



# TMC SPECIFICATION

NO. S 1109

REV:

COMPILED: GF

CHECKED:

APPD:

SHEET 2 OF 8

TITLE: TEST PROCEDURE FOR THE RTPH

typed by vab

6/10/66

## A. EQUIPMENT REQUIRED

1. VOM, Simpson or equivalent
2. Oscilloscope, Tektronix (Dual Trace) or equivalent.
3. Electronic Counter, Hewlett-Packard 5244 or equivalent.
4. Test Fixture
5. Interconnect Test Cables
6. RTKY
7. RTRS-2

## B. POWER SUPPLY VOLTAGE CHECK

1. On A-4363/PC250 the following voltage levels should be present when AC Switch S1001 is activated:

PIN 9	+6 VDC
PIN 5	-18 VDC
PIN 7	-12 VDC
PIN 15	+12 VDC
PIN 18	-24 VDC Turn AC OFF

2. Insert PC254/A4367 into J1008. Turn AC on and at J1003 check for the following voltage levels:

PINS W & X	115 VAC
PIN D	-24 VDC
PIN C	-18 VDC DELAYED
PIN B	-18 VDC
PIN A	+ 6 VDC

TURN AC OFF

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## C. MANUAL PROGRAM

Interconnect RTRS-2 to RTPH.

1. Insert extender card A4412/PC279 into J-1005, and place PC252/A4366 into extender.
2. Turn AC on and rotate S1002 selector switch to the manual program position.
3. Depress A and 1 on RTRS-2 and with scope probe monitor PINS 9, 10, 13, J and L on PC279. Observe A ground indication change to -12V when the 7th button from the right in the function row (bottom row) is depressed.
4. With scope probe monitor PINS E, K, H, R and S on PC279 and observe a -12V indication change to ground when the 7th button from the right in the function row is depressed.
5. With scope probe monitor PIN 8 on PS279 upon depressing any button on programmer switch other than tune observe a negative level approximately 12V change to ground.
6. Turn AC OFF remove extender card and insert PC252/A4366 into J1005.
7. Insert extender card into J1007 and place PC251/A4365 into extender card. Connect scope probe to PINS 6 and 7. Turn AC power ON, and depress A and 1 on the RTRS. Upon depressing any button on programmer switch observe on scope a free running clock with pulses approximately 22 milliseconds. Disconnect scope and inits place connect counter. Adjust clock period to 22 milliseconds disconnect counter. Connect

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scope to TP7 of PC251 and observe a string of positive going pulses 22 milliseconds apart. Turn AC power OFF. Remove extender card and insert PC251 into J1007.

8. Interconnect RTKY to RTPH, and connect test fixture to J1004 on RTPH. Insert extender card into J1006, and place PC249/A4361 into extender. Depress tune button to clear programmer switch. Turn AC power ON. Depress button A on the RTRS and observe on test fixture that Bit Lights 1, 3 and 5 are lit. Depress button "1" on the RTRS and observe that Bit Lights 2 and 5 are lit on test fixture. References outlined in sketch #1 show switch positions and Bits that should be present and displayed on test fixture when buttons are depressed. Turn AC power OFF and remove extender card. Insert PC249 into J1006.

#### D. MANUAL PROGRAM/TAPE PUNCH

1. Turn AC power ON.
2. Rotate S1002 selector switch to Manual Program/Tape Punch position.
3. Depress A and 1 on RTRS and every button on programmer switch including the Tune Button.
4. Extract tape from RTKY and examine punches to see that correct Bits have been punched. Save punched tape.

#### E. TAPE PUNCH

1. Rotate S1002 selector switch to tape punch position.
2. Depress A and 1 on RTRS and every button on programmer switch in the same sequence as in D3.
3. Extract tape from RTKY and overlay it on tape from D3, they should duplicate each other.

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## F. TAPE READ AND REPUNCH

1. Rotate S1002 selector switch to repunch position.
2. Insert one of the punched tapes into the tape read side of the RTKY.
3. Depress tape read button on front panel, tape should step thru tape read side of RTKY and should be duplicated on the tape punch side. Extract both tapes and overlay them. Tape should duplicate each other.

- G. Observe on the test fixture that both "MARK" lights are lit and that when a tape is passing through the tape read side of RTKY that both MARKS and both space lights flicker. Insert a punched tape in the RTKY. Depress Tape Read Button on test fixture and tape should step through Reader. This completes all tests. The RTPH is operational.

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TITLE: TEST PROCEDURE FOR THE RTPH SKETCH #1

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TOP FRONT

POSITION SELECT ROW  
BITS

5	2	3	4	2	2	3	4	2	4	2	3	5
---	---	---	---	---	---	---	---	---	---	---	---	---

1
---

KILOCYCLE ROW BITS

2	3	4	2	2	3	4	2	4	2	3	4	2	3	4	5	2	4	3
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

MEGACYCLE ROW BITS

2	2	3	2	2	2	2	2	2	2	2	3	4	5	2	4	5	3	5	4
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

FUNCTION ROW BITS

1	1	1	1	1	1	1	1	1	1	1	1	2	3	5	1	2	1	2	1	3
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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JEE

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## TEST DATA SHEET FOR THE RTPH-1

### I. POWER SUPPLY CHECKS:

+ 6VDC  
+12VDC  
-12VDC  
-18VDC  
-18VDC (DELAYED)  
-24VDC

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### II. GATE CARD CHECKS:

A4412/PC279

PIN 9  
10  
13  
J  
L

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PIN E  
K  
H  
R  
S  
8

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### III. CLOCK CARD PERIOD ADJUST:

a. Period Adjust Set to  
b. Output Reset Pulses

\_\_\_\_\_  
\_\_\_\_\_

### IV. MANUAL PROGRAM MODE OF OPERATION:

\_\_\_\_\_

### V. MANUAL PROGRAM/TAPE PUNCH MODE OF OPERATION:

\_\_\_\_\_

### VI. TAPE PUNCH MODE OF OPERATION:

\_\_\_\_\_

### VII. TAPE READ MODE OF OPERATION:

\_\_\_\_\_

### VIII. REPUNCH MODE OF OPERATION:

\_\_\_\_\_

### XI. LOOP OPERATION:

\_\_\_\_\_

### X. TIMER CIRCUIT:

\_\_\_\_\_

TESTER: \_\_\_\_\_

DATE: \_\_\_\_\_

