

TEST TRUNK EQUIPMENT UNITS
MISCELLANEOUS RELAY RACK MOUNTED
EQUIPMENT DESIGN REQUIREMENTS
NO. 5 CROSSBAR SYSTEM

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 engineering, manufacture, and installation of various test trunks for use in No. 5 Crossbar System.

1.02 This specification is reissued:

- (a) to provide information on a new unit (J23059 AE) for four 103 trunks and one 103 trunk timer unit for use with 4-wire trunk link frames arranged for multilevel preemption in accordance with SD-25845-01, Issue 2D;
- (b) to bring J23059W into agreement with SD-27640-01, Issue 13D. The incoming trunk test line is arranged to test all trunks equipped for disconnect of the called station upon an on-hook in excess of 1.2 to 1.6 seconds; and
- (c) to add information shown on Addendum, Issue 1.

Description

1.03 The units listed herein are arranged to mount on 23-inch relay rack bays and they have terminal strips for terminating incoming leads. The units shall obtain ground from the fuse panel at the bottom of the relay rack (RR) frame on which they are mounted; battery from the RR frame fuse panel or from the power ringing and tone distribution (PRTD) frame; and tone and ringing services from the PRTD frame.

1.04 *The incoming trunk test line unit* provides the relay equipment for an incoming trunk test line circuit used for testing the terminating end of noncentrex and nonwide area data service trunks incoming to a No. 5 crossbar office.

1.05 *The auxiliary incoming trunk test line units*, when used as part of the incoming trunk test line unit, provide the relay equipment for incoming trunk test line circuits used for testing the terminating ends of phase II or phase III centrex trunks incoming to a No. 5 crossbar office on a transfer basis. Either unit may be used alone as a post transfer unit when the APTT circuit is used to test phase II or III centrex IAO trunks.

1.06 *The LDN incoming trunk test line unit* provides the relay equipment for an incoming trunk test line circuit used for testing the terminating end of phase II centrex trunks incoming to a No. 5 crossbar office on a listed directory number basis.

1.07 *The WADS incoming trunk test line unit* provides the relay equipment for an incoming trunk test line circuit used for testing the terminating end of WADS trunks incoming to a No. 5 crossbar office.

1.08 *The master test frame and/or outgoing trunk test frame test trunk unit* provides the relay equipment for use with trunks from the test frames to a No. 3 local test cabinet or a No. 14 local test desk, either in the same or a distant building. When required, this relay equipment may be associated with test trunk ringing equipment used with the local test desk trunks.

1.09 *The unit for test trunk at MDF from No. 14 local test desk* provides the equipment for establishing test connections between the local

test desk and the MDF, so that intermittent trouble on customer lines can be detected. It provides facilities for bridging the test trunk across the line, for testing the line conductors extending outward from the office, or for testing the tip and ring extending inward to the line circuit.

1.10 The test trunk unit provides the relay equipment for a test trunk circuit from a No. 20A toll testboard to the line link frame for testing WADS trunks.

1.11 The test incoming trunk unit provides the relay equipment for a test incoming trunk circuit arranged for phase I or II centrex.

1.12 The 103 trunk unit for use with 4-wire trunk link frames provides the relay equipment for a 103 trunk circuit used to make an overall check of the ability of an incoming intertoll trunk to set up a through call and pass supervision.

1.13 The auxiliary test incoming trunk arranged for dial transfer is used with the test incoming trunk for phase II centrex to provide dial transfer trunk testing features.

1.14 The outgoing trunk with tandem completion unit provides the connecting link for

terminating through-switched and local originated code 101 test line calls to a 17E testboard from 900-ohm CCSA trunks.

1.15 The auxiliary incoming test line don't answer transfer unit provides the relay equipment for incoming trunk test line circuits used for testing the don't answer transfer feature of phase III centrex trunks incoming to a No. 5 crossbar office. This unit, J23059AB, may be used as a don't answer transfer unit when the APTT circuit is used to test the don't answer transfer feature of phase III centrex IAO trunks.

1.16 The 103 test trunk unit provides the relay apparatus for a 103 test trunk circuit used to make an overall check of the ability of incoming intertoll trunks, 2-way intertoll trunks, and 2-way intertoll trunks arranged for CCSA to set up a through call and pass supervision. The 103 test trunk also has the ability to make an overall check of 2-way line units (LLP) on local originating calls.

1.17 The 103 trunk unit and the 103 trunk timing unit for use with 4-wire trunk link frames arranged for multilevel preemption provide the relay and printed wiring board equipment for testing the signaling distortion introduced by interoffice Autovon trunks and their associated SF units when used in the through-switched mode.

