NO. 3 ESS
TEST PLANNING - GENERAL

CONTENTS

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1. INTRODUCTION

1.1 This section provides general test planning information for the installation of a No. 3 ESS switching machine. Refer to the following sections for detailed test planning information.

Section 1A - Unitized No. 3 ESS Installation Test Planning

Section 1B - No. 3 ESS Installation as Individual Frames Test Planning

1.2 The information in this section together with the detailed information contained in either Section 1A or 1B permits development of an orderly and organized testing plan.

2. REFERENCE INFORMATION

2.1 Installation Handbook

2.11 The Installation Handbooks pertinent to the installation of a No. 3 ESS machine are listed in Table A.

2.2 Bell System Practices (BSPs)

2.21 The following BSPs provide pertinent reference information on No. 3 ESS.

BSP	TITLE
966-210-100	No. 3 ESS General Description
233-150-100	No. 3 ESS Software General Description
233-000-000	Index of No. 3 ESS BSPs
820-650-180	No. 3 ESS Performance Requirements

TABLE A
NO. 3 ESS INSTALLATION TEST METHODS

HANDBOOK	INSTALLATION & TEST METHODS
HB 18, Power Installation	Storage batteries and stand. Sections 17G, 17H and 18C in particular provide procedures for assembling KS-20760 battery stands, placing KS-20472 circular cells and charging KS-20472 circular cells.
HB 21, Testing Power Plant Equipment	Power plant (151A, -48 volt) and miscellaneous power frames (includes Ring and Tone Plant). Sections 211 and 399 provide test information for the power plant and miscellaneous power frame respectfully. Section 130 provides abbreviated test methods for unitized system installation.
HB 50, General Testing Information - Local Systems and Toll Switchboards	The Milliwatt Distribution Circuits (mounted on the test frame) installation test methods are contained in Section 7.1.
HB 59, System Tests	The 7A Recorded Announcement Circuit installation test methods are contained in Section 410.
HB 250, Catalogue of Supplies	This handbook contains a listing and description of tools and supplies, specifications for tool kits and test accessory sets, and test set ordering information. Section 2.26 contains "Test Set Planning and Scheduling Information for No. 3 ESS".
HB 261, Electronic Type Switching Systems and Equipment Specific Hardware Installing Methods	This handbook describes methods for erecting, aligning and mounting frames; and provides requirements, methods and information specific to hardware installation. Section 111 provides information specific to the installation of a unitized No. 3 ESS.
HB 269, No. 3 Electronic Switching System Testing	This handbook provides No. 3 ESS installation test methods for both unitized and individual frame shipments of No. 3 ESS. Section 1.2, "No. 3 ESS Association of Test Equipment with Handbook 269 Test Sections" lists all test facilities and should be referred to for planning purposes.

3. METHOD OF SHIPMENT

3.1 Ordering Options

3.11 A No. 3 ESS machine may be ordered as either a unitized system or an individual frame shipment. Local building conditions dictate how the machine will be ordered by the operating company.

3.2 Factory Assembly and Testing

3.21 All No. 3 ESS machines are fully assembled, wired and operationally tested as a working system at the factory. The operational testing includes volume testing with the actual office translations. Handbook 269 sections are used as a basis for the factory test effort.

3.3 Unitized Shipments

3.31 Unitization is a packaging technique which permits an entire No. 3 ESS machine to be shipped and handled as a single assembled unit. The unitization of No. 3 ESS is facilitated by the addition of steel shipping braces to the equipment lineups.

3.32 Each unitized No. 3 ESS machine is shipped directly from the factory to the office site as an exclusive use shipment. The machine is off-loaded from the transporter and positioned within the building as a single unit.

3.33 Following placement in the office building, the unitized No. 3 ESS machine is tested to verify that it is fully operational.

3.4 Individual Frame Shipments

3.41 Following the completion of the factory testing effort, the system is disassembled to allow for packaging and shipment as individual frames. On-site, the system will then be erected, wired and tested in the conventional manner. The factory test effort will greatly reduce the number of problems encountered on-site.

