NO. 3 ELECTRONIC SWITCHING SYSTEM
PLANNING INFORMATION
OPERATIONAL TESTING

CONTENTS

1. GENERAL INFORMATION

1.1 Description

1.11 This section presents an integrated plan for sequencing and scheduling tests for operational No. 3 ESS testing (600 series sections of HB 269).

1.12 Operational tests are intended to verify circuits and/or functions under actual "in-use" conditions.

1.2 No. 3 ESS Packaged and Pretested Conditions

1.21 This section assumes that the No. 3 ESS system arrives at the installation location in one of several "Packaged and Pretested Conditions": A,B,C,D, or E as follows:

A) All frames are completely unitized as one package. The No. 3 ESS office has been completely factory system tested as an entity prior to unitization.

B) All frames are completely unitized as two or more packages. The No. 3 ESS has been completely factory system tested as an entity prior to unitization. Cabling has been disconnected between the various unitized packages to permit separate handling.

C) No utilized package. The No. 3 ESS office may or may not have been completely factory system tested as an entity prior to shipment. Most of the major cabling either has been disconnected between the various shipment packages.

1.3 Operational Testing

1.31 This section assumes that either a unitized No. 3 ESS system arrives at the installation location in essentially the same condition that it was in as it left the factory. Extensive operational testing should have already been conducted on such No. 3 ESS offices in the factory. Site testing, therefore, is generally directed toward verification that the system is in the same condition as it was when it left the factory. For this reason, not all 600 series tests are expected to be accomplished on these systems at the field location.

1.32 The objective in running the 600 series tests on unitized No. 3 ESS systems is to conduct those tests which have a high probability of detecting and indicating general system malfunctions. The tester then has the option of selecting other tests, available in Handbook 269, for fault isolation.

1.33 Those tests which should be accomplished to verify unitized No. 3 ESS integrity are designated in Table 1. (All titles listed in Table 1 are preceded by "No. 3 ESS" unless otherwise indicated by some system or systems designation.) All other Handbook 269 sections listed in Table 1 are made available to the tester to use as he may require for trouble isolation or informational purposes.

1.4 Sequence of Operation

1.41 Successful completion of all office relevant Handbook 269, 500 series sections designated for the associated "Packaged and Pretested Condition" is required prior to commencing operational testing.

1.5 References

1.51 The following material may be useful when doing operational testing:

Section	Title
HB 250, Sec. 2.26	Test Set Planning and Scheduling Information for No. 3 ESS
HB 269, Sec. 1	No. 3 ESS Unitized System Test Planning
HB 269, Sec. 500	System Verification Testing, Planning Information

2. RECORDS AND REQUIREMENTS

2.1 This information will appear, when relevant, in the associated 600 series section.

2.2 The basic Operational Testing requirement is the successful completion of all pertinent "Packaging and Pretested Condition" testing requirements designated in Table 1 of this section.

2.3 Requirements: No. 3 ESS Operational Testing is intended to satisfy BSP 820-650-180; Performance Requirements, No. 3 ESS, General Equipment Requirements, Electronic Switching Systems.

3. TEST FACILITIES

3.1 Test Equipment

3.11 The following installation test equipment should be available to support the 600 series sections for troubleshooting or testing purposes:

Amt.	ITE	Description
1	5237B	Tektronix Scope 465
1	5653	No. 3 ESS Test Accessory Set
1	5956	SCOATS

3.12 Additional test equipment which may be necessary to run associated 600 series test sections is listed in Table 2. (All titles listed in Table 2 are preceded by "No. 3 ESS" unless already indicated by some system or systems designation.) Each section also lists associated test equipment if needed.

3.13 Switchboard cable required for temporary use during testing can be ordered per Handbook 250, Section 1.3-C.

3.2 Software

3.21 The following software items are required to do operational testing:

Amt.	Code	Description
1	J3H0015-1	No. 3 ESS Generic Program

NOTE: The generic program and "current" office data translations should be provided on the office tape cartridges. Two office cartridges are required for operational testing (one mounted on each mini-recorder) and four office cartridges are provided as spares.

