

DATE 22 Jun 1967

SHEET OF 6

TMC SPECIFICATION NO. S 1199

RJE  
COMPILED

*RJE*  
CHECKED

TITLE:

*JFM*  
APPROVED

MCG-2I TEST PROCEDURE

DATE 22 June 1967

SHEET 1 OF 5

# TMC SPECIFICATION NO. S 1199

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TITLE: MCG-2I TEST PROCEDURE

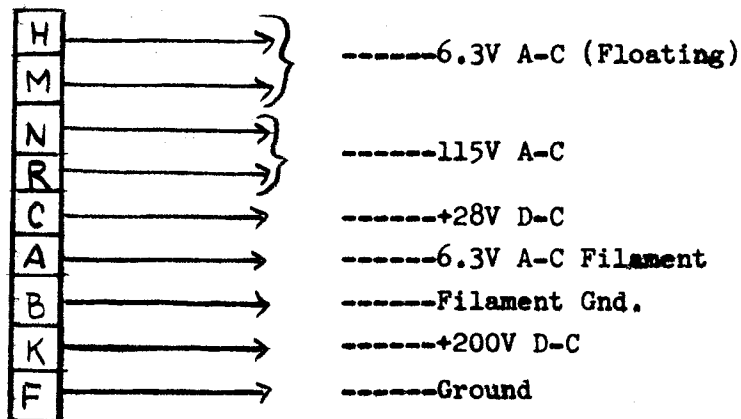
APPROVED

## I. TEST EQUIPMENT

- A. Lambda Model 25 Power Supply (or equivalent).
- B. 6.3VAC at 3A (floating) for 2 ovens.
- C. Tektronix Scope 545A (or equivalent).
- D. H-P Counter 524C (or equivalent).
- E. Test Cable (Fig. A).
- F. 5 terminations TMC #DL-100-4.

FIGURE A

TMC PL 212-2



- G. 28V D-C Supply - Harrison Model 865B (or Equivalent).

## II. PRELIMINARY

- A. Visually inspect unit for any mechanical defects.
- B. Check for any power shorts to ground. J6015 pins N,R,K,H,M.
- C. Set switch to AFC position and check for continuity between J6001 and J6003, J6004, J6005 and J6006.
- D. Set switch to SYN position and check for continuity between J6002 and J6003, J6004, J6005, J6006. Set switch to INT position.
- E. Place dummy 47ohm load (TMC #DL100-4) on J6003, J6005, J6007, J6009, and J6011.
- F. Apply power and adjust power supply for 200V output.

ALLOW UNIT TO WARM UP 30 MINUTES BEFORE MAKING ANY ADJUSTMENTS.

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### III. 100,00KC ADJUSTMENT

- A. Connect counter on Pin 1 of V6003.
- B. Adjust Z6001 (accessible from rear) for  $100,000\text{KC} \pm .01 \text{ cps}$ .

### IV. PHANTASTRON ADJUSTMENTS

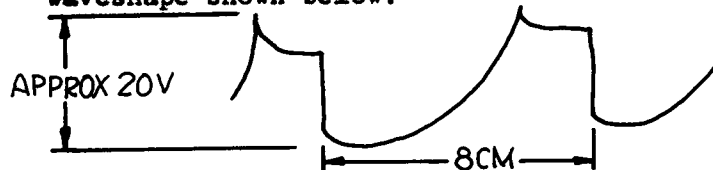
- A. Connect scope to Pin 2 of V6004.
- B. Adjust C6049 for a 4:1 division - waveshape shown below:



SCOPE SETTINGS:

- 1. 20 u sec/CM
- 2. 5 V/CM

- C. Connect scope to Pin 2 of V6005. Adjust C6050 for a 4:1 division-  
waveshape shown below:



Scope settings remain the same.

- D. Connect scope and counter to Pin 7 of V6006. Counter should read 6250 cps. The scope should show a clean sine wave (approx. 10 p-p).

### V. 250KC ADJUSTMENT

- A. Connect scope and counter to J6003 on rear panel.
- B. Peak T6001 for maximum. Lock nut.
- C. Adjust C6002 for  $250,000 \text{ KC} \pm .2\text{cps}$ .
- D. Adjust R6001 for 2.8v out (peak-to-peak).
- E. Repeat steps C and D until conditions are met.

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VI. BALANCE ADJUSTMENT

- A. Remove V6005 temporarily.
- B. Connect scope to arm of R-6045.
- C. Adjust balance pot (R6045) for a symmetrical wave shape. Lock after setting.
- D. Replace V6005.

VII. 705KC ADJUSTMENT

- A. Connect scope to J6011 and counter to J6012.
- B. Adjust C6010 for 705KC +2 cps.
- C. Adjust R6014 for 2.8v out (peak-to-peak).
- D. Repeat steps B and C until conditions are met.

VIII. OUTBOARD CARRIERS ADJUSTMENTS

- A. Connect scope to J6008 and counter to J6007. Adjust T6006 for peak. Adjust R6068 for 2.8vpp. Lock nut. Counter should read 243.750KC +2cps.
- B. Connect scope to J6010 and counter to J6009. Adjust T6007 for peak. Adjust R6069 for 2.8vpp. Lock nut. Counter should read 256.250KC +2cps.

IX. FINAL CHECK

- A. Using a scope, recheck all carriers for a clean sine wave, this indicates no modulation or mixing between carriers.
- B. Touch up frequency adjustments on 250KC, 705KC, and 100.00KC oscillators.

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THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, N.Y.

MCG-2I TEST DATA SHEET

SERIAL NO.: \_\_\_\_\_

MFG. NO.: \_\_\_\_\_

A. Mechanical Check \_\_\_\_\_ OK

B. Wiring Check \_\_\_\_\_ OK

100.00KC ADJUSTMENT

B. 100.00 K-c oscillator  $\pm .01$  cps \_\_\_\_\_ OK

PHANTASTRON ADJUSTMENT

B. Phantastron 4:1 division \_\_\_\_\_ OK

C. Phantastron 4:1 division \_\_\_\_\_ OK

D. Output 6250 cps \_\_\_\_\_ CPS  
Output clean sine wave \_\_\_\_\_ OK

BALANCE ADJUSTMENT

D. Balanced Mixer \_\_\_\_\_ OK

250KC ADJUSTMENT

C. 250.000KC  $\pm .2$  cps \_\_\_\_\_ KC

D. Output  $2.8v \pm 5\%$  \_\_\_\_\_ V. Peak-to-Peak

705KC ADJUSTMENT

B. 705KC  $\pm 2$  cps \_\_\_\_\_ KC

C. Output  $2.8v \pm 5\%$  \_\_\_\_\_ V. Peak-to-Peak

OUTBOARD CARRIER ADJUSTMENT

A. 243.750KC  $\pm .2$  cps \_\_\_\_\_ KC

B. 256.250KC  $\pm .2$  cps \_\_\_\_\_ KC

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### FINAL CHECK

- A. Check for cross no mixing of carriers \_\_\_\_\_ OK  
(i.e. 259KC on 2MC output)
  
- B. Check frequency adjustments:

100.00KC osc.	_____	KC
705KC osc.	_____	KC
250KC osc.	_____	KC

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

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

