AMARS
NO. 1A AUTOMATIC MESSAGE ACCOUNTING RECORDING CENTER
DISK INITIALIZATION AND LOADING OF THE GENERIC PROGRAM
STANDARD PROCEDURE

CONTENTS

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1. GENERAL INFORMATION

1.1 The purpose of this section is to provide a procedure for the RP06 disk initialization and the loading of the AMARC Generic Program.

1.2 The RP06-PX Error Free Disk Packs must have been previously formatted. This should have been done by the supplier representative. Refer to Handbook 59, Section 203A.

1.3 Incorrect responses to the following tests once the Generic Program has been loaded can be examined by referring to the Input and Output manuals (IM/OM).

1.4 System Console 1 will be used for all TTY input and output except during the time the generic program is loaded. If the generic program is loaded, the ACTIVE system uses System Console 0 and the NON-ACTIVE system uses System Console 1.

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 are encountered when running the tests in this Handbook Section.

3. EQUIPMENT REQUIRED

3.1 No. 1A AMARC Generic program on 9 track, 1600 bit-per-inch magnetic tape (TP-5P355-01).

3.2 Two clean IBM standard label tapes (1600 BPI, labels written in EBCDIC code) for use with Generic 3 (obtained from the TELCO).

3.3 Magnetic tape TP-5P355-03, tape to disk transfer program (SACOPY).

3.4 Magnetic tape TP-5P355-04, tape to disk transfer program data (SACOPY DATA).

3.5 Input Manual and Output Manual, IM/OM, for the associated generic program issue.

3.6 Load map of the associated generic program issue.

4. MOUNT THE RP06-PX ERROR FREE DISK PACKS

NOTE: If the RP06-PX error free disk pack is not provided, proceed to Paragraph 4.2

4.1 The RP06-P disk pack on both disk drives must be removed from the disk drive and replaced with the RP06-PX error free disk pack.

4.11 Remove the RP06-P disk pack from the disk drive.

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

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

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

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

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

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

4.12 Mount the RP06-PX error free disk pack onto the disk drive.

4.121 Remove the bottom portion of the disk pack cover.

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

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

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

4.125 Close the door securely on the disk drive.

4.2 Perform a lamp test at the disk drive.

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

4.22 Observe that all disk drive lamps are lighted.

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

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

4.5 Start the Disk Drive.

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

4.52 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.

5. TAPE TO DISK TRANSFER PROGRAM AND DATA

5.1 Mounting the SACOPY Program Tape

5.11 In order to protect the information stored on the tape, remove the plastic "write enable" ring on the spool. Depress the "Reset" key on Tape Unit 0.

5.12 Place the SACOPY Program tape on the uppermost mount in Tape Unit 0 by:

1) Pulling the handle out on the mount;
2) Placing the spool on the mount; and
3) Pushing the handle back in place.

Verify tape is securely held. If not securely held, repeat mounting.

5.13 Unwinding sufficient slack, thread the tape through the guides and rollers, as indicated on the printed diagram on the tape drive unit, and onto the empty "take up" reel on the lower mount. Wind the tape around the take up reel only twice. Leave slack in tape after completing the threading.

5.14 After closing the tape unit door, depress the "LOAD" key. The tape should then wind forward (on to the take up reel) and then stop. "LOAD" lamp should come on. Repeat Paragraphs 5.12 through 5.14 if the above does not occur. Do not proceed unless the "LOAD" lamp is illuminated.

5.15 Depress the "ON LINE" key on tape unit 0. Do not continue unless the only two lights that are illuminated are ON LINE and LOAD.

5.2 Loading the SACOPY Program Tape

5.21 At the processor not under test, verify that the HALT/ENABLE key is in the HALT position, then depress and release the START key.

5.22 Set console switches on CU-0 to 17773030. Then depress LOAD ADDR key.

5.23 Set the SWR keys to zero - all down.

5.24 Place the ENABLE/HALT key to ENABLE.

5.25 Depress the START key. The magnetic tape should move forward and the message:

CORE MEMORY SIZE IS XXXK WORDS

is typed on System Console 1. The tape then continues to move forward for a few seconds then rewinds.

NOTE: XXXK is the core memory size.

5.26 The following message will be printed:

STAND ALONE COPY/VERIFY PROGRAM
MODE: COPY, VRFY, OR VCOPY?

5.27 Remove the SACOPY Program tape by depressing the 'RESET" key then the 'REWIND' key and then remove the tape from the tape drive.