SUBDIVISIONS OF EQUIPMENT AND DETAILED INDEX

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

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	CKTS PER UNIT	MTG PLATES PER UNIT
J23059C	AT&TCo Std	Unit for 5 MTF and/or OGT Test Fr Test Trks from No. 14 LTD or No. 3 Test Cabinet	J23059C-()	SD-25745-01	5	1
J23059F	AT&TCo Std	Unit for One Test Trk at MDF—from No. 14 LTD	J23059F-()	SD-26113-01	1	1
J23059G	AT&TCo Std	Unit for One Incoming Trk Test Line for Use With 4-Wire Line Link Fr	J23059G-()	SD-27513-01	1	4

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	CKTS PER UNIT	MTG PLATES PER UNIT
J23059H	AT&TCo Std	Unit for One 103 Trk for Use With 4-Wire Trk Lk Fr	J23059H-()	SD-27509-01	1	1
J23059J	AT&TCo Std	Unit for Two Station Ringer Test Trks— Arranged for 4-Wire Trk Lk Frs	J23059J-()	SD-27508-01	2	4
J23059K	A&M Only	Unit for One Test Incoming Trk—Office Arranged for Phase II Centrex Service	J23059K-()	SD-27641-01	1	3
J23059L	AT&TCo Std	Unit for One Incoming Trk Test Line	J23059L-()	SD-27640-01	1	4
J23059M	AT&TCo Std	Unit for One Test Trk From a No. 20A Testboard to Line Link Fr for Testing WADS Trks	J23059M-()	SD-27648-01	1	3
J23059N	A&M Only	Unit for One Phase II Centrex Aux Incoming Trk Test Line for Testing Phase II Centrex Trks on a Transfer Basis	J23059N-()	SD-27640-01	1	2
J23059P	A&M Only	Unit for One Incoming Trk Test Line for Testing Phase II Centrex Trks on a LDN Basis	J23059P-()	SD-27640-01	1	1
J23059R	AT&TCo Std	Unit for One Incoming Trk Test Line for Testing WADS Incoming Trks	J23059R-()	SD-27640-01	1	5
J23059S	AT&TCo Std	Unit for one OGT with Tandem Completion for Use as a Code 101 and Equivalent Code 101 Trunk Test to No. 17E Testboard	J23059S-()	SD-27691-01	1	2
J23059T	A&M Only	Unit for One Aux Test Incoming Trk Arranged for Dial Transfer	J23059T-()	SD-27641-01	1	1

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING	CKTS PER UNIT	MTG PLATES PER UNIT
J23059U	A&M Only	Unit for One Test Incoming Trk—Office Arranged for Phase I Centrex	J23059U-()	SD-27717-01	1	4
J23059W	AT&TCo Std	Unit for Two Phase III Centrex Auxiliary Incoming Trk Test Lines for Testing Phase III Centrex Trks	J23059W-()	SD-27640-01	2	3
J23059Y	AT&TCo Std	Unit for Two Applique Ckts for Use With Station Ringer Test Trk Ckt for Testing Lines Any of Which Are Arranged for Multilevel Preemption	J23059Y-()	SD-27508-01	2	1
J23059AA	AT&TCo Std	Unit for One 103 Test Trk	J23059AA-()	SD-27795-01	1	2
J23059AB	AT&TCo Std	Unit for One Incoming Trk Test Line for Testing Don't Answer Transfer Feature of Phase III Centrex Trks	J23059AB-()	SD-27640-01	1	1
J23059AC	AT&TCo Std	Unit for One 103-Trunk —Multilevel Preemption —For Use With 4-Wire Trunk Link Frame	J23059AC-()	SD-27845-01	1	4
J23059AD	AT&TCo Std	Unit for Timers for Four 103 Trunks— Multilevel Preemption— For Use With 4-Wire Trunk Link Frames	J23059AD-()	SD-27845-01	4	3 MTG PLATES SPACES/ UNIT
J23059AE	AT&TCo Std	Unit for Four 103 Trunks and 103 Trunk Timer Unit—Multilevel Preemption—For Use With 4-Wire Trunk Link Frames	J23059AE-()	SD-27845-01	4	19

Circuit Schematic Index

CIRCUIT DRAWING	J23059 EQUIP CODE
SD-25745-01	C
SD-26113-01	F
SD-27508-01	J, Y
SD-27509-01	H
SD-27513-01	G
SD-27640-01	L,N,P,R,W,AB
SD-27641-01	K,T
SD-27648-01	M
SD-27691-01	S
SD-27717-01	U
SD-27845-01	AC,AD,AE

