AMARS
#1A AUTOMATIC MESSAGE ACCOUNTING RECORDING CENTER
(#1A AMARC)
FUNCTIONAL TESTS REQUIRING PARAMETERS

CONTENTS

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1. GENERAL INFORMATION

1.1 The tests in this section check the Executive and Time Monitor programs of the Generic program. The tests in this section are intended to be performed by Western Electric only if requested by the TELCO and on an extra item basis. The tests in this section require equipment and NPD parameter data which in the responsibility of the TELCO.

1.2 This section requires that the NPD parameters for Channel 1 are stored in memory.

1.3 System Console 0 is always associated with the ACTIVE CPU. System Console 1 is always associated with the NON-ACTIVE CPU (STANDBY or OOS).

1.4 This section should not be performed when the system is receiving vital data from remote location(s).

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 running the tests in this handbook section.

3. EQUIPMENT REQUIRED

3.1 No. 1A AMARC Input/Output Manuals, IM/OM, for the associated generic issue.

3.2 Load map for the associated generic program issue.

4. AMARC STATUS

4.1 The No. 1A AMARC should be in normal operating condition. All cabinets and the two system consoles should be powered with no apparent failures. The No. 1A AMARC Generic program must be loaded and running in both processors. One processor must be in standby mode. For ease of explanation, the following tests assume the initial status is CU-0 active, CU-1 standby.

5. SYSTEM INITIALIZATION FUNCTIONAL TEST

5.1 Manual Initialization

5.11 Set the system clock to the current time and date.

5.111 On System Console 0, type the following input:

```
Input:     SET CLK DATE mmddyy,TIME hhnnss!
           where mm = month (1-12)
                 dd = day (1-max. day of month)
                 yy = year
                 hh = hour (0-23,military time)
                 nn = minute (0-59)
                 ss = seconds (0-59)

Response:  M tt yz SET CLK     TIME:HH:MM:SS.T   DATE:MM/DD/YR
           M tt yz CURRENT:          HH:MM:SS.T        MM/DD/YR
           M tt yz REQUESTED:        HH:MM:SS.T        MM/DD/YR TIME CHG, DATE CHG
           M tt yz CHANGES:  HOURS, MINUTES, SECONDS, MONTH, DAY, YEAR
           M tt yz YOU HAVE 30 SECONDS TO RESPOND BY TYPING:
           M tt yz SET CLK OK!  IF YOU ARE SATISFIED, OR
           M tt yz SET CLK CANCEL!  IF YOU ARE NOT SATISFIED.
```

NOTE: The current and requested time and date will be listed in the response.

5.112 On System Console 0, type the following:

```
Input:     SET CLK OK!

Response:  M tt yz OP CLK  MM/DD/YY  HH:MM:SS.T
```

NOTE: The new time and date is listed in the response.

5.12 Cause a manual non-stable initialization by typing the following input on System Console 1:

```
Input:     INIT SYS!

Response:  **tt yz INIT SYS 1  00S  000001  000007  cccccc
```

NOTE 1: Additional data fields to the above response can be discarded.

NOTE 2: Additional responses relating to the disk and/or tape drive can be discarded.

5.13 To verify that all channel data has not been modified, type the following input using System Console 1

```
Input:     REPT CHL!

Response:  M tt yz REPT CHL STATUS
           aabbcc aabbcc ...
           where aabbcc = 000000 for each equipped channel
                 aabbcc = 100011 for each unequipped channel
```

6. EXECUTIVE AND TIME MONITOR FUNCTIONAL TESTS

6.1 Priority Sanity Check

6.11 On the out-of-service processor's (CU-1) console: A) set the HALT/ENABLE key to HALT: B) load address 17777776 into the SWR keys: C) depress the LOAD ADDR key; and then D) depress the EXAM key. Contents of bits 5, 6 and 7 should be zero as indicated on the console's DATA DISPLAY lamps. If the display lamps bits 5, 6 and 7 are zero, proceed to Paragraph 6.12. If the display lamps bits 5, 6 and 7 are not zero, set the ENABLE/HALT key to ENABLE, depress the CONT key, and then repeat this paragraph.