5.3 Loading the SACOPY DATA Tape

5.31 Mount the SACOPY DATA tape onto tape unit 0 in the same manner as Paragraph 5.1.

5.32 At System Console 1:

TYPE: VCOPY (CR)
RESPONSE: VERIFIED COPY
FROM:
TYPE: TMØ (CR)
RESPONSE: TO:
TYPE: HP12 (CR)

NOTE: (CR) means the carriage return key.

5.33 The SACOPY DATA tape will begin to be read. The tape may take several minutes to be read. When the tape has completed being read, the tape will rewind. The tape will then be read a second time and will rewind. The following will be typed on the terminal during the process

NO. OF BLOCKS: XXX
NO BAD SECTORS ON HP12
VERIFY
NO. OF BLOCKS: XXX
NO BAD SECTORS ON HP12
NEXT COPY/VERIFY
MODE: COPY, VRFY, OR VCOPY?

where XXX = some numerical value.

5.34 Halt CU-0 by placing the HALT/ENABLE key to the HALT position.

5.35 Remove the SACOPY DATA tape from the tape drive by depressing the 'RESET' key then the 'REWIND key and then remove the tape from the tape drive.

5.4 Repeat Paragraphs 4 through 5.3 for CU-1 and its associated tape and disk drives.

6. LOADING THE GENERIC PROGRAM INTO CU-0

6.1 Mount the generic program tape onto tape unit 0 in the same manner as Paragraph 5.1.

6.2 Load the Generic program in the same manner as Paragraph 5.21 through 5.24.

6.3 In addition to the CORE MEMORY SIZE printout, the following message will be printed on System Console 0:

**tt yz INIT SYS z ACTIVE 000003 000000 000000
yz (nine fields of eight zeros)
yz (nine fields of eight zeros)

Where: tt = time, minutes after the hour
y = processor state (A, S or 0)
z = processor I.D. (0 or 1)

NOTE 1: Additional messages will be printed associated with the tape disk back-up, alarm panel status, etc.

NOTE 2: During the initial loading of the generic program, the time and date are automatically initialized to 01/01/00, 00:00:00.0. References to time and date used in this section will be with respect to the time of the initial loading of the generic program.

6.4 Remove the Generic Program Tape.

6.41 Depress the 'RESET' key then the 'REWIND' key on the tape drive. The tape will rewind off of the takeup reel.

6.42 The following message will be printed on System Console 0:

**tt yz RMV TAPE AMA (seven data field groupings)

6.43 Remove the generic program tape from the tape drive and store it in the provided plastic case.

7. MOUNTING THE ACCOUNTING TAPE ON CU-0

7.1 Mount a clean IBM standard label AMA magnetic tape on the CU-0 tape drive. The tape must be equipped with plastic "write enable" ring. Certification can be verified by the "1600 BPI" label on the spool. Use the same procedure as Paragraphs 5.12 through 5.15.

NOTE: The 'WRITE ENABLE' lamp will also be lighted.

7.2 Restore tape by typing on System Console 0

```
          RST TAPE AMA UCL!
RESPONSE: PF
          M tt yz RST TAPE AMA
                  (seven data fields)
```

NOTE 1: Additional messages will be printed associated with the tape disk back-up, alarm panel status, etc.

NOTE 2: The 'LOAD' lamp will extinguish as the tape moves forward of the load point.

8. LOADING THE GENERIC PROGRAM INTO CU-1

8.1 On CU-1, with the HALT/ENABLE key in the HALT position, depress and release the START key.

8.2 Release the HALT key on CU-1.

8.3 On System Console 0:

```
TYPE: UPD MEM PRG!
RESPONSE: PF
```

8.4 When the generic program has been loaded into CU-1, the following will occur:

On System Console 0:

```
M 55 yz UPD MEM PRG COMPLETE
```

On System Console 1, the same output messages as were printed on System Console 0 when the generic program was loaded from tape into CU-0 (except will indicate OOS). Refer to paragraph 6.3, if necessary.

9. ENTER NPD TEST DATA INTO CU-1

9.1 On System Console 1:

```
TYPE: RC ID XXXXXX!
```

where: XXXXXX = six BCD digits which uniquely identify this No. 1A AMARC (obtained from the TELCO). If the identification is not known, use any 6 BCD digits.

RESPONSE: OK

9.2 On System Console 1:

```
TYPE: INIT SYS!
RESPONSE:
  M tt yz INIT SYS 1 OOS...
```

NOTE: Other messages associated with the system status and alarms may be printed on both system consoles.

