

DATE 20 JANUARY 1964

SHEET 3 OF 6

TMC SPECIFICATION NO. S-810

A

AP  
COMPILED

*CVP*  
CHECKED

TITLE:

APPROVED

*BR*

MCG-1 TEST PROCEDURE

DATE 20 January 1964

SHEET 2 OF 6

TMC SPECIFICATION NO. S-810

Ai

COMPILED AP

VP  
CHECKED

TITLE: MCG-1 TEST PROCEDURE

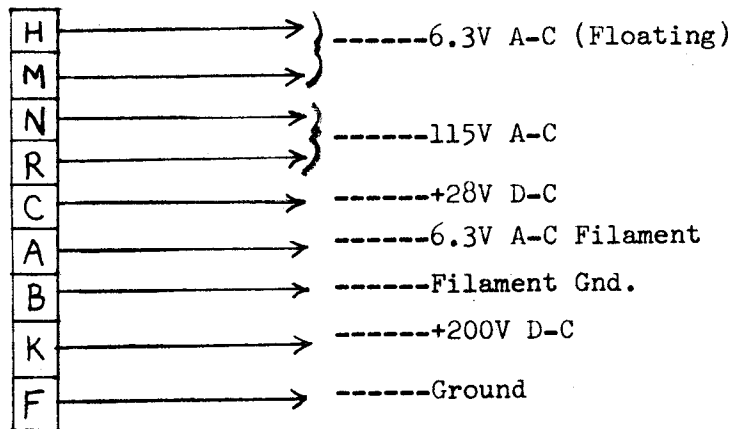
APPROVED

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. Plac 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.

DATE 20 January 1964  
SHEET 3 OF 6

# TMC SPECIFICATION NO. S-810

A

AP  
COMPILED

*VP*  
CHECKED

TITLE: MCG-1 TEST PROCEDURE

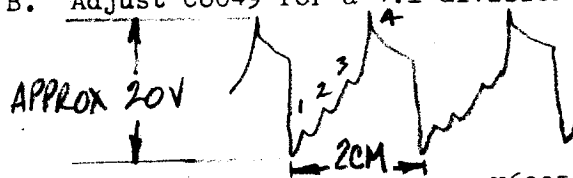
APPROVED

### III. 100.64KC ADJUSTMENT

- Connect counter on Pin 1 of V6003.
- Adjust Z6001 (accessible from rear) for 100.640KC  $\pm$  .01 cps.

### IV. PHANTASTRON ADJUSTMENTS

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



SCOPE SETTINGS:

- 20  $\mu$  sec/CM
- 5 V/CM

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



Scope settings remain the same.

- Connect scope and counter to Pin 7 of V6006. Counter should read 6290 cps. The scope should show a clean sine wave (approx. 10 p-p)

### V. 250KC ADJUSTMENT

- Connect scope and counter to J6003 on rear panel.
- Peak T6001 for maximum. Lock out.
- Adjust C6002 for 250.000KC  $\pm$  .2cps.
- Adjust R6001 for 2.8v out (peak-to-peak).
- Repeat steps C and D until conditions are met.

DATE 21 January 1964

SHEET 4 OF 6

TMC SPECIFICATION NO. S -810

A

AP  
COMPILED

*VP*  
CHECKED

TITLE: MCG-1 TEST PROCEDURE

APPROVED

VI. BALANCE ADJUSTMENT

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

VII. 2 MC ADJUSTMENT

- A. Connect scope to J6011 and counter to J6012.
- B. Adjust C6010 for 2.0MC  $\pm 2$  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 2.8vp-p. Lock nut. Counter should read 243.710KC  $\pm .2$ cps.
- B. Connect scope to J6010 and counter to J6009. Adjust T6007 for 2.8vp-p. Lock nut. Counter should read 256-290KC  $\pm .2$ cps.

IX. FINAL CHECK

- A. Using a scope, recheck all carriers for a clean sine wave, this indicates no modulation or missing between carriers.
- B. Touch up frequency adjustments on 250KC, 2MC, and 100.64KC oscillators.

DATE 21 January 1964

SHEET 5 OF 6

TMC SPECIFICATION NO. S-810

A

AP  
COMPILED

*MP*  
CHECKED

TITLE: MCG-1 TEST PROCEDURE

APPROVED

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, N.Y.

MCG-1 TEST DATA SHEET

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

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

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

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

100.64KC ADJUSTMENT

B. 100.64 K-c oscillator +01 cps \_\_\_\_\_ KC

PHANTASTRON ADJUSTMENT

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

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

D. Output 6290 cps \_\_\_\_\_ CPS  
Output clean sine wave \_\_\_\_\_ OK

BALANCE ADJUSTMENT

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

250KC ADJUSTMENT

C. 250.000KC + .2 cps \_\_\_\_\_ KC

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

2MC ADJUSTMENT

B. 2,000KC +2 cps \_\_\_\_\_ KC

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

OUTBOARD CARRIER ADJUSTMENT

A. 243.710KC + .2 cps \_\_\_\_\_ KC

B. 256.290KC + .2 cps \_\_\_\_\_ KC

DATE 21 January 1964  
SHEET 6 OF 6

TMC SPECIFICATION NO. S-810

A

AP  
COMPILED

NP  
CHECKED

TITLE: MCG-1 TEST PROCEDURE

APPROVED

MCG-1 TEST DATA SHEET - Cont'd from Page 5

FINAL CHECK

A. Check for cross no mixing of carriers \_\_\_\_\_ OK  
(i.e. 250KC on 2MC output)

B. Check frequency adjustments:

100.64KC osc. \_\_\_\_\_ KC  
2000KC osc \_\_\_\_\_ KC  
250KC osc \_\_\_\_\_ KC

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

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

