NO. 2 SWITCHING CONTROL CENTER SYSTEM OPERATING AND TEST PROCEDURES FOR NO. 3 ELECTRONIC SWITCHING SYSTEM APPLICATION GENERIC 3E3 AND LATER ISSUES

1. GENERAL

1.01 This section describes the operating and test procedures for a No. 2 Switching Control Center System (SCCS) to remotely control No. 3 Electronic Switching System (ESS) offices using generic 3E3 and later issues. The tests will verify that System Status Panel (SSP) functions in the central office (CO) can be remotely controlled using the SCCS Control Console No. 1A (CC1A) or the SCCS Control Console No. 2A (CC2A). Most SSP functions will be verified during these tests.

1.02 This section is being reissued to add new function indicators to Table A and to reflect the addition of the SCCS Control Console No. 2A (CC2A). Since this is a general revision, no revision arrows have been used to denote significant changes.

1.03 This section covers the following test procedures, performed from the SCCS CC1A or CC2A.

A. All Lamps Test

B. Sequential Lamp Test

C. Repetitively Toggle Individual Indicator Test

D. Key Control Test

E. Alarm Features Test

F. E2A Telemetry Control Inhibit and Restore Test.

2. PRELIMINARY PRECAUTIONS AND PROCEDURES

Caution 1: The tests in this section should be performed during light traffic hours.

Caution 2: While performing the tests in this section, care should be taken not to activate INIT EXECUTE function. Activating INIT EXECUTE with other system initialization functions active will result in an interruption of service.

2.01 Maintenance personnel will need to be in attendance in the No. 3 ESS office to verify some alarm tests. These tests can be made in conjunction with local SSP tests.

2.02 Before performing any tests, maintenance personnel should be familiar with the following documents:

(a) Section 190-110-110 No. 2 SCCS — Common Application Description

(b) Section 190-117-110 No. 2 SCCS — Description for No. 3 ESS Application

(c) PA-1P198

(d) PA-5P158, PA-5P159, PA-5P160, PA-5P161, and PA-5P162

2.03 Procedures in this section require that a work station cathode-ray tube (CRT) terminal and the CC1A or CC2A be used to remotely control the No. 3 ESS SSP. The system must be in the monitor mode for the work station CRT terminal to be used and in full access mode for the SCCS CC1A or CC2A to be used. The monitor mode should be entered before the full access mode to allow the user to observe TTY messages before connecting the SCCS control console. Procedures for entering both modes are given in the appropriate CC1A or CC2A PA document for the generic being used.

3. MANUAL TEST PROCEDURES

3.01 The following manual test procedures, performed from the SCCS CC1A or CC2A, ensure that key and lamp features on the control console function properly. The tests also verify that the E2A telemetry, SSP interface circuitry, and the CO respond to commands from the SCCS CC1A or CC2A. Most lamp indications can be repetitively toggled for a trouble clearing aid.

Caution: Do not perform these tests unless SYSTEM NORMAL indication is lighted when testing is started.

STEP	ACTION	VERIFICATION
A. All Lamps Test		
1.	Active +**lamps_on**	All lamps and LEDs on the control console CRT display are lighted.
2.	Reactivate +**lamps_on**	Various lamps and LEDs on the control console CRT display may be lighted.
3.	Activate +**lamps_off**	All lamps and LEDs except +**lamps_off** on the control console CRT display are extinguished.
4.	Reactivate +**lamps_off**	Various lamps and LEDs on the control console CRT display may be lighted.
B. Sequential Lamp Test		
1.	On the work station CRT terminal, type TST:SCC!	Each CC1A or CC2A lamp or LED will light for 1.5 seconds. The SSP indicators will light, one at a time from right to left, top to bottom. The following indicators are controlled by manual key contact operation. These will remain off during this test except for those marked with an asterisk (*), which will remain on. + **emer_line_trfr** + **enab** **alt_bus** **ckt_pwr** * + **lock** **cont_inh** + **lamps_on**
C. Repetitively Toggle Individual Indicator Test		
1.	On work station CRT terminal, type TST:SCC nn! nn = A pointer to a table address to select the indicator that is to be flashed on and off. The function selected will flash on and off at a 100-msec interval for five minutes or until stopped. See Table A.	