10. MOUNTING THE ACCOUNTING TAPE ON CU-1

10.1 Mount a clean IBM standard label AMA magnetic tape on the CU-1 tape drive. The tape must be equipped with a "write enable" ring.

10.2 Restore tape by inputting the following on System Console 1:

```
INPUT: RST TAPE!
RESPONE  PF
         M tt yz REPT TAPE AMA TAPE RE-
         STORED
```

Additional responses on both System Consoles:

```
M tt yz UPD MEM TRN COMPLETE
M tt yz RST SYS 1 STANDBY
```

NOTE 1: System status and alarm messages will be printed on both System Consoles.

NOTE 2: If the above responses are not obtained, repeat paragraph 10.2 using the RST TAPE UCL command.

11. UPDATE NPD TEST DATA INTO CU-0

11.1 Switch system by inputting the following on System Console 0:

```
INPUT: SW SYS!
RESPONSE: M tt yz SW SYS 000001
```

NOTE: System status and alarm messages will be printed on both system consoles.

11.2 Remove CU-0 to out-of-service by inputting the following on System Console 1:

INPUT: RMV SYS!
RESPONSE: M tt yz RMV SYS 0 OOS 000001

NOTE: System status and alarm messages will be printed on both system consoles.

11.3 Update the NPD test data into CU-0 by inputting the following on System Console 0:

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

11.4 Input the following on System Console 1:

INPUT: INIT SYS!
RESPONSE: M tt yz INIT SYS 0 OOS...

NOTE: System status and alarm messages may be printed on both system consoles.

11.5 Restore CU-0 to Standby by inputting the following on System Console 1:

INPUT: RST SYS!
RESPONSE: M tt yz UPD MEM TRN COMPLETE
M tt yz RST SYS 0 STANDBY

NOTE: System status and alarm message will be printed on both system consoles.

12. ZEROING THE DISKS

12.1 General

12.11 Both disks will be zeroed. The disk on CU-1 will start to be zeroed, first. While the disk on CU-1 is being zeroed, the disk on CU-0 will start to be zeroed. Use System Console 0 for inputting messages when zeroing the disk on CU-1. Use System Console 1 for inputting messages when zeroing the disk on CU-0. The approximate time required to zero a disk is one hour.

12.2 Procedure

12.21 Input the following using the appropriate System Console:

INPUT: RMV DISK!
RESPONSE: PF
M tt yz REPT DISK RMV OK

12.22 Obtain the virtual octal address of the mnemonic "__CHKZERO" from the load map. On the appropriate System Console:

TYPE: IN MEM D 0 XXXXXX 10!
RESPONSE: PF
M tt yz ADDRESS OLD NEW
XXXXXX 000000 000010

NOTE: XXXXXX is the virtual address of __CHKZERO.

12.23 Start the disk zeroing and check program. On the appropriate System Console:

TYPE: RST DISK CHK!
RESPONSE: PF
M tt yz REPT DISK CHK IP bbbbbb cccccc

NOTE 1: bbbbbb and cccccc are data fields

NOTE 2: The above response will occur at the start of the disk check and approximately every 3 minutes thereafter.

12.24 When all of the following messages have been printed, the disk zeroing and check procedures have been completed on the system disk associated with the particular system console. While waiting for these messages to be printed on system console 0, start the disk zeroing and check procedures on CU-0, using the same procedure starting at paragraph 10.21 using System Console 1.

M tt yz REPT DISK CHK CMPOK 000000 000000
M tt yz REPT DISK CHK READONE 000000 000000
M tt yz REPT DISK CHK FILEOK 000000 000000
M tt yz REPT DISK CHK CMPOK 000001 000000
M tt yz REPT DISK CHK READONE 000001 000000
M tt yz REPT DISK CHK FILEOK 000001 000000
M tt yz REPT TAPDSK INITIALIZATION IP
M tt yz REPT TAPDSK BILLING DATA NOT ON DISK

12.24 (Cont'd)

NOTE 1: The disk zeroing and check program will run for approximately 1 hour before all the above messages have been printed.

NOTE 2: The above messages may be interrupted by the normal hourly printout. For details of the hourly printout see the OP CLK message in the output manual.

13. CONCLUSION

13.1 Switch systems by inputting the following on System Console 0:

INPUT: SW SYS!
RESPONSE: M tt yz SW SYS 000001

NOTE: System status and alarm messages will be printed on both system consoles.

Manager, Product Engineering
Control Center

Reason for Reissue
The current Generic 3 program requires that NPD data be entered before a tape can be restored on a non-Active System.