AMARS
NO. 1A AUTOMATIC MESSAGE ACCOUNTING RECORDING CENTER
(NO. 1A AMARC)
GENERIC 2 TO GENERIC 3 RETROFIT PROCEDURE
(TRANSITION PANEL REMOVAL)

CONTENTS

1. GENERAL INFORMATION

1.01 The procedures in Handbook 59, Sections 214A, 214B, 214C, 214D and 214E must be completed prior to starting the tests in this handbook section. In addition, authorization must be received by the TELCO to proceed with this handbook section.

1.02 The TELCO should arrange to have their craft personnel available for inputting messages and switching channels to dial-up or authorize Western Electric to perform these operations.

1.03 The TELCO should arrange to have DEC or maintenance personnel present to make cable connections in the DEC equipment or authorize Western Electric to perform these operations.

1.04 The TELCO should arrange to have their data facilities personnel available to disconnect the 'Y' connectors and connect the Generic 3 modem cables at the data set cabinet or authorize Western Electric to perform these operations.

1.05 Incorrect responses to the following tests, when the generic program is executing can be examined by referring to the Input and Output Manuals (IM/OM) for the appropriate generic issue.

1.06 Cabling - In connecting a cable to the male connector on the DEC circuit board, the triangle on the cable (female) connector should be inserted to mate with the "A" designation on the circuit board.

1.07 This procedure should be performed at a low traffic hour.

1.08 Before any work is started, the procedure to be followed should be reviewed, revised if necessary, for local office conditions and approved by the local operating company representative.

2. RECORDS AND REQUIREMENTS

2.1 The Test Trouble Record forms (SD-97-1313 and SD-97-1315) should be used to record all troubles which may be encountered when executing the tests in this handbook section.

3. TEST EQUIPMENT

3.1 One ITE-5632 digital multimeter (or equivalent).

3.2 One ITE-5237B Oscilloscope (or equivalent).

3.3 Input and Output manuals, IM/OM, for the associated Generic 3 program issue.

3.4 SPP-832 Spare Parts Package for Phase III/Generic 3.

3.5 One RP06 disk pack containing the Phase III/Generic 3 Diagnostics (created in Handbook 59, Section 214C).

3.6 Several clean IBM standard label tapes (1600 BPI, labels written in EBCDIC code) for use in recording Generic 3 AMA data. (Obtained from the TELCO).

4. INITIAL STATUS

4.1 Request the TELCO craft personnel to:

4.11 Configure the system such that CPU0 is ACTIVE and CPU1 is out-of-service, if not already in that configuration.

4.12 Using system console 0, stop monitoring the five trouble types.

INPUT: STOP MON TBL X!

where X = 1 through 5

4.13 Remove the tape on CPU1.

4.14 Remove the PTP using both system consoles.

4.2 Place the ENABLE/HALT key for CPU1 to the HALT position.

4.3 Using the Main Alarm Control and Display panel, place CPU1 into the PROCESSOR ISOLATE state.

4.4 Turn power off to CPU1.

5. REMOVE TRANSITION PANEL ON CPU1

5.1 Remove power associated with CPU1, only, at the J1P040D, J1P040V-1 List 1 and List 2 cabinets.

5.2 Disconnect the CPU1 Generic 3, Phase III, cables as listed in Tables 1 and 2 from the back side of the transition panels in the J1P040K and J1P040L cabinets, respectively.

TABLE 1

Cable Designation	Panel Connector Desig.
CB70-X CPUX 00DZ11B	CA30-X J5B 00DZ11B
CB71-X CPUX 01DZ11B	CA31-X J6B 01DZ11B
CB72-X CPUX 02DZ11B	CA32-X J7B 02DZ11B
CB73-X CPUX 03DZ11B	CA33-X J8B 03DZ11B
CB40-X CPUX 00DN11DA	CA36-X J3B 00DN11DA
CB41-X CPUX 01DN11DA	CA37-X J4B 01DN11DA
CB42-X CPUX 02DN11DA	CA46-X J3D 02DN11DA
CB43-X CPUX 03DN11DA	CA47-X J4D 03DN11DA

