

DATE <u>2-12-59</u>	TMC SPECIFICATION NO. S 416	
SH. <u>1</u> OF <u>8</u>		
COMPILED BY <i>[Signature]</i>	TITLE: PRODUCTION TESTING OF MODEL RTM-2	JOB
APPROVED <i>[Signature]</i>		REV. A

INSTRUCTIONS FOR THE PRODUCTION TESTING
OF
MODEL RTM-2

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1. Purpose and Description

See Instruction Manual

2. Test Equipment Required:

1. VTVM, Heath Kit, Model V-6
2. Ohmmeter, Simpson, Model 260 or equivalent.
3. Audio Generator, Heath Kit, Model AG-1
or
Heath Kit, Model AG-8
4. Oscilloscope, Du Mont, Model 304-H or Equivalent
5. Load Resistor, 5,000 Ω , 20 W, RWL10-30
6. Test Switch, SPST, ST-11-A.
7. Variac, Type V5 or equivalent.

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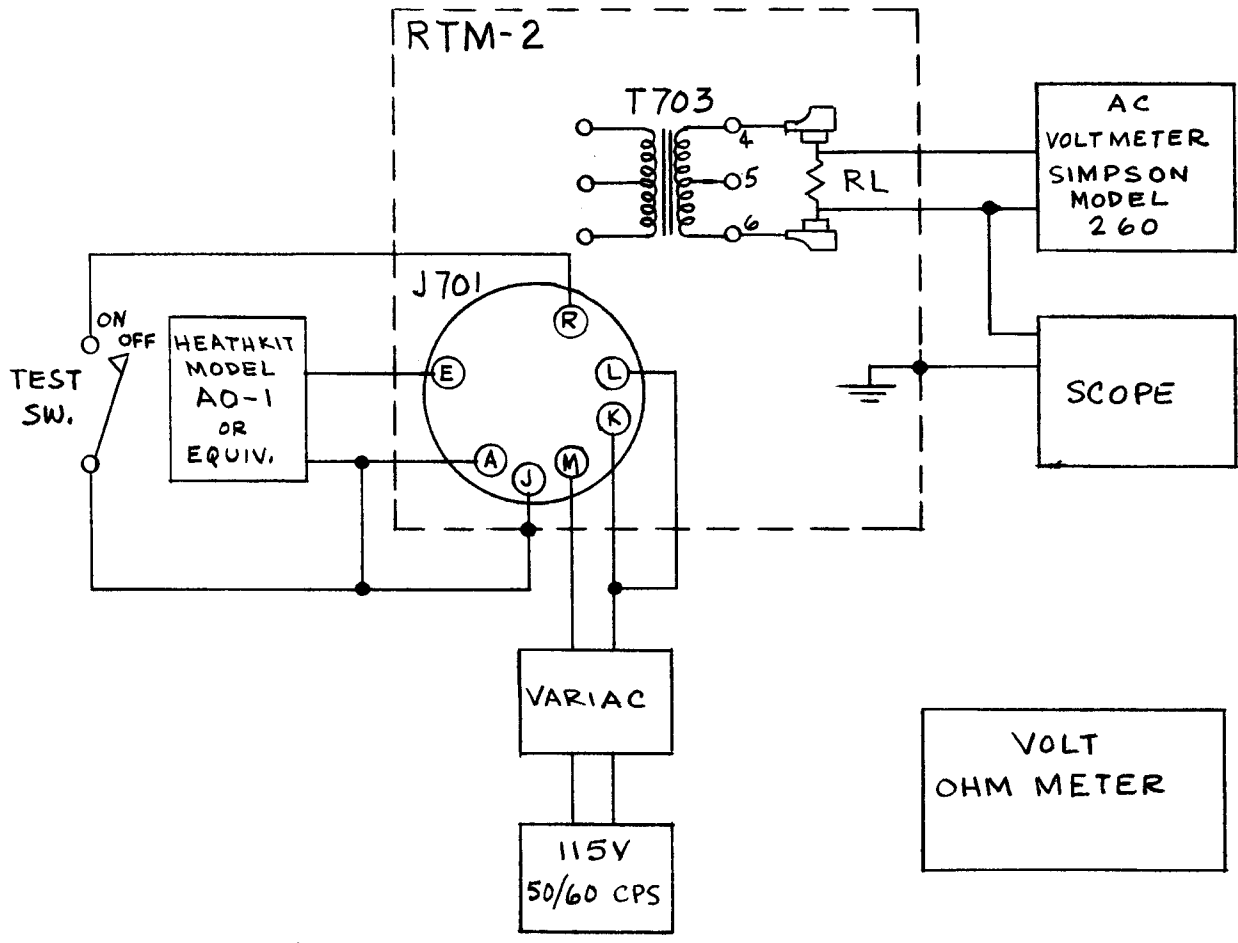
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3. General Instrument Layout:



REMOVE: V704 & V705,
CONNECT THE LOAD RESISTOR

RL = 5K, 20W
TMC NO, RW-110-30

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4. Test Instructions:

- a. Proceed as outlined in Test Sequence and Procedure paragraph 5 to follow.
- b. Fill in blanks on report sheet, in the first part only, rejecting those units which do not meet the specifications stated herein.
- c. Sign Report Sheet and submit it to your supervisor.

5. Test Sequence and Procedure:

A. General Inspection:

- a. Inspect the total unit for obvious mechanical imperfections.
- b. Inspect the total unit for obvious electrical imperfections.
Be sure that R-711 is 5 K Ω .
- c. Carefully adjust the spark gap, using .203 inch gauge.
- d. Inspect the high voltage wiring: K-701, J-702, J-703, T-704, V-704, V-705. It must be in accordance with the schematic, CK-373.

B. Resistance Check:

- a. Measure between the pins "P" and "S" of J-701: Resistance should be approximately 80 Ω .
- b. Measure for continuity between pin "F" of J-701 and pin 2 of T-701.
- c. Measure resistance between pin "S" of J-701 and ground. Resistance must be 23 K to 27 K Ω .

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C. Initial Rapid Check:

- a. Connect the power, 115 V at 60 cps, to pins "M", "K" and "L", refer to General Instrument Layout, paragraph 3A.
- b. Turn the power "ON" and observe if pilot light is on, voltage regulator operates and all filaments are being heated.

D. Audio Amplifier and Modulator Drivers:

- a. Connect the Audio Signal Generator to pins "A" and "E" of J-701, set at 1000 cps.
- b. Remove V-704 and V-705 from their sockets, (if any.)
- c. Connect 5,000 Ω , 20 W resistor to the modulator grid connectors as shown in paragraph 3, General Instrument Layout.
- d. Connect Oscilloscope to one side of the lead resistor, ground the other side of the scope.
- e. Connect the Simpson Model 260 A.C. meter across the lead.
- f. Turn the gain control fully clockwise.
- g. Drive the model RTM with .08 VRMS input from the audio generator.
- h. Turn the Test Switch to "ON" position.
- i. The output voltage across the load should be approximately 220 VRMS and the relay K-701 must be in energized pos.
- j. There should be no noticeable distortion (less than 5%) at the oscilloscope.

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E. Relay Test:

- a. Place the Model RTM-2 in its upright position.
- b. With the Test Switch in "OFF" position, measure for continuity between J-702 and J-703.
- c. With the Test Switch in "ON" position measure the resistance between J-702 and J-703. It must be 80 to 120 Ω .
- d. Set the variac for 100 VAC output to the Model RTM-2
- e. The VR tube must light.
- f. Adjust resistor R-708 for minimum current flow through the relay K-701, required to close it. Then flip the Test Switch "ON" and "OFF" a few times. The relay must have very little or no backlash.
- g. Disconnect the power.

Units which meet the specifications above are not ready for shipment. Final Test must be given in the assigned CAB-7 as described in TMC Specification S-584.

One copy of report sheet must accompany each Model RTM-2.

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TEST REPORT SHEET

MODEL RTM-2

<u>PART I</u>	<u>ACCEPT</u>	<u>REJECT</u>
TEST A: GENERAL INSPECTION	_____	_____
TEST B: RESISTANCE CHECK	_____	_____
TEST C: INITIAL RAPID CHECK	_____	_____
TEST D: AUDIO AMPLIFIER AND MODULATOR DRIVERS	_____	_____
TEST E: RELAY TEST	_____	_____

SERIAL NUMBER _____ ACCEPTED _____

DATE _____ REJECTED _____

TESTED BY: _____

<u>PART II</u>	<u>ACCEPT</u>	<u>REJECT</u>
POWER OUTPUT	_____	_____

DATE _____

TESTED BY: _____