NOTE: This step may have to be executed several times.

6.12 If the contents of the Processor Status Switch register bits 5, 6 and 7 are all zeros, set bit 6=1, and set all other bits to the same as their examined value. Momentarily lift up the DEPOSIT key, set the ENABLE/HALT key to ENABLE, and then depress the CONT key.

6.13 The following printout should occur on System Console 1:

```
** tt yz REPT SYS TBL PRI ERR dddldd aaaaaa
```

6.2 Sequence Sanity Check

6.21 Using System Console 1, type the following input:

```
Input:     IN MEM D 0 aaaaaa bbbbbb!

Response:  M tt yz ADDRESS:    OLD       NEW
           M tt yz aaaaaa     xxxxxx    bbbbbb
           **tt yz REPT SYS TBL SEQ ERR cccccc dddddd
```

where aaaaaa = virtual, octal address of mnemonic LOOPTR
bbbbbb = virtual, octal address of mnemonic EXTABL
cccccc = address of a base level program other than TIMMON (i.e., not same as dddddd).
dddddd = address of mnemonic TIMMON.

6.3 Stack Pointer Sanity Check

6.31 Using System Console 1, type the following:

NOTE: The REPT SYS TBL SP ERR message will continuously be printed.

```
Input:     IN MEM I 0 aaaaaa 100000!

Responses: M tt yz ADDRESS:   OLD     NEW
           M tt yz aaaaaa   bbbbbb   100000
           **tt yz REPT SYS TBL SP ERR bbbbbb  cccccc
```

where: aaaaaa = virtual, octal address of BALOOP+2
bbbbbb = virtual, octal address of TOPSTK-2
cccccc = address of some base level program

6.32 Interrupt the printing of the REPT SYS TBL SP ERR message by typing the 'DELETE' key on System Console 1.

6.33 Using System Console 1, type the following:

```
Input:     IN MEM I aaaaaa  bbbbbb!

Response:  M tt yz ADDRESS:     OLD       NEW
           M tt yz aaaaaa     100000    bbbbbb
```

where: aaaaaa = virtual, octal address of BALOOP+2
bbbbbb = virtual, octal address of TOPSTK-2

NOTE: Before the above response is received, the REPT SYS TBL SP ERR messages may continue to print again up to 16 times.

6.4 Idle Loop Time

6.41 On System Console 0, type the following:

Input: REPT RELTM!

Response: M tt zy REPT RELTM ...

6.42 On System Console 1, type the following:

Input: IN MEM D 0 xxxxxx 1000!

Response: **tt yz INIT SYS 1 00S 000001 000006 yyyyyy

where: xxxxxx = virtual, octal address of CLKCTR
yyyyyy = virtual, octal address of INTLZE+30

NOTE 1: Additional data fields to the above response can be discarded.

NOTE 2: Additional responses relating to the disk and/or tape drive can be discarded.

6.43 Determine the amount of idle loop time for both processors. After waiting 10 seconds, type the following on both System Consoles:

Input: REPT RELTM!

Response: M tt yz aaaaaa XX.X% ...

where: XX.X = amount of idle loop time

6.44 Verify that the percentage of idle loop time, obtained from the responses in Paragraph 6.43, on System Console 1 is higher than on System Console 0.

6.5 Conclusion

6.51 This concludes the testing in section 212. Restore the out-of-service processor (CU-1) to standby by typing the following using System Console 1:

Input: RST SYS!

Response: tt yz UPD MEM TRN COMPLETE
M tt yz RST SYS STANDBY

NOTE 1: Up to three minutes may elapse before the responses are printed.

NOTE 2: Additional responses relating to the disk and/or tape drive can be discarded.

No changes are indicated due
to extensive revision.

Manager, Product Engineering
Control Center

Reason for Reissue:
Update for Generic 3.