NO. 3 ESS
SYSTEM VERIFICATION
INITIALIZATION OF SYSTEM

CONTENTS

1. GENERAL

1.1 Description

1.11 This section details the procedure necessary to initialize the system and maintain at least one Control Unit in a base level.

1.2 References

1.21 The following documents will be useful as references during the initialization of the system:

Document	Title
SD-1C900-01	3A Central Control Schematic
SD-1C901-01	3ACC Control Panel Schematic
SD-1C902-01	Main Store Controller Schematic
SD-1C903-01	Main Store Memory Schematic
SD-1C904-01	Tape Data Controller Schematic
SD-1C905-01	TTY Controller Unit Schematic
SD-1C906-01	System Status Panel Schematic
SD-1C907-01	System Status Panel Controller Schematic
SD-1C908-01	System Status Panel Relay Schematic
SD-1C909-01	MTC Frame Power Schematic
SD-1C910-01	Processor Frame Schematic
SD-1C911-01	Processor Frame Power Circuit Schematic
SD-1C912-01	Maintenance Frame Schematic
SD-2H099-01	No. 2B ESS I/O Control Unit Schematic
CD-XXXXX-01	Circuit Descriptions for Above Listed Schematic Drawings
FA,FB,FC, & JK	Circuit Pack Schematics
HB 269, Sec. 500	Planning Information for System Verification
HB 269, Sec. 502	System Verification - General Information
IM-3H300-01	No. 3 ESS Input Manual
OM-3H300-01	No. 3 ESS Output Manual

1.3 Test Records and Requirements

1.31 The results of this section's test shall be recorded on Forms SD-97-1313 and SD-97-1315. Detailed information for completing the record forms appears in Handbook 3, Section 6B.

1.32 The tests in this section are based on the No. 3 ESS Performance Requirements BSP 820-650-180.

2. TEST EQUIPMENT

2.1 Test Sets

2.11 The following test sets may be useful in initializing the Control Complex:

Amt.	ITE #	Description
1	5511	3ACC Micro Control Test Set
1	5237B	Tektronix 465 Oscilloscope

2.2 Accessories

2.21 The following Accessory Tests may be useful in trouble-shooting faulty circuits:

Amt.	ITE #	Description
1	5543	2B Processor Accessory Test Set
1	5653	No. 3 ESS Accessory Test Set

3. SETUP PROCEDURES

3.1 Once the system program (generic) has been loaded, the main objective is to maintain at least one CU capable of running diagnostic programs on the offline CU.

3.2 Should it become necessary to do any wiring on backplanes, due to CN work or correcting wiring errors, the offline CU should be the CU worked on. This way there will always be a CU capable of doing offline diagnostics.

4. INITIALIZATION PROCEDURES

4.1 Control Unit Preparation

4.11 At each control unit, operate THE TMR switch. (The TEST MODE lamp should be lit on both CUs.)

4.12 At each control unit, operate the MANUAL and RESET CKT keys. (The HALTED and MANUAL lamps should be lit on both CUs.)

4.13 Remove the X-ray tape cartridges and insert the generic tape cartridges in both CUs.

4.2 System Initialization

4.21 At the System Status Panel (SSP), operate the SELECT 0 and FORCE keys.

4.22 Operate, in order, the ENABLE, STABLE, RELOAD, RECENT, and EXECUTE keys.

NOTE: This step may have to be repeated several times before the system attempts to bootstrap from tape.)

4.23 The following should now occur:

1. The tape is read and main store is loaded. (This bootstrap is indicated by two ls bouncing back and forth in opposite directions on the SSP Display Buffer and the Maintenance TTY bell sounding.)

2. Following a successful bootstrap, the Display Buffer on CU0 is dynamically displaying the PA + 1 of the last transfer.

3. TTY printouts are being generated, indicating that a system initialization has occurred.

4.231 If these results are observed, release both TMR switches and the SELECT 0 key and release the MANUAL key on both CUs. The system is now ready for CU diagnostics and this section has been completed.

4.232 If these results are not obtained, attempt to initialize CU1 by operating the SELECT 1 and FORCE keys on the SSP and continue at step 4.22.

4.233 If neither CU can be initialized, the information in Section 5 may prove useful in troubleshooting the processors.

5. TROUBLESHOOTING AIDS

5.1 At this point, it may be necessary to go back to CU X-ray to insure that the system does not have a hardware fault.

5.2 It is always possible that the tapes are bad. To verify this, try another set of tapes.

5.3 The bootstrap program is generated from the following programs: PR-1C953-31 (CIPL) and PR-1C952-32 (CINIT).

5.4 Further information is being compiled on troubleshooting bootstrapping and will be put in this section at a later date.

→ Arrows indicate new or changed information.

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Reason for Reissue:
To remove references to No. 2B ESS.