

**SESS® SWITCHING EQUIPMENT
TEST ACCESS UNIT
CIRCUIT**

Description of Changes

- D.1 Replace J4,J5,J8,J10,J11,J13,J14,J15,J16,J17,J18,J19N 23A jacks with Switchcraft MT332B jacks in FS2. Changed App Fig. 1 to show Switchcraft replacements.
- D.2 Replace J6 and J12 223A jacks with Switchcraft MT331 jacks in FS2. Changed App Fig. 1 to show replacement jacks.
- D.3 Replace J9 and J12 239A jacks with Switchcraft Mt334B jacks in FS2. Changed App. Fig. 1 to show replacement jacks.
- D.4 Add options V,U,T,S,R,Q to notes 302, 303 and options index.

AT&T

DEPT NAC120200-JRK-PK

CIRCUIT DESCRIPTION

CD-5D099-01
ISSUE 2A
APPENDIX 2M
DWG ISSUE 4M
DISTN CODE BT13

**5ESS® SWITCHING EQUIPMENT
TEST ACCESS UNIT
CIRCUIT**

CHANGES

D. Description of Changes

Added options "W" and "X" to FS1, sheets C1 and D2 option "X" describes DA pack.

Added circuit pack IDs: ED5D095-30, EAY1 and CLE1 Code ESPQAC3AAA.

Made corrections to terminal names and pairs to sheet B2: TMAR to TMAT, TMAT to TMAT1, TMBT to TMBR1. TMAT and TMBR are paired. TMAT1 and TMBR1 are paired.

Corrected terminal pairing: T1 is paired with R1; T is paired with R.

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DEPT NA5301500-DSS-JPH

CIRCUIT DESCRIPTION

CD-5D099-01
ISSUE 2A
APPENDIX 1M
DWG ISSUE 3M
DISTN CODE BT13

SESS® SWITCHING EQUIPMENT
TEST ACCESS UNIT
CIRCUIT

CHANGES

D. Description of Changes

- D.1 Replace J4 and J5 jacks (code 223A) with (code 238A) in APP FIG. 1. This corrects a condition which could cause ringing voltage to appear across the sleeve leads of the 223A jacks.
- D.2 Add options "Y" and "Z" to FS 2, and add Notes 302 and 303.
- D.3 Add Group "A" to ED-5D092-30.

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AT&T-T DEPT 11NW532270-JEC-EBH

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**5ESS™ SWITCHING EQUIPMENT
TEST ACCESS UNIT
CIRCUIT**

SECTION I - GENERAL DESCRIPTION1. PURPOSE OF CIRCUIT

1.01 The Test Access Unit (TAU) is a throughput device. Located at the 5ESS Master Control Center (MCC) and/or the Supplementary Trunk and Line Work Station (STLWS), it supplies TELCO operations personnel with audio-coupled and directly connected access to lines and trunks for testing.

2. GENERAL DESCRIPTION OF OPERATION

2.01 Two pair of unidirectional send and receive ports originate at the TAU panel and terminate on trunk circuits, allowing audio signals to be directed to and/or from 5ESS with variable amplification to compensate for cable loss. Two additional ports provide metallic connections to lines and trunks via the Metallic Service Unit. Several miscellaneous ports for telephone, monitor, and E&M connections are provided on the TAU for convenience. All TAU ports are software controlled via the MCC.

SECTION II - DETAILED DESCRIPTION1. AC PORTS - FS1

1.01 Send Ports. Two separate ports provide audio-coupled access for sending ac signals to trunks and lines. Amplifier circuits between input and

output sides of each port provide signal gain from -1dB to +2dB to compensate for cable losses. The amplifiers employ a transformer-coupled, differential design and have 600 ohm unbalanced inputs and balanced outputs. The outputs terminate on 5ESS trunk circuits and are subsequently switched through the network to destination lines or trunks.

1.02 Receive Ports. Two separate ports provide audio coupled access for receiving ac signals from trunks and lines. Amplifier design is similar to that discussed above. Inputs are balanced; outputs are unbalanced. The inputs terminate on 5ESS trunk circuits which receive signals from user-selected lines or trunks.

2. DC PORTS - FS1

2.01 Two separate ports provided metallic access to lines and trunks. Relays control the status of each port.

2.02 DC Port 1. K1 controls cut-through of the input to output on the port. The relay is normally open and a low impedance (<2k ohms) between DAT3 and DAR3 will cause the relay to close. K2 controls application of a unidirectional load across the port consisting of a 402 ohm resistor and a diode. The relay is normally closed and a low impedance (<2k ohms) between DAT2 and DAR2 will cause the relay to open.

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2.03 DC Port 2. Operation is similar to that of DC Port 1. K3 controls input to output cut-through, and DAT6, DAR6 control K3. K4 controls port loading, and DAT5, DAR5 control K4.

3. MISCELLANEOUS PORTS

3.01 Ports for telephone monitor, E&M, and 4 spare connections are provided on the TAU for convenience. Except for coupling capacitors in the monitor path, these ports pass through the TAU unaffected.

SECTION III - REFERENCE DATA

1. WORKING LIMITS

1.01 Amplifier Circuits.

Gain: adjustable from -1 to 2 dB
 Overload: $\geq +5$ dBm at input
 Noise: 0 dBmCo with input terminated with 600 ohm
 Frequency Response: ± 0.2 dB 200 Hz to 4 kHz WRT 1.004 kHz
 ± 0.1 dB 300 Hz to 3.2 kHz WRT 1.004 kHz
 ± 0.1 dB absolute at 1.004 kHz
 Impedance: ERL ≥ 30 dB input or output
 1 kHz RL ≥ 36 dB input or output against 600 ohm

Balance:	<u>Sending Amp</u>	<u>Receiving Amp</u>	<u>Requirement</u>
	Input Balance	Output Balance	Unbalanced
	Output Balance	Input Balance	80 dB at 60 Hz
	Output Balance	Input Balance	70 dB at 540 Hz
	Output Balance	Input Balance	50 dB at 4 kHz

2. FUNCTIONAL DESIGNATIONS

2.01 Circuit Packages

Designation Meaning

SENDAMPA Send Amplifier, Port A
 RECVAMPA Receive Amplifier, Port A
 SENDAMPB Send Amplifier, Port B
 RECVAMPB Receive Amplifier, Port B

3. FUNCTIONS

- 3.01 Sends audio signals through send ports.
- 3.02 Receives audio signals through receive ports.
- 3.03 Provides metallic path through dc ports.

- 3.04 Provides switchable dummy-load on dc ports.
- 3.05 Provides access for telephone service via telephone ports.
- 3.06 Provides phone-set monitor access via monitor port.
- 3.07 Provides E&M access through E&M ports.
- 3.08 Provides spare connections via spare ports.

4. CONNECTING CIRCUITS

- 4.01 Audio-coupled port connections are made with the 5ESS Trunk Unit.
- 4.02 Metallic-coupled port connections are made with the 5ESS Metallic Service Unit.

4.03 Relay control connections are made with the 5ESS Metallic Service Unit.

4.04 Telephone, monitor, E&M, and spare connections are made at the 5ESS Distributing Frame as necessary.

5. MANUFACTURING TEST REQUIREMENTS

5.01 The manufacturing testing requirements are specified in the X-79889 specification.

SECTION IV - REASONS FOR REISSUE

B. Changes in Documentation

B.1 Completion and updating of CD documentation package.

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