4. GENERAL TESTING INFORMATION

4.1 Layout of Installation Handbook 269

4.11 The installation methods in Handbook 269 are applicable for No. 3 ESS installations as both unitized and individual frame shipments. A few sections are written specifically for the method of installation; however, they may be used as backup procedures if not specifically required to complete the installation testing effort. In general, the unitized installation test plan is based on the success mode of operation which does not require intermediate handbook methods to be completed.

4.12 The section numbering in Handbook 269 basically follows the sequence of testing effort. Section numbers in hundred blocks are assigned to similar test methods and information. These blocks are as follows:

A. Numbers under 100 refer to reference information.

B. The 100 Series block refers to preliminary tests which include continuity tests (used only as backup for unitized installations) and power verification.

C. The 300 Series block refers to circuit tests using test programs. The specific tests are as follows:

Order Code	Description
ITE-5550	Microcode X-Ray (Tests 3ACC microcontrol operation)
H-460-005	3ACC Common Systems X-Ray (Tests operation of No. 3 ESS control complex equipment)
H-460-008	Peripheral X-Ray Test Programs (Tests operation of all major peripheral equipment units)

D. The 500 Series block refers to system verification tests which verify that the hardware-software interfaces are functioning properly. The Generic program and translations are loaded into the system and are tested with the system circuitry to function together as a working unit.

E. The 600 Series block refers to operational tests which verify circuits and/or functions under actual call processing conditions.

4.2 Sequencing of Installation Handbook 269 Sections

4.21 For further information regarding sequencing of particular test sections and planning job testing operations, consult the following Handbook 269 sections:

Section 300 - No. 3 ESS Test Programs - General Information

Section 500 - No. 3 ESS System Verification, Planning Information

Section 600 - No. 3 ESS Operational Testing, Planning Information

4.22 Individual test sections may also contain test sequence information pertinent to the running of the section.

5. GENERAL INSTALLATION PROCEDURE

5.1 Coordination of Equipment Orders

5.11 Each No. 3 ESS office installation will typically involve three equipment orders. A factory order is associated with the No. 3 ESS equipment which is assembled and tested as a single functional unit prior to shipment. This order is slightly different between unitized and individual frame shipments. The site order includes all No. 3 ESS equipment that is not required for the factory assembly and test as well as the reserve battery power plant. Typically, a toll equipment order is associated with the office and installed in the conventional manner.

5.2 Recommended Installation Sequence

5.21 Preship Preparation

5.211 The site order is shipped in advance of the factory order. This allows the battery stand and batteries to be installed in advance of the No. 3 ESS equipment. For unitized shipments, additional installation items must be completed prior to receival of the unitized equipment which are detailed in Section 1A.

5.22 Installation Test Plan

5.221 The installation testing of a No. 3 ESS unitized system consists basically of the following test phases:

A. Verification of 151A Power Plant.

B. Power verification of the No. 3 ESS equipment.

C. Verification of processor using installation test programs.

D. Verification of peripheral equipment controllers using installation test programs.

E. Load Generic Program and initialize system.

F. System verification testing.

G. Operational testing.

5.222 For more detailed installation test plans, refer to either Section 1A for unitized shipments or Section 1B for individual frame shipments.

6. TEST RECORDS

6.1 Forms SD-97-1313 and SD-97-1315 are to be used in recording installation test results as outlined in Section 6B of Handbook 3.

6.2 An entry should be made in SD-97-1315 for each schematic diagram listed in the Index of Circuits, Handbook 269, applicable to the job. Troubles associated with each schematic diagram are then recorded on SD-97-1313 and cross-referenced to SD-97-1315 by use of file numbers. Reference is also provided to Handbook Test Section.