2. SUPPLEMENTARY INFORMATION

819-000-000—No. 5 Crossbar System
 AA128.006—Checking List—General Equipment Requirements

J23064—(819-601-150)—Relay Rack Frames for Trunks and Relay Equipments
 J29259—(819-005-150)—General Outline—No. 5 Crossbar System
 J29261—(819-600-150)—Trunk Tables Showing No. 5 Crossbar Trunk Equipments Arranged by Functions and Features

3. DRAWINGS

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

ED-94822-()—Timing Circuit Amplas Package Arranged to Mount on 2-inch Mounting Plate

ED-94823-()—Wiring and Assembly for Nonfunctional Miscellaneous Amplas Units

SD-25760-01—No. 5 Crossbar System—Keysheet

SD-25760-02—No. 5 Crossbar System—Current Drain Data Sheet

SD-94820-01—Time Delay Circuit Pack Schematic

4. EQUIPMENT

J23059C (AT&TCo Std)—Unit for Five Master Test Frame and/or Outgoing Trunk Test Frame Test Trunks From No. 14 Local Test Desk or No. 3 Test Cabinet

Equipment—J23059C-()

List 1—Common equipment for one test trunk unit arranged for five test trunks with equipment and wiring for one trunk per SD-25745-01, Fig. 1.

List 2—Equipment and wiring required in addition to list 1 for one test trunk per SD-25745-01, Fig. 1.

J23059F (AT&TCo Std)—Unit for One Test Trunk at MDF—From No. 14 Local Test Desk

Equipment—J23059F-()

List 1—Assembly, equipment, and wiring for one trunk in accordance with SD-26113-01, Fig. 1.

Notes

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

1. Wiring required when protector mountings are required in accordance with SD-26113-01, W option.
2. Wiring required when no protector mountings are required in accordance with SD-26113-01, X option.

B. Provide jacks at the main distributing frame, in accordance with SD-26113-01, Fig. 2, as required.

C. Provide 4W6A patching cords for connecting to type C protector mounting, 4W11A patching cords for connecting to 121-type protector mounting, or 4W7A patching cords for connecting to 444-type jacks, as required.

D. Job records need not be maintained for Y or Z option.

J23059G (AT&TCo Std)—Unit for One Incoming Trunk Test Line for Use With 4-Wire Line Link Frame

Equipment—J23059G-()

List 1—Assembly, wiring, and equipment for one incoming trunk test line per SD-27513-01, Fig. 1.

List 2—Equipment and wiring required in addition to list 1, when incoming trunks to be tested are

arranged for multilevel preemption, in accordance with SD-27513-01, Fig. 2.

List 3—Equipment and wiring required in addition to list 1 when incoming trunks to be tested are not arranged for multilevel preemption, in accordance with SD-27513-01, Z option.

J23059H (AT&TCo Std)—Unit for One 103 Trunk for Use With 4-Wire Trunk Line Frames

Equipment—J23059H-()

List 1—Assembly, wiring, and equipment for one 103 trunk per SD-27509-01, Fig. 1.

J23059J (AT&TCo Std)—Unit for Two Station Ringer Test Trunks—Arranged for 4-Wire

Equipment—J23059J-()

List 2—Assembly, wiring, and equipment for two station ringer test trunks in accordance with SD-27508-01, two Fig. 1 less Y option.

List 3—Wiring and equipment required in addition to list 2 when unit is not arranged for multilevel preemption per SD-27508-01, Y option.

Note

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

1. Wiring required in addition to list 1 when TOUCH-TONE® testing feature is not required in accordance with SD-27508-01, Z option.
2. Wiring required in addition to list 1, when unit is arranged to test lines any of which are subject to multilevel preemption, in accordance with SD-27508-01, X option.

J23059K (A&M Only)—Unit for One Test Incoming Trunk—Office Arranged for Phase II Centrex Service

Equipment—J23059K-()

List 1—Assembly, equipment, and wiring for one test incoming trunk in accordance with SD-27641-01, Fig. 1.

Notes

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

1. Wiring required in addition to list 1 when dial transfer feature is required per SD-27641-01, X option.
2. Wiring required in addition to list 1 when dial transfer feature is not required per SD-27641-01, Y option.

B. Job records need not be maintained for Z option.

J23059L (AT&TCo Std)—Unit for One Incoming Trunk Test Line

Equipment—J23059L-()

List 1—Assembly, wiring, and equipment for one incoming trunk test line unit per SD-27640-01, Fig. 1 and 2.