where X = CPU #

TABLE 2

Cable Designation	Panel Connector Desig.
CB74-X CPUX 04DZ11B	CA40-X J5B 04DZ11B
CB75-X CPUX 05DZ11B	CA41-X J6B 05DZ11B
CB76-X CPUX 06DZ11B	CA42-X J7B 06DZ11B
CB77-X CPUX 07DZ11B	CA43-X J8B 07DZ11B
CB44-X CPUX 04DN11DA	CA56-X J3D 04DN11DA
CB45-X CPUX 05DN11DA	CA57-X J4D 05DN11DA
CB78-X CPUX 10DZ11B	CA50-X J5B 10DZ11B
CB79-X CPUX 11DZ11B	CA51-X J6B 11DZ11B
CB80-X CPUX 12DZ11B	CA52-X J7B 12DZ11B
CB81-X CPUX 13DZ11B	CA53-X J8B 13DZ11B

where X = CPU #

5.3 The DEC or maintenance personnel are required to perform these steps.

A) Connect the cables, just removed, to the associated DEC equipment in CPU1 as listed in Tables 3 and 4 in the J1P040K and J1P040L cabinets, respectively.

NOTE: The CPU1 DEC peripherals, listed in Tables 3 and 4, presently have cables from the transition kit installed. These cables on CPU1 from the transition kit first need to be removed from the DEC peripherals and routed out of the DEC equipment for later removal.

TABLE 3

Cable Designation	DEC Peripheral
CB70-X CPUX 00DZ11B	00DZ11B
CB71-X CPUX 01DZ11B	01DZ11B
CB72-X CPUX 02DZ11B	02DZ11B
CB73-X CPUX 03DZ11B	03DZ11B
CB40-X CPUX 00DN11DA	00DN11DA
CB41-X CPUX 01DN11DA	01DN11DA
CB42-X CPUX 02DN11DA	02DN11DA
CB43-X CPUX 03DN11DA	03DN11DA

where X = CPU #

5.3 Continued

TABLE 4

Cable Designation	DEC Peripheral
CB74-X CPUX 04DZ11B	04DZ11B
CB75-X CPUX 05DZ11B	05DZ11B
CB76-X CPUX 06DZ11B	06DZ11B
CB77-X CPUX 07DZ11B	07DZ11B
CB44-X CPUX 04DN11DA	04DN11DA
CB45-X CPUX 05DN11DA	05DN11DA
CB78-X CPUX 10DZ11B	10DZ11B
CB79-X CPUX 11DZ11B	11DZ11B
CB80-X CPUX 12DZ11B	12DZ11B
CB81-X CPUX 13DZ11B	13DZ11B

where X = CPU #

B) The DEC or maintenance personnel should remove the DEC peripherals on CPU1, unique to Generic 2, as listed in Table 5. Also, remove any cables connected to these DEC peripherals and route these cables out of the DEC equipment.

TABLE 5

Peripheral	Designation	Device Address
DR11-C	CTL0	767770-767774
DR11-C	CTL1	767760-767764
DR11-C	CTL2	767750-767754
DL11-B	TC1	776500-776506

5.4 Remove the transition panels and their associated jumper cables from CPU1's J1P040K and J1P040L cabinets. Return this equipment to the transition kit.

5.5 Restore power, associated with CPU1, to the J1P040D, J1P040V-1 List 1 and List 2 cabinets. Restore power to CPU1.

6. CPU1 DZ11 DIAGNOSTICS

6.1 Remove CPU1 RP06 Disk Pack

6.11 Depress the START/STOP switch on the disk drive to the STOP position.

6.12 When the 'DOOR LOCKED' lamp extinguishes, slide the door open.

6.13 Place the top portion of the disk pack cover over and onto the disk.

6.14 Turn the handle on the disk pack cover counter clockwise until clicking sounds can be heard.

6.15 Lift the disk pack straight up and out of the disk drive.

6.16 Install the bottom cover onto the disk pack and store the disk pack.

NOTE: This disk pack will be reinstalled in the disk drive after the completion of the diagnostic programs.