7. RESPONSIBLE ORGANIZATION FOR HANDBOOK 269 SECTIONS

7.1 The following department is responsible for 17 Series section:

LE-5 Department Chief - 7872
No. 3 ESS Installation Test & Field Engineering
Western Electric Company, Inc.
Naperville, Illinois 60540
CORNET 367-4608
(312) 690-4608

→ 7.2 The following department is responsible for 100, 200, 300, 500, and 600 sections:

→ LE-3 Department Chief - 7871
No. 3 ESS System Test and PECC
Diagnostic Center Engineering
Western Electric Company, Inc.
Naperville, Illinois 60540
CORNET 367-4152
(312) 690-4152

Arrows indicate new or
changed information

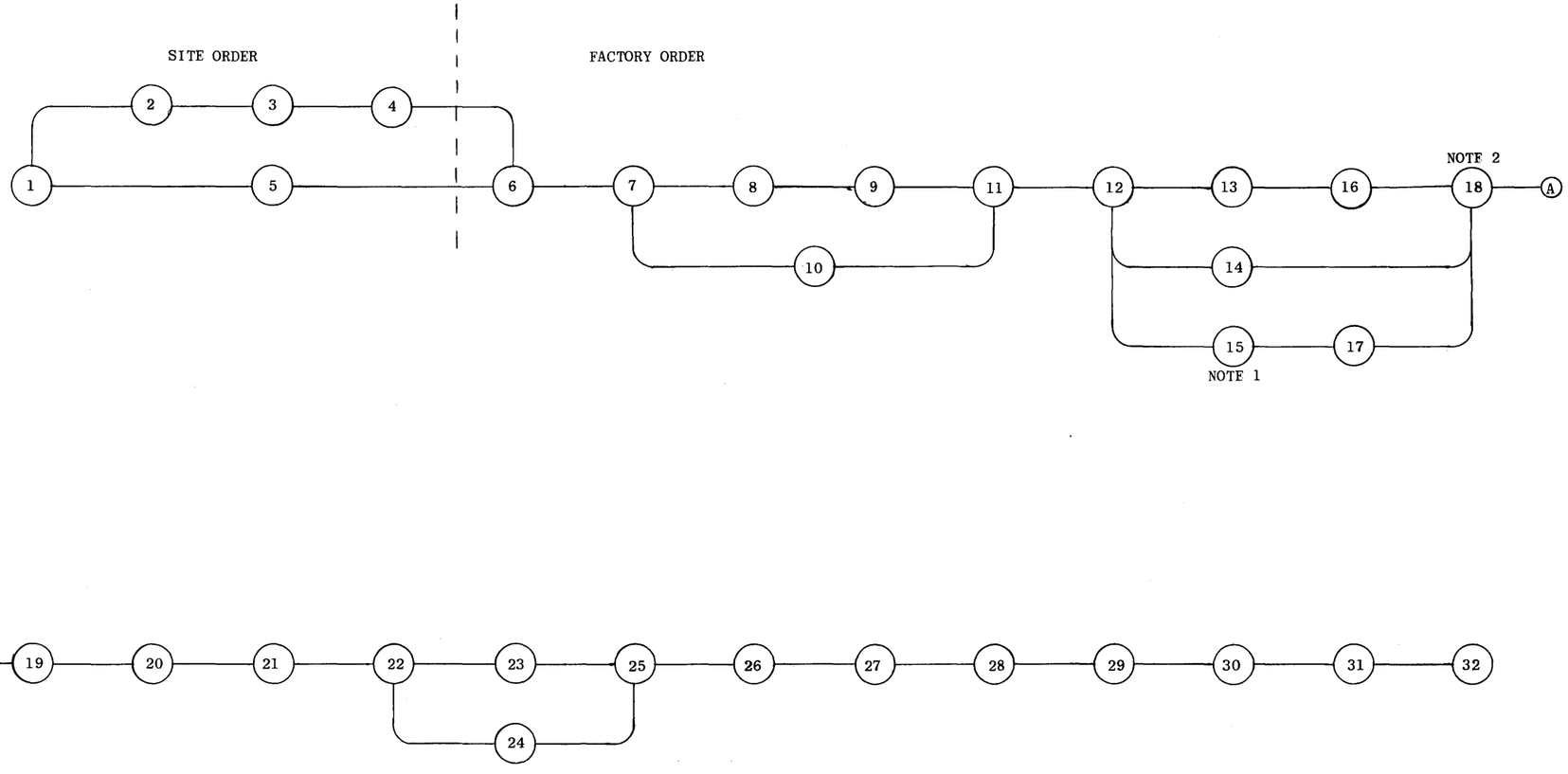
Manager, ESS Installation & Field Engineering

