

DATE 15 April 1963
SHEET 1 OF 5

TMC SPECIFICATION NO. S-630

JNS
COMPILED

M.P.
CHECKED

TITLE:

APPROVED *BP*

AX-384 TEST PROCEDURE
(HFS) 100CPS SELECTOR DECK AND 1MC STANDARD

DATE 15 April 1963
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TMC SPECIFICATION NO. S-630

C

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(HFS) 100CPS SELECTOR DECK AND 1MC STANDARD

I. FUNCTION & DESCRIPTION

The function of the 3100 deck is to convert a 1KC pulse into ten signals, 100CPS apart, in the frequency range of 3.1 KC to 4.0 KC. The 3100 deck also contains the master 1MC standard for the DDR-5 complex plus a 1MC isolation amplifier.

The 1KC pulse is fed to a phanostron divider which provides a 100CPS pulse rich in harmonics. The crystals select the 31st through the 40th harmonics of this pulse. The signal is applied to a two-stage amplifier where it is further amplified and the 100CPS spurious pulse is attenuated.

II. TEST EQUIPMENT REQUIRED

- A. Oscilloscope Tektronix 541 or equivalent.
- B. AC VTVM Ballantine No. 314 or equivalent.
- C. Power supply Lambda model 26 or equivalent.
- D. Power supply Harrison model 865B or equivalent.
- E. Test cable (Fig. A).
- F. TMC MODEL CHL-1
- G. 56 ohm 1/2 watt load mounted in Dage 95712 6410-1 CONNECTOR.
- H. Burroughs Nixie (B-5031) with TMC cable CA668
- I. VOM Simpson No. 260 or equivalent.

III. PRELIMINARY

- A. Inspect unit carefully, see if unit is clear of short circuits, loose parts, etc.
- B. Check B+ line to ground with VTVM, reading should be approximately 70K at pin 6 of J3104.
- C. Connect to power supply through test cable. Turn on AC and 28VDC. Set B+ voltage to 200VDC, then turn B+ switch on. Allow 5 minutes before continuing tests.

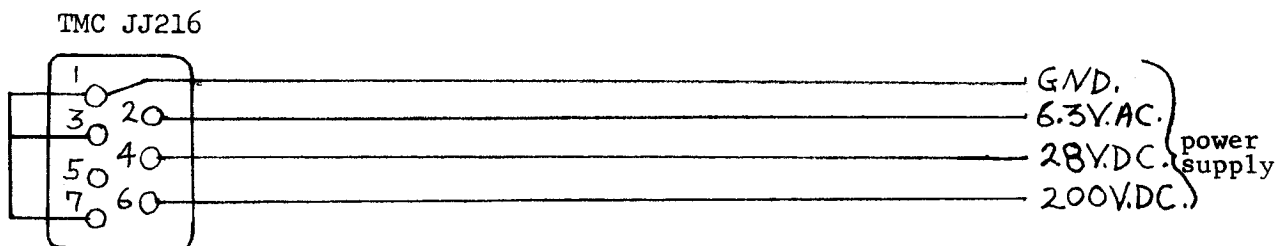


Fig. A

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IV. ALIGNMENT PROCEDURE

A. Phanostron Divider

1. Connect 1KC pulse output from modified TMC model CHL-1 to J3101.
2. Connect scope probe to TP3101 and check amplitude of 1KC pulse at input (approx. 15V peak to peak).
3. Connect scope probe to TP3102.
4. Adjust R3103 (potentiometer) for 100CPS pulse at TP3102. Set potentiometer in middle of 100CPS range and lock.

B. Harmonic Selector Bank

1. Insert crystals in their respective sockets.
2. Insert indicator tube plug into J3105.
3. Remove scope probe from TP3102 and connect to TP3103.
4. Connect 56 ohm 1/2 watt load to J3102.
5. Set switch so indicator tube reads "0".
6. Adjust C3128 for maximum amplitude at TP3103.
7. Set switch so indicator tube reads "1".
8. Adjust C3129 for maximum amplitude at TP3103.
9. Repeat steps 7 & 8 for positions 2 through 9 and trim up. C3138 through C3135.
10. Measure output across 56 ohm load for all active positions of switch. Amplitude should be between .2 and .3V RMS at all settings.

C. LMC Standard and Isolation Amplifier

1. Using volt-ohm meter check for +28VDC at Pins 2 and 3 of LMC standard.
2. Put 56 ohm 1/2 watt load on J3103. Measure voltage across load with VTVM. It should be between 3/4V and 1.5V RMS.

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The DC voltages in the Voltage Chart are for reference only. These voltages should be within +10%, no signal applied.

TUBE	TYPE	1	2	3	4	5	6	7	8	9
V3101	6AS6	-0.2	+6.5	0	0	+120	+175	+5.7		
V3102	6AB4	+200	N.C.	0	0	N.C.	0	+12		
V3103	6AU6	0	+8	0	0	+130	+95	+8		
V3104	6AU6	-7V	+2	0	0	+145	+135	+2		
V3105	6AW8	+1.2V	0	+125	0	0	+1.7	0	+70	+125

The voltages shown below are with signal applied and for reference only.

	TP3101	15V Peak-to-peak
Pin 6	V3101	115V peak-to-peak
	TP3102	100V peak-to-peak
	TP3103	1.5V peak-to-peak
Pin 2	V3105	2.2V peak-to-peak
Pin 9	V3105	10V peak-to-peak

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THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, N.Y.

AX-384 TEST DATA SHEET

MFG. NO. _____

1. B+ line to ground.	_____	ohms
2. Check DC voltage.	_____	OK

3. 1MC Output Voltage (J3103 with 56 ohm load attached) should not be less than 3/4 VRMS, or more than 1.5V RMS.	_____	VRMS
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4. Output Voltage (J3102 with 56 ohm load attached) should be between .2 and .3V RMS		
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at 4.0 KC (position "0")	_____	VRMS
at 3.9 KC (position "1")	_____	VRMS
at 3.8 KC (position "2")	_____	VRMS
at 3.7 KC (position "3")	_____	VRMS
at 3.6 KC (position "4")	_____	VRMS
at 3.5 KC (position "5")	_____	VRMS
at 3.4 KC (position "6")	_____	VRMS
at 3.3 KC (position "7")	_____	VRMS
at 3.2 KC (position "8")	_____	VRMS
at 3.1 KC (position "9")	_____	VRMS

DATE _____

TESTER _____