STEP	ACTION	VERIFICATION
2.	To stop repetitive flashing, type the following on work station CRT terminal. ABT:MSF!	Flashing of the selected function will stop.

D. Key Control Test

Caution: Do not activate INIT EXECUTE function while performing these tests. Activating INIT EXECUTE with other system initialization functions active will result in an interruption of service.

1.	On CRT work station terminal, type MON:ST aa;RDT LAMPS! aa = SSPMAP first word address. This address is located in program listing, Common Temporary Store Definition (CTSD). The address will change with each generic issue.	With the system normal, all display buffer lamps should be extinguished.
2.	On SCCS CC1A or CC2A activate the following functions in the order given and after observing the appropriate display buffer bit(s), release the function.	
	+enab **+enabl** and **+mem_rel** **+select_0** **+select_1** **+lock** **+execute**	Bit 0 LED lights Bit 0 and 6 LEDs light Bit 2 LED lights Bit 3 LED lights Bit 12 LED lights Bit 1 LED lights Bit 5 LED lights.
3.	On work station CRT terminal, type STOP:UTIL!	
4.	On work station CRT terminal, type MON:ST bb;RDT LAMPS! bb = SSPMAP 2nd word address	All display buffer bit LEDs should be extinguished.
5.	On SCCS CC1A or CC2A activate the following functions in the order given and after observing the appropriate display buffer bits, release the function.	
	+enab and **+stab_calls** **+enab** and **+past_od** **+enab** and **+bkdt_od** **+emer_line_trfr**	Bit 0 and 13 LEDs light Bit 0 and 14 LEDs light Bit 0 and 15 LEDs light Bit 8 LED lights

STEP	ACTION	VERIFICATION
	+**inh_bldg_alm** +**alm_trfr**	Bit 10 LED lights Bit 11 LED lights
6.	On work station CRT terminal, type STOP:UTIL!	
7.	On SCCS CC1A or CC2A activate +**lock**	On-line SYC should lock on-line. Off-line SYC should now indicate UNAVAIL.
8.	On work station CRT terminal, type SW:SYC!	CU should not switch and system should respond RL.
9.	Release +**lock**	Off-line SYC should indicate STANDBY.

E. Test Alarm Features

1.	Maintenance personnel will be required in the No. 3 ESS office and the alarms activated for this test.	+**alm_trfr** on SCCS CC1A or CC2A should be extinguished.
2.	On work station CRT terminal, type TST:SCC 03!	Major alarm sounds in No. 3 ESS office.
3.	On SCCS CC1A or CC2A activate +**alm_trfr.**	Alarm is transferred to SCC.
4.	On SCCS CC1A or CC2A release +**alm_trfr.**	Audible alarm in No. 3 ESS office is activated.
5.	On SCCS CC1A or CC2A activate +**alm_rls.**	Alarm is released.
6.	On CRT terminal, type ABT:MSF!	

F. E2A Telemetry Control Inhibit and Restore Test

Note: The E2A telemetry control inhibit test verifies that transmission from the SCCS to a No. 3 ESS office can be disabled. This feature is provided in the event the E2A system begins to send erroneous information to the No. 3 ESS office. While in the control inhibit state, E2A telemetry will allow the transmission of status from the No. 3 ESS office to the SCCS. However, the SCCS cannot transmit controls to the No. 3 ESS office.

1	On work station CRT terminal, simultaneously depress the following characters: CTRL Z then depress D.	
2	On work station CRT terminal, type OP:CLK!	No response from the No. 3 ESS office.

STEP	ACTION	VERIFICATION
3	On work station CRT terminal, simultaneously depress the following characters: CTRL Z then depress E.	
4	On work station CRT terminal, type OP:CLK!	System clock is output from the No. 3 ESS office.

