

NO. 3 ESS  
SYSTEM VERIFICATION  
SCANNER CONTROLLER

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1. GENERAL INFORMATION

1.1 Description

1.11 The No. 3 ESS Generic Scanner Controller (SC) diagnostic function is used to verify the office Scanner Controller hardware. Operator actions are made on the maintenance TTY which trigger the scanner controller diagnostic. The diagnostic programs, generally nonresident, are called into a paging area, from the generic tape cartridge mounted on the mini-recorder, reserved in main store for execution.

1.2 Sequence - The diagnostic testing of the Scanner Controller (Section 520.04) should follow the completion of Handbook 269, Section 508 Series Sections.

1.3 References

Code	Title
SD/CD-3H110-01	Peripheral Controller
CPS-FA993	FIOC Sequence Controller
CPS-FA994	FIOC Register Board
CPS-FA997	Scanner Sequencer
CPS-FB228	Interrogate Current Driver
CPS-FB351	FIOC Receiver Transmitter
CPS-FB409	Power Control
CPS-FB412	Scanner Test Board
CPS-FB413	Scanner Timer
CPS-FC135	Scanner Column Detector
CPS-FC330	Scan Interrogate Matrix
SD/CD-3H140-01	Master Scan Matrix
CPS-FC183	Trunk & Master Scanner Ferrods

Code

Title

CPS-FC184	Master Scanner Ferrods
→ IM/OM-3H300	No. 3 ESS Input/Output Message Manual
→ TLM-3H101	Master/Universal Scanner TLM

2. RECORDS AND REQUIREMENTS

2.1 Records - This section's test records should be recorded on forms SD-97-1313 and SD-97-1315. Handbook 3, Section 6B may be referenced for detailed information on test record completion.

2.2 Requirements - This section's testing is intended to satisfy BSP 820-650-180; Performance Requirements, No. 3 ESS, General Equipment Requirements, Electronic Switching Systems.

3. TEST EQUIPMENT

3.1 Required - None

3.2 Troubleshooting - As required. Refer to ITE-5653, Specifications for Test Accessory Set, No. 3 ESS; and Handbook 250, Section 2.26, Test Set Planning and Scheduling Information, No. 3 ESS.

4. TEST PROCEDURE

4.1 General

4.11 The SC diagnostic tests are conducted via the "standby" CU under control of the "active" CU.

4.12 If an automatic CU switch occurs while conducting SC diagnostics, the diagnostics will be terminated.

The REPEAT or STEP mode should then be requested on the failing tests (phase) to isolate and fix the trouble. Normally, a trouble should be eliminated before again requesting the diagnostic in the NORMAL mode.

#### 4.2 Test Procedure

4.21 Perform the steps in Table A in the order found. All detected troubles should be cleared before proceeding with the tests in this section. Table A procedure should be conducted at least one time completely with no detected faults or deviations in the procedure.

4.22 "SN" indicates step number and "Y" indicates the standby CU in Table A.

4.23 Each CU has either 1 or 2 sets of SC's associated with it. Diagnostics are conducted on only one set at a time and that set must be indicated. Table A directs that diagnostics on the lower set (0) be conducted first from one CU and then from the alternate CU. The diagnostics are then conducted on the higher numbered set (1), if available, from one CU and then from the alternate CU.

#### 4.3 Test Requirements

4.31 All input requests for SC diagnostics must receive an associated "All Tests Pass" (ATP) output message before the SC considered as having passed verification requirements. Refer to the IM/OM for the message descriptions and formats.

#### 5. TROUBLESHOOTING PROCEDURE

5.1 First, refer to pertinent documentation to determine unexpected system response. In some cases, the IM/OM may adequately explain such a response; such as improper condition states or an unexpected sequence of system input events.

5.2 When certain that a trouble does exist, the TLM printout should give an indication of what the trouble is. When this is otherwise, the tester must then carry out basic troubleshooting procedure to isolate the fault.

TABLE A

SN	NO. 3 ESS SC SYSTEM VERIFICATION TEST PROCEDURE			NOTE
	OPERATOR ACTION	SYSTEM RESPONSE	OPERATOR RESPONSE	
1	RMV:SC 0(Y)!	M tt RMV SC 0(Y)0000	Go to SN2	1,5
		Any Other	Go to par. 5	7
2	DGN:SC 0(Y)!	tt DGN SC 0(Y)ATP	Go to SN3	
		Any Other	Go to par. 5	7
3	RST:SC 0(Y);UCL!	M tt RST SC 0(Y)COMPL	Go to SN4	3,6
		Any Other	Go to par. 5	7
4	SW:SYC;UCL!	OK	Go to SN5	3,8
		Any Other	Go to par. 5	7
5	RMV:SC 0(Y)!	M tt RMV SC 0(Y)0000	Go to SN6	1
		Any Other	Go to par. 5	7
6	DGN:SC 0(Y)!	tt DGN SC 0(Y) ATP	Go to SN7	
		Any Other	Go to par. 5	7
7	RST:SC 0(Y);UCL	M tt RST SC 0(Y)COMPL	(Refer to Notes)	3,9
		Any Other	Go to par. 5	7
8	RMV:SC 1(Y)!	M tt RMV SC 1(Y)0000	Go to SN9	1
		Any Other	Go to par. 5	7
9	DGN:SC 1(Y)!	tt DGN SC 1(Y)ATP	Go to SN10	
		Any Other	Go to par. 5	7
10	RST:SC 1(Y);UCL!	M tt RST SC 1(Y)COMPL	Go to SN11	3
		Any Other	Go to par. 5	7
11	SW:SYC;UCL!	OK	Go to SN12	3,8
		Any Other	Go to par. 5	7
12	RMV:SC 1(Y)!	M tt RMV SC 1(Y)0000	Go to SN13	1
		Any Other	Go to par. 5	7
13	DGN:SC 1(Y)!	tt DGN SC 1(Y)ATP	Go to SN14	
		Any Other	Go to par. 5	7
14	RST:SC 1(Y);UCL!	M tt RST SC 1(Y)COMPL	(Refer to Notes)	2,4
		Any Other	Go to par. 5	7