3.3 Documentation

3.31 In addition to the hardware and office documentation (SDs, CDs, EDs, T-drawings, etc.) already required for previous testing, the following documentation should be available for operational testing:

Code	Title
TG-3H	Administrative Operations Manual
	Office Records
PA-3H300-01	No. 3 ESS Generic and Program Store Layout
PRs	Generic Program Listings
BSP 232-105-101	General Maintenance Procedures
IM/OM-3H300	No. 3 ESS Input/Output Message Manual
TLM-3HXXX	Trouble Locating Manuals
PG-3H902	Program Document Index
	Office Data Translaton Input Forms
SD-3H912-01	CDF Assignment Rules
SD-3H912-01	PD Assignment Rules
SD-3H912-01	Scanner Assignment Rules

3.4 Office Equipment

3.41 Verify that the maintenance TTY is conveniently located for installer use.

3.42 Verify that all office test clip leads have been removed. Those clip leads required for operatinal testing should be specified in the associated test sections.

4. TEST PLAN

4.1 The suggested sequence of conducting the 600 series tests is indicated in Section 1 of this handbook. Normally, all 500 series test sections of this handbook should have been completed before starting any 600 series testing.

4.2 Any troubles encountered during a test should normally be cleared before continuing with the test or before starting subsequently listed tests.

4.3 The 600 series tests can be grouped into the following general categories:

A. Specific Circuit Functional Test

B. Maintenance and Recovery Tests

C. Overall Office Call-Handling Test

4.31 Specific circuit functional tests verify individual circuits available to support office call-handling verification and, therefore, must be checked on a forced basis.

4.32 Maintenance and recovery tests verify that office maintenance features function properly and that the office can recover in a system fault environment.

4.33 Overall office call-handling tests verify that the office supports all call-handling requirements.

5. GENERAL OFFICE MAINTENANCE

5.1 The office should be closely monitored for any problems which may arise.

5.2 All system hardware and software problems should be investigated and cleared as they arise.

TABLE 1

NO. 3 ESS OPERATIONAL TESTING CONDUCTION REQUIREMENTS FOR THE DEFINED PACKAGING AND PRETESTED CONDITIONS: A,B,C,D, AND E (REFER TO PARAGRAPH OF THIS SECTION)

HANDBOOK 269 SECTION		PACKAGING AND PRETESTED CONDITION			
NO.	TITLE	A	B	C	NOTE
600	Planning Information, Operational Testing	I	I	I	1
601					
610	Operational Testing, General Information Service Circuits	I	I	I	
610.21	Operational Testing, Station Ringer Test Circuit (SD-3H520-01; CPS FB521 & FB522)	T	T	T	
610.22	Operational Testing, Superimposed Ringing Circuit (SD-3H406-01)	T	T	T	2,3
610.25	Operational Testing, Coin, Tone Announcement and Conference Circuit (SD-3H411-01)	T	T	T	
612	Operational Testing, General Information, Trunk Circuits, SD-3H220-01	I	I	I	
612.370	Operational Testing, Incoming Reverse Battery, Delay Dial Circuit (CPS-FB370)	T	T	T	

NOTES:
1. I - For Informational Purposes
2. T - Available for Troubleshooting Procedures or Informational Purposes
3. C - Conduct Associated Test Procedures

TABLE 1 (Cont.)

HANDBOOK 269 SECTION NO.	TITLE	PACKAGING AND PRETESTED CONDITION A	B	C	NOTE
612.371	Operational Testing, Incoming Reverse Battery, Wink or Immediate Circuit (CPS-FB371)	T	T	T	
612.382	Operational Testing, 2-Way E&M Circuit with Type 2 Interface (CPS-FB382)	T	T	T	
612.391	Operational Testing, 2-Way E&M Circuit with Type 3 Interface (CPS-FB391)	T	T	T	
612.399	Operational Testing, High-Low Reverse Battery Circuit (CPS-FB399)	T	T	T	
612.519	Operational Testing, Incoming Local Test Desk No. 14 or No. 16 Circuit (CPS-FB519)	T	T	T	
614.63	Operational Testing, Noise Immunity Line Circuit (SD-3H208-01)	T	T	T	
614.64	Operational Testing, Dial-Tone-First Coin Line (Sd-3H205-01)	T	T	T	
622	Operational Testing, E2A Telemetry and Interface Circuit	C	C	C	
634	Operational Testing, General Information, Custom Calling Feature	I	I	I	
634.01	Operational Testing, Call Forwarding Feature	T	T	T	
634.02	Operational Testing, Call Waiting Feature	T	T	T	
634.03	Operational Testing, Speed Calling Feature	T	T	T	
634.04	Operational Testing, Three-Way Calling Feature	T	T	T	
660	Operational Testing, General Information, Load Application and Volume	I	I	I	
660.01	Operational Testing, Load Application Test Equipment; Setup and Operating Procedures	I	I	I	
660.21	Operational Testing, Load Application, Interoffice Calling	C	C	C	
660.31	Operational Testing, Volume, Maintenance	C	C	C	
660.41	Operational Testing, Volume, Integrated	C	C	C	