6.2 Mount the RP06 disk pack for diagnostic use onto the disk drive on CPU1.

6.21 Remove the bottom portion of the disk pack cover.

6.22 Place the disk pack with the top portion of the disk pack cover into the disk drive.

6.23 Turn the handle on the disk pack cover clockwise until it stops. Do not overtighten.

6.24 Lift the disk pack cover straight up and out of the disk drive.

6.25 Close the door securely on the disk drive.

6.3 Perform a lamp test at the disk drive

6.31 Depress the lamp test button located under the front display panel.

6.32 Observe that all disk drive lamps are lighted.

6.4 Disk Drive Control Functions

6.41 Depress the 'CONTROL A' switch to the 'CONTROL A' position. Observe that the 'CONTROL A' lamp is lighted.

6.42 Place the 'WRITE PROTECT' switch to the NON-WRITE PROTECT mode.

6.43 Ensure that lap plug 0 is installed in the disk drive on CPU1.

6.5 Start the Disk Drive on CPU1

6.51 Depress the START/STOP switch on the disk drive to the START position.

6.52 Observe that the START indicator and the DOOR LOCKED indicator are lighted and the disk pack starts to rotate.

NOTE: The disk drive will not start if the door is not closed securely and the DOOR LOCKED lamp is not lighted.

6.6 Boot the Diagnostics

6.61 Set the console switches on CPU1 to 17773000. Then depress the LOAD ADDR key.

6.62 Set the SWR keys to zero, all down.

6.63 Place the ENABLE/HALT key to enable.

6.64 Depress the START key. A response will be typed on System Console 1; a group of numbers followed by a '$'.

NOTE: System Console 1 is always associated with the Diagnostic program. All diagnostic input and output are made through System Console 1.

6.65 Input the following in capital letters:

INPUT: DBO (Return key)
RESPONSE: hpboot:hpboot
hpboot2:

NOTE: All other inputs will be made in small letters when running the diagnostics.

6.66 INPUT: unix.diag (Return key)

A response will be printed indicating that the No. 1A AMARC diagnostics have been selected.

6.67 Input the following for the run level request:

INPUT: 7 (Return key)
RESPONSE: INIT:SINGLE USER MODE
PASSWORD:

6.68 Input the following for the password request. (The characters will not be echoed back on this input.)

INPUT: amarc (Return key)
RESPONSE: #

6.69 Input the following to select the diagnostics.

INPUT: diagnostics (Return key)

A response will be printed indicating that the diagnostics were requested with a list of all available diagnostic programs. The operating system will enter into a conversational mode of operation. All necessary run information will be printed on the TTY.

6.7 Execute DZ11 Diagnostics CPU1

6.71 Enter the quick mode of operation.

INPUT: q (Return key)

An appropriate response will be obtained.

6.72 Verify at the Main Alarm Control and Display Panel that CPU1 is in the PROCESSOR ISOLATE state and that CPU0 is not in the PROCESSOR or INTERFACE ISOLATE state. Place in the appropriate states, if necessary.

6.73 Start the DZ11 diagnostics for multiplexors 00 through 13, if fully equipped.

INPUT: async.dsif -d 00 13 (Return key)

A response indicating that all DZ11 multiplexors have passed. If a failure is obtained, detailed trouble analysis will be required. Input the message 'examples' to obtain trouble shooting analysis information.

6.74 After all the DZ11 diagnostics have passed, terminate the diagnostic program.

INPUT: mon (Return key)
stop (Return key)

An appropriate response will be obtained.

6.75 INPUT: sync (Return key)

6.76 Halt CPU1 by placing its HALT/ENABLE key to the HALT position.

6.8 Restore Generic 3 AMA Disk on CPU1

6.81 Remove the RP06 Diagnostic disk pack from the disk drive on CPU1 in the same manner as Paragraph 6.1.

6.82 Restore the RP06 Generic 3 AMA disk pack into the disk on CPU1 in the same manner as Paragraphs 6.2 through 6.5.

7. RESTORE CPU1

7.1 Restore CPU1 to Active - Request the TELCO craft personnel to restore CPU1 to an ACTIVE state and place CPU0 into the out-of-service state. The procedures to accomplish this is as follows:

7.11 Update the Generic program across the PTP.

7.111 CPU1 should still have its HALT key in the HALT position. With the HALT key on CPU1 in the HALT position, depress and release the START key. Place the ENABLE/HALT key on CPU1 to the ENABLE position.