5. ABBREVIATIONS

ABBREVIATION	TERM
CC1A	SCCS Control Console No. 1A
CC2A	SCCS Control Console No. 2A
CIP	Critical Indicator Panel
CO	Central Office
CRT	Cathode-Ray Tube
ESS	Electronic Switching System
LED	Light Emitting Diode
SCCS	Switching Control Center System
SSP	System Status Panel
SYC	System Control
TTY	Teletypewriter

TABLE A

SSP AND CIP LAMP, KEY AND ALARM INDICATORS FUNCTION IDENTITY NUMBERS

FUNCTION	IDENTITY NUMBER	FUNCTION	IDENTITY NUMBER
ALARM CIRCUIT	74	EMER LINE TRFR	85
ALARM RELEASE	56	ENABLE	78
ALARM TRFR	57	EXECUTE	58
ALT BUS	59		
AMA*	49	FAIL	77
		FORCE	89
		FORCED*	43
BACKDATE OFFICE DATA	82	FUSE	73
BLDG	42		
BLDG PWR	10	INH BLDG ALARM	55
		INIT EXECUTE	83
CRITICAL (AUDIBLE)	02		
CKT LIM†	06	LOCK (LAMP)	52
CRITICAL (LAMP)*	68	LOCK P (SWITCH)	01
CU	44		
		MAJOR (AUDIBLE)	03
		MAJOR (LAMP)*	69
DISAB REM ACC	86	MAJOR EQPT LOSS	51
DISPLAY BUFFER 0	34	MAJOR POWER	71
DISPLAY BUFFER 1	33	MEMORY RELOAD	80
DISPLAY BUFFER 2	32	MINOR (AUDIBLE)	04
DISPLAY BUFFER 3	31	MINOR (LAMP)*	70
DISPLAY BUFFER 4	30	MINOR POWER	72
DISPLAY BUFFER 5	29	MISC	50
DISPLAY BUFFER 6	28		
DISPLAY BUFFER 7	27	NRP ACT	39
DISPLAY BUFFER 8	26	NWC	45
DISPLAY BUFFER 9	25		
DISPLAY BUFFER 10	24	OVLD ANN	40
DISPLAY BUFFER 11	23		
DISPLAY BUFFER 12	22	PANEL TIMEOUT	54
DISPLAY BUFFER 13	21	PASS	76
DISPLAY BUFFER 14	20	PAST OFFICE DATA	81
DISPLAY BUFFER 15	19	PERIPHA†	08
DISPLAY BUFFER 16	18	PERIPHB†	07
DISPLAY BUFFER 17	17	PPD	47
DISPLAY BUFFER 18	16		
DISPLAY BUFFER 19	15	RT*	48
DISPLAY BUFFER 20	14		
DISPLAY BUFFER 21	13	SC	46
DISPLAY BUFFER 22	12	SELECT 0	87
DISPLAY BUFFER 23	11	SELECT 1	88
DSP	41	SERVICE LOSS	75

* Indicators appear on the CC1A, CC2A, and CIP

† Indicators appear on the CIP only

TABLE A (Contd)

SSP AND CIP LAMP, KEY AND ALARM INDICATORS
FUNCTION IDENTITY NUMBERS

FUNCTION	IDENTITY NUMBER	FUNCTION	IDENTITY NUMBER
STABLE CALLS	79	SYC 1 STANDBY	66
SVC LIM	36	SYC 1 UNAVAILABLE	64
SYC*	09	SYSTEM NORMAL	53
SYC 0 ACTIVE	63		
SYC 0 OUT OF SERVICE	61	TDC	38
SYC 0 STANDBY	62	TRAFFIC*	05
SYC 0 UNAVAILABLE	60	TRK LIM	35
SYC 1 ACTIVE	67	TTY INIT	84
SYC 1 OUT OF SERVICE	65	TTYC	37

* Indicators appear on the CIP only