SWITCHED ACCESS REMOTE TEST SYSTEM 1A (SARTS 1A)
REMOTE TEST SYSTEM 1A (RTS 1A)
MAINTENANCE

1. GENERAL

1.01 This section gives the step procedures to verify that the voice-frequency (VF) meter, multimeter and tone generators of a Remote Test System 1A (RTS 1A) are functioning properly. Once a trouble has been sectionalized, reference is made to the charts and tables of Section 666-610-500 to further isolate the problem.

1.02 Whenever this section is reissued, the reason for reissue will be given in this paragraph.

1.03 This section can be used as a continuation of Section 666-610-300. Section 666-610-300 sectionalizes a trouble condition in various components of the Switched Access Remote Test System 1A (SARTS 1A). However, that section did not assure that all functions of the RTS were working properly. In this section, commands are sent by a tester or the process controller 1A (PC 1A) manager (from the near-end) to the RTS 1A (at the far-end) to test the following:

VF METER

- level
- frequency
- noise

MULTIMETER

- dc volts
- ac volts
- dc current
- ac current

- capacitance
- resistance

TONE GENERATOR

- 1004 Hz

  and/or

- 404 Hz
- 2600 Hz
- 2713 Hz
- 2804 Hz

1.04 Any one of the test position 52As (TP 52As) can be used to perform the step procedures, including the SARTS 1A maintenance position (SMP). It is suggested that a printer (optional equipment) be associated with the TP 52A used in performing these tests. The printer will provide a hard copy for immediate and/or future reference of the responses given by the RTS being tested.

1.05 When a response to a step does not meet the requirement, shown in parenthesis ( ), compare the step with the command entered. If they match, enter a G03/ command (G03/ repeats the last command entered). If the response still does not meet the requirement, make a note of the step that failed and continue testing. When all of the steps are completed, turn to Table A. Table A shows what chart and table of Section 666-610-500 is to be used to further isolate the trouble. Example: If Step 10 shows a response of = 1,010 kHz, refer to Table A and Step 10 which shows that Chart 1 and Table A of Section 666-610-500 will further isolate the trouble (testing under Section 660-610-500 requires SMP status).

1.06 Normally 48 volts are tested through a resistance lamp (RL) and are defaulted by the system using a 1. However, for purposes of this test, 48 volts must be tested through a fixed resistance (FR). This is accomplished by changing the 1 to a 2 in Steps 6, 7, 15 and 20 in order to obtain the proper responses.

1.07 If other than 1004 Hz is to be tested in Step 8, change field one to a : 1 for 404 Hz, 3 for 2600 Hz, 4 for 2713 Hz, or 5 for 2804 Hz. The response in Step 9 will remain the same for all frequencies (= −10.0 DBM). The response in Step 10 should be as follows:

- 404 Hz = 0.404 KHZ (±0.002 KHZ)

- 2600 Hz = 2.600 KHZ (±0.008 KHZ)

- 2713 Hz = 2.713 KHZ (±0.013 KHZ)

- 2804 Hz = 2.804 KHZ (±0.014 KHZ)

If a frequency other than 1004 Hz was entered in Step 8, Step 8 must be reentered with a 2 in field one. The 1004 Hz must be present on the A pair for the remaining steps.

1.08 If during testing the log full (LF) appears on the upper right corner of the screen, and a printer is available, enter the 399/ command. The LF will appear if some of the steps are repeated before reaching Steps 14 or 24.

1.09 Figure 1 is an example of the results received on a printer from the two 399/ log print commands entered during the step procedures.

1.10 Figure 2 is an example of a display that appears on the cathode-ray tube.

1.11 It appears that the commands used in this section may also be used in testing an RTS 5A. However, the SMAS # would change from -00099- for RTS 1A to -0099- for RTS 5A.

1.12 Other commands that are used by the SMP to obtain the status or to control the RTS are as follows:

040/	RTS STATUS & CONTROL
041	RTS ACCESS
/XA	CONN GRPS PRESENTLY ACCESSED
/XB	CONN GRP USAGE
/XC	CONTINUITY FAILURES
/XD	CONN GRP BSY
/XH	REMOTE PORT LIST
/XM	RESETS ALL PEG COUNTS
046	FECC ROM CHECK
047	FECC RAM CHECK
048	TFCC ROM CHECK
049	TFCC RAM CHECK

STEP   PROCEDURE

1   Enter: 000/   (If necessary)

        Response: 100 TABLE OF CONTENTS

2   Enter: 701

        Response: 701/   /   /   /   /   /   /
                        701/LOCN   /SYS/SMAS # /ORTN/CNFGN/TP #/SEG /

3   Enter: 701/ (**) /(*)/-00099-/FE/4AB/01/

        Response: 701/ (**) /(*)/-00099-/FE/4AB/01/   /

                    (Note: Wait for TSV call back)

4   Enter: 703/ / / / /33/-00.0/-00.0   (Operate S/R key only)

        Response: 703/ /   / / /33/-00.0/-00.0/

5   Enter: G01/23

        Response: G01/F/A&B/

6   Enter: L01/11121

        Response: L01/BAT&GRD/-48/NORM/FR/A/

7   Enter: L01/2222

        Response: L01/LP/CLSD/FR/B/

8   Enter: T01/2-00.0-00.01

        Response: T01/1004/-00.0/-00.0/A/

        ** - An 8-digit code which is the location of the RTS.

        *   - The system number assigned to the RTS.