List 2—Wiring and equipment required in addition to list 1 when noncentrex and non-WADS trunks are to be tested in accordance with SD-27640-01, Z option.

List 3—Equipment and wiring required in addition to list 1, when phase III centrex trunks are to be tested, in accordance with SD-27640-01, T option. (See Note D.)

Notes

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

1. (A&M Only)—Wiring required in addition to list 1, when phase II centrex trunks are to be tested on a transfer basis, in accordance with SD-27640-01, Y option.

B. Reserved.

C. In order to administer the Y option wiring J23059N unit (unit for one phase II centrex auxiliary incoming trunk test line) must be added.

D. In order to administer wiring per T option J23059W must be added.

J23059M (AT&TCo Std)—Unit for One Test Trunk From a No. 20A Testboard To Line Link Frame For Testing Wide Area Data Service Trunks

Equipment—J23059M-()

List 1—Assembly, equipment, and wiring for one test trunk in accordance with SD-27648-01, Fig. 1.

Notes

- A. Reserved.
- B. Job records need not be maintained for W, X, Y, and Z options.

J23059N (A&M Only)—Unit for One Phase II Centrex Auxiliary Incoming Trunk Test Line for Testing Phase II Centrex Trunks on a Transfer Basis

Equipment—J23059N-()

List 1—Assembly, wiring, and equipment for one auxiliary incoming trunk test line unit per SD-27640-01, Fig. 3.

Notes

- A. Reserved.
- B. Reserved.
- C. This unit is an accessory to J23059L and is required when J23059L is to be used to test phase II centrex incoming trunks on a transfer basis. It should be mounted adjacent to J23059L on the same relay rack frame whenever possible. This unit can also be used alone as a post transfer unit when the APTT circuit is used to test phase II centrex IAO trunks.

J23059P (A&M Only)—Unit for One Incoming Trunk Test Line for Testing Phase II Centrex Trunks on a Listed Directory Number Basis

Equipment—J23059P-()

List 1—Assembly, wiring, and equipment for one incoming trunk test line unit per SD-27640-01, Fig. 4.

J23059R (AT&TCo Std)—Unit for One Incoming Trunk Test Line for Testing WADS Incoming Trunks

Equipment—J23059R-()

List 2—Assembly, wiring, and equipment for one incoming trunk test line unit per SD-27640-01, Fig. 1 and 5 and Z option and SD-94820-01, two Fig. 2.

J23059S (AT&TCo Std)—Unit for One Outgoing Trunk With Tandem Completion for Use as a Code 101 and Equivalent Code 101 Test Trunk to No. 17E Testboard

List 1—Assembly, equipment, and wiring for one outgoing trunk with tandem completion for use as a code 101 and equivalent code 101 trunk test to No. 17E testboard with reverse battery supervision in accordance with SD-27691-01, Fig. 1.

Notes

- A. Reserved.
- B. Job records need not be maintained for X, Y, and Z options.

J23059T (A&M Only)—Unit for One Auxiliary Test Incoming Trunk Arranged for Dial Transfer

Equipment—J23059T-()

List 1—Assembly, equipment, and wiring for one auxiliary trunk unit per SD-27641-01, Fig. 2.

J23059U (A&M Only)—Unit for One Test Incoming Trunk—Office Arranged for Phase I Centrex Service

Equipment—J23059U-()

List 1—Assembly, equipment, and wiring for one test incoming trunk in accordance with SD-27717-01, Fig. 1.

Notes

- A. Reserved.
- B. Job records need not be maintained for Z option.

J23059W (AT&TCo Std)—Unit for Two Phase III Centrex Auxiliary Incoming Trunk Test Lines for Testing Phase III Centrex Trunks

Equipment—J23059W-()

List 1—(A&M Only) Assembly, wiring, and equipment arranged for two but equipped with one auxiliary incoming trunk test line circuit in accordance with SD-27640-01, Fig. 6, and G option and SD-94820-01, Fig. 2. (See Note C.)

List 2—(A&M Only) Equipment and wiring required in addition to list 1 for one additional auxiliary incoming trunk test line circuit in accordance with SD-27640-01, Fig. 6 and G option and SD-94820-01, Fig. 2. (See Note C.)

List 4—Assembly, wiring, and equipment for two but equipped for one auxiliary incoming trunk test line circuit in accordance with SD-27640-01, Fig. 6, and F option with SD-94820-01, Fig. 2 (See Note C.)

