain. (Omit option W.)

J33029F—AT&TCo Std—All-Trunks-Busy Unit for Automatic Intercept Service—For Use With ANI C or D

List 1—Assembly, wiring, and equipment for one all-trunks-busy control unit per SD-35042-01, three Fig. 8.

List 2—Wiring and equipment required in addition

to list 1 for announcement access per SD-35042-01, Fig. 9 and option T.

List 3—Wiring and equipment required in addition to list 2 for voice alarm and control per SD-35042-01, Fig. 10. (Omit option T.)

5. GENERAL NOTES AND INDEXES

None.

TABLE A

INTERCEPT TRUNK FRAMES J33029A AND B (9 FT 0 IN.) AND J33029C AND D (11 FT. 6 IN.)

COMPONENT EQUIPMENT UNITS SHALL BE EQUIPPED AS FOLLOWS:					
UNIT		QUANTITY TO BE PROVIDED		DESCRIPTION OF UNIT	DESCRIPTION OF LIST
J CODE	LIST NO.	ALWAYS	FOR OPTION INDICATED		
J33029E	1	1		Trunk connector unit	
	2		1		When more than three AIS outgoing trunk units
	3		1		For each additional outpulser provided in the office
J33029F	1	1		All trunks busy	
	2		1		When office is equipped with an announcement
	3		1		For voice alarm and control
J32008N	1	1		Switch trouble and group and alarm unit	
J32008P	1		1 (See Note B)	Trunk finder shelf unit — arranged for three 100-point trunk finders — 4-wire with bank multiples	
J32008R	1		1 (See Note B)	Trunk finder shelf unit — arranged for six 100-point trunk finders — 4-wire with bank multiples	
J33016AR	1	1	(See Note A)	Auxiliary intercept trunk and isolation unit for nonlevel hunting connectors	
	2		1		When the office is equipped with an announcement

TABLE A (Cont)

COMPONENT EQUIPMENT UNITS SHALL BE EQUIPPED AS FOLLOWS:					
UNIT		QUANTITY TO BE PROVIDED		DESCRIPTION OF UNIT	DESCRIPTION OF LIST
J CODE	LIST NO.	ALWAYS	FOR OPTION INDICATED		
J33016AS	1	1	See Note A	Outgoing intercept trunk unit	
	2		1		When the office is arranged for loop signaling
	3		1		When the office is arranged for E and M signaling
	4		1		When the office is equipped with precise tone
	5		1		When this trunk is provided in an office with ANI type C
	6		1		For trunks having impedance less than 1100 ohms at 1000 Hz
	7		1		For trunks having impedance of 1100 ohms (or greater) at 1000 Hz

Notes:

- A. The maximum numbers of auxiliary intercept trunk and isolation units and outgoing intercept trunk units that can be equipped on the intercept trunk frames are as follows:

FRAME	HEIGHT	NO. OF UNITS	
		J33016AR	J33016AS
J33029A	9' 0"	8	3
J33029B	9' 0"	4	4
J33029C	11' 6"	14	3
J33029D	11' 6"	10	4

When additional auxiliary intercept units [J33016AR-()] and outgoing intercept trunk units [J33016AS-()] are required, they shall be miscellaneous relay rack mounted.

- B. Trunk finder shelf unit J32008P is located on intercept trunk frame J33029A or C, and J32008R is located on J33029B or D.

Bell Telephone Laboratories, Incorporated
Dept 5245