STEP			PROCEDURE

9   Enter: T03/12

      Response: T03/LEV/B/   = -10.0DBM

      Requirement: (Between -09.6DBM and -10.4DBM)

10   Enter: T03/22

      Response: T03/FREQ/B/   = 1.004KHZ Z

      Requirement: (Between .999KHZ and 1.009KHZ)

         (Note: If other than 1004Hz is to be tested, read paragraph 1.07)

11   Enter: M11/32212

      Response: M11/R-T/F/DC/NO DISCH/B/ = -048.0VDC

      Requirement: (Between -043.0VDC and -053.0VDC)

12   Enter: M12/321

      Response: M12/R-T/F/A/   = 0.418KOHM

      Requirement: (Between 0.397KOHM and 0.439KOHM)

13   Enter: M14/2222

      Response: M14/R/DC/F/B/ = -057.8DCMA

      Requirement: (Between -051.2DCMA and -069.7DCMA)

14   Enter: 399/   (If printer is available.)

      Response: (Log is printed out on printer.)

STEP		PROCEDURE

15   Enter: L01/2122

      Response: L01/LP/OPN/FR/B/

16   Enter: M13/321

      Response: M13/R-T/F/A/   = 02.15UFD

      Requirement: (Between 02.05UFD and 02.25UFD)

17   Enter: T04/12

      Response: T04/C-NCH /B/   = 38DBRN

      Requirement: (Less than 40DBRN)

18   Enter: T02/-391

      Response: T02/-39/A/

19   Enter: T04/32

      Response: T04/3K FLAT/B/ = 52DBRN

      Requirement: (Less than 55DBRN)

20   Enter: L01/2221

      Response: L01/LP/CLSD/FR/A/

21   Enter: T02/-001

      Response: T02/-00/A/

22   Enter: M11/32112

      Response: M11/R-T/F/AC/NO DISCH/B/ = 001.8VAC

      Requirement: (Between 001.4VAC and 002.2VAC)

STEP	PROCEDURE

23   Enter: M14/1122

      Response: M14/T/AC/F/B/ = 000.8ACMA

      Requirement: (Between 000.4ACMA and 001.2ACMA)

24   Enter: 399/   (If printer is available.)

      Response: (Log is printed out on printer.)

25   Enter: G02/2

      Response: (Access point sketch disappears —

                       access point disconnected.)

TABLE A

STEP	RESPONSE MUST BE BETWEEN:	ISOLATE TROUBLE BY USING SECTION 666-610-500 CHART and TABLE	
9	−09.6DBM and −10.4DBM	1	A
10	.999KHZ and 1.009KHZ	1	A
11	−043.OVDC and −053.OVDC	2 (See note)	B
12	0.397KOHM and 0.439KOHM	2	B
13	−051.2DCMA and −069.7DCMA	2	B
16	02.05UFD and 02.25UFD	2	B
17	Less than 40DBRN	1	A
19	Less than 55DBRN	1	A
22	001.4VAC and 002.2VAC	9	I
23	000.4ACMA and 001.2ACMA	2	B

Note: Verify that the 48-volt power supply from the central office is 48 ± 5V.

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TEST POSITION NUMBER = 01-01

   TIME = 12:51:32  AM
   DATE = 10-10-77


000/
701/HOLMNJ11/41/-00099-/FE/
   4AB/01/    /
T:                        01
703/   /  /  / /33/-00.0/
   -00.0/
G01/F/A&B/
L01/BAT&GRD/-48/NORM/FR/A/
L01/LP/CLSD/FR/B/
T01/1004/-00.0/-00.0/A/
T03/LEV/B/       =- 10.0DBM
T03/FREQ/B/      = 1.004KHZ
M11/R-T/F/DC/NO DISCH/B/
   =-048.0VDC
M12/R-T/F/A/     = 0.418KOHM
M14/R/DC/F/B/    =-057.8DCMA



TEST POSITION NUMBER = 01-01

   TIME = 12:55:14  AM
   DATE = 10-10-77


T:                        01
L01/LP/OPN/FR/B/
M13/R-T/F/A/     = 02.15UFD
T04/C-NCH /B/    =   38DBRN
T02/-39/A/
T04/3K FLAT/B/   =   52DBRN
L01/LP/CLSD/FR/A/
T02/-00/A/
M11/R-T/F/AC/NO DISCH/B/
   = 001.8VAC
M14/T/AC/F/B/    = 000.8ACMA
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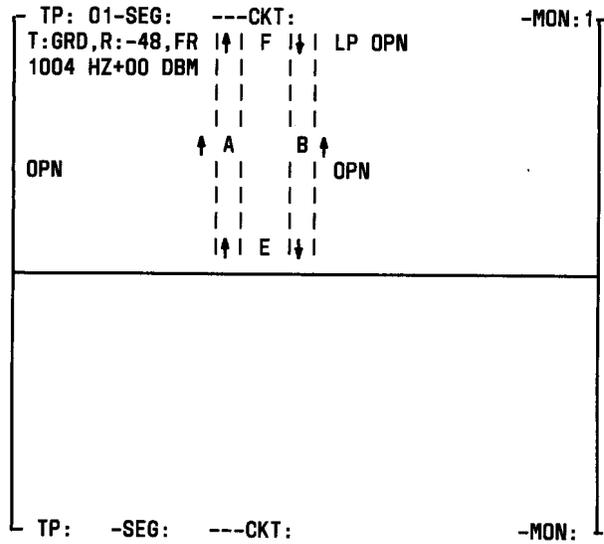
Fig. 1—Example of Log Print

Fig. 2—Example of Display