List 5—Equipment and wiring required in addition to list 4 for one additional auxiliary incoming trunk test line circuit in accordance with SD-27640-01, Fig. 6 and F option and SD-94820-01, Fig. 2 (See Note C.)

Notes

- A. Reserved.
- B. Reserved.
- C. This unit is an accessory to J23059L and is required when J23059L is to be used to test phase III centrex incoming trunks.

J23059Y (AT&TCo Std)—Use of Two Applique Circuits for Use With Station Ringer Test Trunk Circuit for Testing Lines Any of Which Are Arranged for Multilevel Preemption

Equipment—J23059Y-()

List 1—Assembly, wiring, and equipment for two applique circuits in accordance with SD-27508-01, two Fig. 2.

Notes

- A. Reserved
- B. This unit must be located on the same relay rack bay as the associated station ringer test trunk unit.

J23059AA (AT&TCo Std)—Unit for One 103 Test Trunk

Equipment—J23059AA-()

List 1—Assembly, wiring, and equipment for one 103 test trunk in accordance with SD-27795-01, Fig. 1.

List 2—Apparatus and wiring required in addition to list 1 when this circuit is used to test trunks arranged for reverse battery supervision in accordance with SD-27795-01, Fig. 2. (The 103 test trunk is arranged for reverse battery supervision.)

List 3—Apparatus and wiring required in addition to list 1 when this circuit is used to test trunks arranged for SX supervision in accordance with SD-27795-01, Fig. 3. (The 103 test trunk is arranged for SX supervision.)

List 4—Apparatus and wiring required in addition to list 2 and 3 when this circuit is used to test trunks arranged for either SX or reverse battery supervision in accordance with SD-27795-01, Fig. 4. (The 103 test trunk is arranged for combined SX and reverse battery supervision.)

J23059AB (AT&TCo Std)—Unit For One Incoming Trunk Test Line For Testing Don't Answer Transfer Feature of Phase III Centrex Trunks

Equipment—J23059AB-()

List 1—Assembly, wiring, and equipment for one incoming trunk test line for SD-27640-01, Fig. 7.

J23059AC (AT&TCo Std)—Unit for One 103 Trunk—Multilevel Preemption—For Use With 4-Wire Trunk Link Frame

Equipment—J23059AC-()

List 1—Assembly, equipment, and wiring required for one 103 trunk in accordance with SD-27845-01, Fig. 1 and SD-94820-01, two Fig. 2. (See Note B, C, and D.)

Notes

- A. Reserved
- B. A maximum of four of these units is associated with one J23059AD.
- C. Two trunk units should be mounted directly above and two trunk units should be mounted directly below J23059AD.
- D. The trunks should be placed at a convenient level of the relay rack frame for accessibility to connectors, keys, and potentiometers.

J23059AD (AT&TCo Std)—Unit for Timers for Four 103 Trunks—Multilevel Preemption—For Use With 4-Wire Trunk Link Frames

Equipment—J23059AD-()

List 1—Assembly, equipment, and wiring for one 103 trunk timing unit arranged for association with four 103 trunks and equipped for association with one 103 trunk per SD-27845-01, Fig. 2. (See Note B.)

Notes

- A. Reserved
- B. This unit is associated with a maximum of four J23059AC units.

J23059AE (AT&TCo Std)—Unit for four 103 Trunks and one 103 Trunk Timer Unit—Multilevel Preemption—For Use With 4-Wire Trunk Link Frames

Equipment—J23059AE-()

List 1—Assembly, equipment, and wiring for one trunk and one timer unit consisting of J23059AC, List 1, and J23059AD, List 1 (See Note B and C).

List 2—Equipment and wiring for one trunk and one timer consisting of J23059AC, List 1 and J23059AD, List 2 (See Note B).

Notes

- A. Reserved
- B. The wiring for lists 1 and 2 is internal loose wiring.
- C. J23059AE occupies 19 mounting plate spaces.

5. GENERAL NOTES

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
J23059A	Mfr Disc.	4	J23059L
J23059B	Mfr Disc.	1	J23059E
J23059D	Mfr Disc.	2	J99206AU
J23059E	Mfr Disc.	3	J93016BB
J23059J, L1	Mfr Disc.	6	J23059J, L2
J23059K	A&M Only	6	—
J23059N	A&M Only	6	—
J23059P	A&M Only	6	—
J23059R, L1	Mfr Disc.	4	J23059R, L2
J23059T	A&M Only	6	—
J23059U	A&M Only	5	—
J23059W, L1	A&M Only	7	J23059W, L4
L2	A&M Only	7	J23059W, L5
L3	Mfr Disc.	7	—

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