7.112 Verify that CPU1 is in the NORMAL NON-ISOLATED state from the Main Alarm Control and Display Panel.

7.113 Using System Console 0:

TYPE: UPD MEM PRG!

7.114 When the generic program has been loaded into CPU1 the following printouts will occur.

On System Console 0:

M tt yz UPD MEM PRG COMPLETE

On System Console 1:

An initialization printout and other related data.

7.115 Verify that the Generic program was loaded correctly. Input the following on System Console 1:

INPUT: TEST DET 3!

A response indicating that the test passed should be obtained.

7.12 Load NPD Data into CPU1

7.121 Using System Console 0:

TYPE: UPD MEM NPD!
RESPONSE: M tt yz UPD MEM NPD COMPLETE

7.122 Verify that the NPD data was loaded correctly. Input the following on System Console 1:

INPUT: TEST DET 4!
A response indicating that the test passed should be obtained.

7.123 Calculate a CRC value for the NPD data by inputting the following on System Console 1:

INPUT: TEST DET 6!
A response will be obtained containing a CRC value. This CRC value should compare with the CRC value obtained when the NPD data was loaded into CPU0 in a previous handbook section.

7.124 Initialize CPU1 by inputting the following on System Console 1:

INPUT: INIT SYS!
An initalization message will be obtained.

7.13 Restore CPU1 to Standby

7.131 Mount a Generic 3 standard label AMA tape with a 'write enable ring' on the tape drive on CPU1. Verify that the tape is ON LINE and at LOAD POINT. the WRITE ENABLE lamp should also be illuminated.

7.132 Input the following on System Console 1:

INPUT: RST TAPE!
Responses:
Both System Consoles:
M tt yz UPD MEM TRN COMPLETE
M tt yz RST SYS 1 STANDBY

System Console 1:
M tt yz RST TAPE AMA...

NOTE: It takes several minutes to achieve the STANDBY state.

7.14 Restore CPU1 to the Active State

7.141 Using System Console 0:

INPUT: SW SYS!
A response indicating that a system switch occurred will be obtained.

7.142 CPU1 should now be ACTIVE and CPU0 should now be STANDBY.

7.143 The TELCO may want to observe the system operation for a short period of time before continuing.

7.15 Place CPU0 to the OOS State

7.151 Using System Console 1:

INPUT: RMV SYS!
A response should be obtained indicating that CPU0 has been placed to the out-of-service state.

7.152 Remove the AMA accounting tape of CPU0 by inputting the following on System Console 1:

INPUT: RMV TAPE!
A response indicating that the tape has been removed should be obtained.

7.153 Remove the tape from the tape drive on CPU0. Remove its 'write enable ring' and label the tape appropriately for the accounting organization.

7.16 Additional Steps

7.161 Remove the PTP on both sides by inputting the following on both System Consoles:

INPUT: RMV PTP!

7.162 Place the ENABLE/HALT key for CPU0 to the HALT position.

7.163 Using the Main Alarm Control and Display Panel, place CPU0 into the PROCESSOR ISOLATE state.

7.164 Turn power off to CPU0.

8. REMOVE TRANSITION PANEL ON CPU0

8.1 Initial Status

8.11 CPU1 should be ACTIVE. CPU0 should be OOS, halted and with its power turned off. CPU0 should be in the PROCESSOR ISOLATE state.

8.2 Remove power associated with CPU0, only, at the J1P040D, J1P040V-1 List 1 and List 2 cabinets.

8.3 Disconnect the CPU0 Generic 3, Phase III, cables as listed in Tables 1 and 2 from the back side of the transition panels in the J1P040K and J1P040L cabinets, respectively.

8.4 The DEC or maintenance personnel are required to perform these steps.

A) Connect the cables, just removed, to the associated DEC equipment in CPU0 as listed in Tables 3 and 4 in the J1P040K and J1P040L cabinets, respectively.