6-16-78

Reason for Reissue:
Correct Responsible Departments

CHART A

UNITIZED NO. 3 ESS
INSTALLATION INTERVAL PLANNING NETWORK



NO.	ACTIVITY
1.	JOB START
2.	ERECT BATTERY STAND (HB 18, SEC. 17G)
3.	INSTALL & INTERCONNECT BATTERIES (HB 18, SEC. 17H)
4.	PRECHARGE BATTERIES
5.	PREPARE SITE TO RECEIVE UNITIZED EQUIPMENT (HB 261, SEC. 111)
6.	OFF LOAD AND POSITION UNITIZED EQUIPMENT (ED-3H200-10)
7.	ANCHOR EQUIPMENT TO FLOOR AND REMOVE UNITIZATION SHIPPING HARDWARE (HB 261, SEC. 111)
8.	INSTALL INTERCONNECTING POWER CABLE RACK
9.	INSTALL BATTERY CHARGE AND DISCHARGE FEEDERS
10.	CONNECT A.C. POWER TO SYSTEM
11.	TEST 151A POWER PLANT (HB 21, SEC. 211)
12.	POWER VERIFICATION AND TEST - MISCELLANFOUS POWER FRAME (HB 21, SEC. 399)
13.	POWER VERIFICATION - CONTROL COMPLEX (HB 269, SEC. 150)
14.	POWER VERIFICATION - NETWORK FRAME (HB 269, SEC. 161)
15.	POWER VERIFICATION - CONTROL FRAME (HB 269, SEC. 160)
16.	POWER VERIFICATION - TEST FRAME (HB 269, SEC. 151)
17.	POWER VERIFICATION - MISCELLANEOUS FRAME (HB 269, SEC. 162)
18.	STARTUP PROCEDURES (HB 269, SEC. 302)
19.	SYSTEM INITIALIZATION (HB 269, SEC. 508)
20.	SYSTEM VERIFICATION - TTY (HB 269, SEC. 508.1)
21.	SYSTEM VERIFICATION - CONTROL COMPLEX (HB 269, SEC. 508.2)
22.	SYSTEM VERIFICATION - CONTROL PANEL AND SYSTEM STATUS PANEL (HB 269, SEC. 508.3)
23.	SYSTEM VERIFICATION, TLTP, USING TRUNK CIRCUITS (HB 269, SEC. 528.01)
24.	SYSTEM VERIFICATION, TLTP, USING LINE CIRCUITS (HB 269, SEC. 528.02)
25.	SYSTEM VERIFICATION, SERVICE CIRCUITS (HB 269, SEC. 534)
26.	SYSTEM VERIFICATION, TRUNKS (HB 269, SEC. 535)
27.	TTY OUTPUT OF ALARMS (HB 269, SEC. 542)
28.	ERROR RECOVERY AND EMERGENCY ACTION (HB 269, SEC. 555)
29.	IDLE SYSTEM TEST (HB 269, SEC. 655)
30.	MAINTENANCE VOLUME TEST (HB 269, SEC. 660.04)
31.	INTEGRATFD VOLUME TEST (HB 269, SEC. 660.05)
32.	CUTOVER PROGRAM FEATURES (HB 269, SEC. 642)

NOTE 1: NETWORK FRAME 01 MUST BE POWER VERIFIED BEFORE CONTROL FRAME 0 IS POWER VERIFIED.

NOTE 2: THE CONTROL COMPLEX STARTUP PROCEDURES (PART OF HB 269, SEC. 302) MAY BE RUN FOLLOWING POWER VERIFICATION OF THE CONTROL COMPLEX.

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