NOTES:
1. I - For Informational Purposes
2. T - Available for Troubleshooting Procedures or Informational Purposes
3. C - Conduct Associated Test Procedures

TABLE 2

OPERATIONAL TESTING TEST EQUIPMENT

SECTION	SUBJECT	QTY	CODE	DESCRIPTION	NOTE
600	Planning Information, Operational Testing				8
610	Operational Testing, General Information, Service Circuits				
610.21	Operational Testing, Station Ringer Test Circuit (SD-3H520-01; CPS FB521 & FB522)				
610.22	Operational Testing, Superimposed Ringing Circuit (SD-3H406-01)				
610.25	Operational Testing, Coin, Tone Announcement and Conference Circuit (SD-3H411-01)	2 or 2 1 2	1C2 1C1 1500-D 2500-D	TT Coin Telephone DP Coin Telephone TT Telephone TT Telephone	1 and 2
612	Operational Testing, General Information, Trunk Circuits, SD-3H220-01	1 1 1	ITE-4631 ITE-5158 ITE-5267	Test Headset ICT Test Set Misc. Trunk Test Set	3,8
612.370	Operational Testing, Incoming Reverse Battery, Delay Dial Circuit (CPS-FB370)				
612.371	Operational Testing, Incoming Reverse Battery, Wink or Immediate Circuit (CPS-FB371)				
612.382	Operational Testing, 2-Way E&M Circuit with Type 2 Interface (CPS-FB382)				
612.391	Operational Testing, 2-Way E&M Circuit with Type 3 Interface (CPS-FB391)				
612.399	Operational Testing, High-Low Reverse Battery Circuit (CPS-FB399)				
612.519	Operational Testing, Incoming Local Test Desk No. 14 or No. 16 Circuit (CPS-FB519)				
614	Operational Testing, General Information, Line Circuits	4	500-C/D 1500-D 2500-D	DP Telephone TT Telephone TT Telephone	4

TABLE 2 (Cont.)

SECTION	SUBJECT	QTY	CODE	DESCRIPTION	NOTE
614.63	Operational Testing, Noise Immunity Line Circuit (SD-3H208-01)	1	ITE-5158	Incoming Trunk Test Set	
614.64	Operational Testing, Dial-Tone-First Coin Line (Sd-3H205-01)				
634	Operational Testing, General Information, Custom Calling Feature				
634.01	Operational Testing, Call Forwarding Feature	3	500-C/D 1500-D 2500-D	DP Telephone TT Telephone TT Telephone	1,4
634.02	Operational Testing, Call Waiting Feature				1,4, 5
634.03	Operational Testing, Speed Calling Feature				1,4, 5
634.04	Operational Testing, Three-Way Calling Feature				1,4, 5
660	Operational Testing, General Information, Load Application and Volume				8
660.01	Operational Testing, Integrated Volume Testing with ITE-5956	1	ITE-5649 ITE-5956	No. 3 ESS Computerized Volume Test Set SCOATS Test Set	10 10
660.21	Operational Testing, Load Application, Interoffice Calling				9
660.31	Operational Testing, Volume, Maintenance				9
660.41	Operational Testing, Volume, Integrated				9

NOTES:
1. TelCo provided equipment.
2. Either 1C2 or 1C1 is required dependent upon how the office is equipped.
3. The test equipment listed for Section 612 defines those items which cover all 612.XX sections.
4. Any combination of designated test equipment is suitable.
5. Test equipment identical to Section 634.01.
6. Equivalent test equipment may be substituted.
7. No test equipment required when test results are successful.
8. Actual test procedures not included in this section.
9. Test equipment identical to Section 660.01.
10. 1 SCOATS required for each 3 networks or 1 ITE-5649 total may be used.

No arrows shown due to extensive changes.

Manager, ESS Installation & Field Engineering
5-26-78

Reason for Reissue:
Tables 1 and 2 updated.