NOTE: The CPU0 DEC peripherals, listed in Tables 3 and 4, presently have cables from the transition kit installed. These cables on CPU0 from the transition kit first need to be removed from the DEC peripherals and routed out of the DEC equipment for later removal.

B) The DEC or maintenance personnel should remove the DEC peripherals on CPU0, unique to Generic 2, as listed in Table 5. Also, remove any cables connected to these DEC peripherals and route these cables out of the DEC equipment.

8.5 Remove the transition panels and their associated jumper cables from CPU0's J1P040K and J1P040L cabinets. Return this equipment to the transition kit.

8.6 Restore power, associated with CPU0, to the J1P040D, J1P040V-1 List 1 and List 2 cabinets. Restore power to CPU0.

9. CPU0 DZ11 DIAGNOSTICS

9.1 Execute the DZ11 diagnostics on CPU0, by repeating Paragraphs 6.1 through 6.82 using CPU0.

NOTE: System Console 1 is always associated with the diagnostic program. All diagnostic input and output are made through System Console 1.

10. RESTORE CPU0

10.1 Request the TELCO craft personnel to restore CPU0 to an ACTIVE state and place CPU1 into the STANDBY state using the same procedure as in Paragraphs 7.11 through 7.143. The TELCO may also want to remove the AMA tape on CPU1 (Standby).

11. REMOVE 'Y' CABLES AT DATA SET CABINET

11.1 General

11.11 The TELCO craft personnel will switch a channel to dial back-up. While the channel is on dial back-up, the data facilities personnel will remove the associated 'Y' cable and install the associated dedicated modem cable at the Data Set Cabinet. The TELCO craft personnel will then restore the channel from dial back-up to its dedicated

channel. This procedure will be repeated until all 'Y' cables have been removed and all dedicated modem cables have been installed. When the entire procedure has been completed, the 'Y' cables should be returned to the transition kit. the TELCO should also verify that all dial-ups and ACU units are available for use by typing in 'REPT SYS!' on System Console 0 and examining the printout. The TELCO should restore all dial-ups and ACU units which are not restored, before continuing.

11.2 Procedure

11.21 Switch a channel to dial back-up. Start with the lowest channel number first.
NOTE: A No. 3 ESS dedicated backup channel cannot be switched to a backup channel. As long as the No. 3 ESS is being polled on its dedicated channel, the "Y" cable can be disconnected from its dedicated backup with no special procedure.

11.211 To switch a non-No. 3 ESS channel to dial backup, input the following on System Console 0:

Input: SW CHL XXX DLP!
Response: SW CHL XXX DLP ... OK
where: XXX = dedicated channel number

11.212 To switch a No. 3 ESS channel to its dedicated backup channel (next higher sequential channel no.), input the following on System Console 0:

Input: SW CHL XXX BKP!
Response: SW CHL XXX BKP OK
where: XXX = dedicated channel number

11.3 Disconnect the 'Y' cable for the associated channel from the Data Set Cabinet. Disconnect the M25A modem cable from the 'Y' connector. Install the M25A modem cable to appropriate Data Set Cabinet connector.

11.4 Restore the channel from backup to its dedicated link by inputting the following on System Console 0:

Input: RST CHL XXX!
Response: RST CHL XXX
where: XXX = dedicated channel number.

NOTE: There is no need to restore a No. 3 ESS backup channel.

11.5 Repeat Paragraphs 11.2 through 11.4 for the next higher sequential channel until all active dedicated channels are completed.

12. CONCLUSION

12.1 Turn power off to the J1P040D cabinet and both J1P040C cabinets, if equipped (Generic 2 Phase II W. E. Co. Cabinets). Turn power off to the 230A repeaters associated with Generic 2, if not already turned off.

12.2 Disconnect the cables connected to connector J9 on the 230A repeaters associated with CPU0 and CPU1. These cables are M6AS cables and should be returned to the TH-405-000 transition kit.

12.3 Disconnect the cable connected to connector J7 on the 230A repeaters associated with CPU0 and CPU1. These cables are M25A cables and should be returned to the TH-405-000 transition kit.

Manager, Product Engineering
Control Center

Reason for Reissue:
To include UIS Information.