DATE 12/13/63 SHEET 1 OF 4	TMC SPECIFICATION NO. S-728	B
NP COMPILED / NP CHECKED	TITLE:	
APPROVED		

HFS-1 TEST PROCEDURE
(OVERALL)

OGILVIE PRESS, INC., BROOKLYN 17, N. Y. STOCK NO. 459M 8444

DATE 12/13/63 SHEET 2 OF 4	TMC SPECIFICATION NO. S-728	B
NP COMPILED / NP CHECKED	TITLE: HFS-1 TEST PROCEDURE	
APPROVED		

A. TEST EQUIPMENT REQUIREMENT

1. Oscilloscope, Tektronix MO.515A or equivalent.
2. RF generator, measurements MO.82 or equivalent.
3. 1MC standard & 28V.DC supply, CSS-1A.
4. HFP power supply.
5. AC VTVM, Ballantine MO.314 or equivalent.
6. 1 - 47 ohm, 1 - 27 ohms and 1 - 56 ohm dummy load.

B. PRELIMINARY

1. Connect power supply cable to J3001.
2. Connect RF generator to J3009.
3. Set S3102 to INT. position.
4. Turn power on. Check Nixie lights by turning selector switches to every position. Nixie lights should light in proper sequence.

C. PROCEDURE

1. Connect 47 ohm load to J3019 and AC VTVM across load. The VTVM should read 1 volt or better.
2. Connect 27 ohm load to J3012 and AC VTVM across load. The VTVM should read 0.8 volt or better.
3. Connect 56 ohm load to J3016 and AC VTVM across load. The VTVM should read between 1.5VRMS $\pm$ 10%
4. FREQUENCY DIVIDERS

   a. Connect oscilloscope to TP3403 and check for 100KC output signal.
   b. Repeat step 1 for TP3302(10KC), TP3202(1KC), and TP3102(.1KC)

5. SUMMING AMPLIFIERS

   a. Connect oscilloscope to TP3103 and check output voltage at all positions of .1KC selector switch(no output in 2 positions). The output voltage should be .7V $\pm$.2V peak to peak.
   b. Connect oscilloscope to TP3205 and check output voltage at all positions of 1KC selector switch (no output in 2 positions). The output voltage should between .7V$\pm$.2V peak to peak.
   c. Connect oscilloscope to TP3305 and check output voltage at all positions of 10KC selector switch(no output in 2 positions). The output voltage should be between .7V$\pm$.2V peak to peak.

   d. Connect oscilloscope to TP3406 and check output voltage at all positions of 100KC selector switch(no output in 2 positions). The output voltage should be berween 2.8 and 5V. peak to peak.

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6. AUDIO SYNC TONE

a. Connect oscilloscope to J3014. Set HFS for 2 MC reading on Nixies. Set the RF generator 1.75MC above 2 MC(3.75MC) and 20MV.out.
b. The AUDIO SYNC TONE on scope should be 2V. peak to peak or better.
c. Turn .1KC Selector switch to every position advancing RF generator so that it remains 1.75MC above HFS Nixie reading. The output voltage should be 2V peak to peak or better(except in the two blank positions). Leave the switch on position 9.
d. Repeat step 3 for 1KC, 10KC, 100KC, and 1MC selector switches.

7. 1 MC PHASE COMPARATOR

a. Adjust R3140(SYNC BAL) to set 1MC COMPARATOR meter to center position.
b. Connect 1MC standard to J3020 and check meter for 1MC comparison.

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DATE 12/13/63 SHEET 4 OF 4	TMC SPECIFICATION NO. S-728	B
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APPROVED		

THE TECHNICAL MATERIEL CORPORATION
MAMARONECK, N.Y.

TEST DATA SHEET HFS-1

SERIAL NO._____

MFG. NO._____

1. 1MC internal standard. 1 volt or better across 47 ohms load J3019._____ OK
2. 2MC signal 0.8 volt RMS or better across 27 ohm load J-3012._____ OK
3. 250 KC signal 1.5V RMS ± 10% across 56 ohm load J-3016._____ OK
4. Frequency dividers:
   - TP3403 100KC _____ OK
   - TP3302 10KC _____ OK
   - TP3202 1KC _____ OK
   - TP3102 .1KC _____ OK
5. Summing Amplifiers:
   - TP3103 3.1-4KC _____ OK
   - TP3205 30.1-40KC _____ OK
   - TP3305 350.1-450KC _____ OK
   - TP3406 3.2501-4.250KC _____ OK
6. Audio Syn Tone:
   J3014
   Switch positions 2 through 31 _____ OK
7. 1MC Phase Comparator Meter
   CENTERS PROPERLY _____ OK

TESTED BY:_____ STANDARD NO._____

DATE:_____

OGILVIE PRESS, INC., BROOKLYN 17, N. Y. STOCK NO. 459M 8444

REVISION SHEET

THE TECHNICAL MATERIEL CORP.
MAMARONECK NEW YORK

S728
LIST NO.

DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
4/23/64	A	2,3,4	11283	Revised shts.2,3,4 per EMN	
8/5/64	B	4	12058	Revised sht. 4 per EMN	for L.G