TMC SPECIFICATION			NO. S 1260
REV:			
COMPILED:	CHECKED:	APPD:	SHEET OF
TITLE:			
11/12/70 jb/			

TEST PROCEDURE

FOR

RTMU-41

I. Equipment Required:

A. VOM, Simpson Model 260, or equivalent.
B. Oscilloscope, Tektronix (dual trace), or equivalent.
C. Electronic Counter, Hewlett-Packard 5244, or equivalent.
D. DDRR-10( ) Test Set.
E. Interconnect Test Cables.
F. Schematic Diagram CK1561.
G. Timing Chart CH-802

II. Preliminary Electrical Tests:

CAUTION: Be sure AC power is removed from RTMU-41

A. Connect ohmmeter across AC input of unit. Be sure fuses F1 and F2 are in place.
B. Set AC switch S1 to ON. Continuity should exist across the AC input (approximately 4 ohms). Removing either F1 or F2, or setting S1 to OFF will break continuity.
C. Continuity should not exist between AC leads and ground. Set S1 to OFF and remove ohmmeter from unit.

III. Power Supply Voltage Checks:

A. Insert PC-352/A4549 into A10 and set AC power to ON. Power light DS1 will light. Removing either fuse will cause the power light to go out.
B. Meter the voltage levels at test points +12V and -12V DC. Voltages should be as indicated $\pm$1V DC. Meter the voltage level at test point -27V DC + 2V.
C. Monitor TP +12V and jumper TP +12 to ground. Remove ground. Voltage level should return to +12V DC. Repeat for test points -12V and -27V DC.
D. Monitor TP +12 with the high gain scope. The ripple present on TP +12 should be no more than 20 millivolts peak-to-peak. Repeat for test points -12V and -27V DC.
E. Set AC power switch S1 to OFF. Connect scope probe to DC reset test point. Turn AC power to ON. Level on DC reset test point should rise to approximately +3V DC and then fall and remain at approximately -5 volts.

READ BACK

BITS	LIGHT 1	2	3	4	5
1,2	ON	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF
1, 3	ON	OFF	ON	OFF	OFF
2	OFF	ON	OFF	OFF	OFF
1,2,3	ON	ON	ON	OFF	OFF
2	OFF	ON	OFF	OFF	OFF
1, 4	ON	OFF	OFF	ON	OFF
2	OFF	ON	OFF	OFF	OFF
1,2, 4	ON	ON	OFF	ON	OFF
2	OFF	ON	OFF	OFF	OFF
1, 3,4	ON	OFF	ON	ON	OFF
2	OFF	ON	OFF	OFF	OFF
1,2,3,4	ON	ON	ON	ON	OFF
2,3,4	OFF	ON	ON	ON	OFF
1,2,3,4	ON	ON	ON	ON	OFF
2,3,4	OFF	ON	ON	ON	OFF
1,2,3,4	ON	ON	ON	ON	OFF
2,3,4	OFF	ON	ON	ON	OFF
1,2,3,4	ON	ON	ON	ON	OFF
2	OFF	ON	OFF	OFF	OFF
1, 5	ON	OFF	OFF	OFF	ON
2	OFF	ON	OFF	OFF	OFF
1,2, 5	ON	ON	OFF	OFF	ON
2	OFF	ON	OFF	OFF	OFF
1, 3, 5	ON	OFF	ON	OFF	ON
2	OFF	ON	OFF	OFF	OFF
1,2,3, 5	ON	ON	ON	OFF	ON
2	OFF	ON	OFF	OFF	OFF
1, 4,5	ON	OFF	OFF	ON	ON
2	OFF	ON	OFF	OFF	OFF
1,2,3,4,5	ON	ON	ON	ON	ON
1	ON	OFF	OFF	OFF	OFF

C. Set AC power to OFF.
D. Record all data on Test Data Sheet.

Test Data Sheet For RTMU-41

I. Power Supply Checks:
   A. Voltage:
      1. TP+12 _____VDC
      2. TP-12 _____VDC
      3. TP-27 _____VDC

   B. Ripple :
      1. TP+12 _____Millivolts
      2. TP-12 _____Millivolts
      3. TP-27 _____Millivolts

   C. Shorting:
      1. TP+12 _____OK
      2. TP-12 _____OK
      3. TP-27 _____OK

   D. DC Reset TP _____OK

II. Input Timing Circuit:
   A. PC-316/A4494 _____OK
   B. PC-357/A4565 _____OK
   C. Clock Period Adjusted To _____Milliseconds

III. Reset Timing And Gating Circuits:
   A. PC-358/A4566 _____OK
   B. PC-361/A4569 _____OK
   C. PC-359/A4567 _____OK

IV. Memory Shift Register:
   A. PC-456/A4710 _____OK

Tested By: _____ Date: _____

REVISION SHEET

THE TECHNICAL MATERIEL CORP.
MAMARONECK NEW YORK

S 1260
LIST NO.

DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
3/24/71	Ø			ORIGINAL RELEASE FOR PRODUCTION	

F. Power distrubution checks. Measure the following points for voltages and grounds:

CONNECTOR	PIN		
	+12V DC	-12V DC	GROUND
A1	-	4	1,22,A,Z
A2	20	4	1,22,A,Z
A3	20	4	1,22,A,Z
A4	20	4	1,22,A,Z
A5	20	4	1,22,A,Z
A6	20	4	1,22,A,Z
A7	20	4	1,22,A,Z
A8	20	4	1,22,A,Z
A9	20	4	1,22,A,Z

IV. Input Timing, Reset Timing and Gating Checks:

A. Set AC power to RTMU to OFF. Inter-connect test set and RTMU. Turn selector switch on test set to RTMU position. Insert PC-316/A4494 into A1 and PC-357/A4565 into A2. Set AC power to ON for the test set and the RTMU. Push Tune Button on Test Set.

B. Connect frequency counter to TP15 on PC-357/A4565 and adjust R2 for 27.00 msec (100 wpm) or 44.00 msec (60 wpm) ± 0.05 msec. Set AC power to OFF.

C. Insert PC358/A4566 into A3. Set AC power to ON. Monitor TP2 and push TUNE button on test set and observe a negative pulse. Repeat the above for TP3. Set AC power to OFF.

D. Insert PC361/A4569 into A6 and set AC power to ON. Monitor TP1 and push TUNE button on test set and observe positive going pulses. Repeat the above for TP6. Set AC power to Off.

E. Insert PC-359/A4567 into A4 and set AC power to ON. Push Tune Button On Test Set and observe single negative pulse 13.5 msec (100 wpm) in width on TP16, 21 and 24. Set AC Power to OFF.

V. Operational Checks:

A. Memory Shift-Register:
1. Insert PC-456/A4710 into A7 and turn AC power to ON.

B. Set switches of test set according to following table. Program input to RTMU by pressing (red) tune button. Read back code on lights of test set by using (black) memory advance button. Each time advance (black) button is depressed the bit display will change.

Switch	Set In Position
#'s	1
LTR's	A
10 MC	1
1 MC	1
100 KC	1
10 KC	1
1 KC	1
.1 KC	1
RSSA	2
MODE	2
TIME CONSTANT 1	2
TIME CONSTANT 2	2