CL	TMC SPECIFICATION	NO. S 978
REV: 0 A B		
COMPILED: lk	CHECKED:	APPD: 6/22/65
TITLE:		SHEET 1 OF 7

KMCU - 1

TEST PROCEDURE

FIG. 1

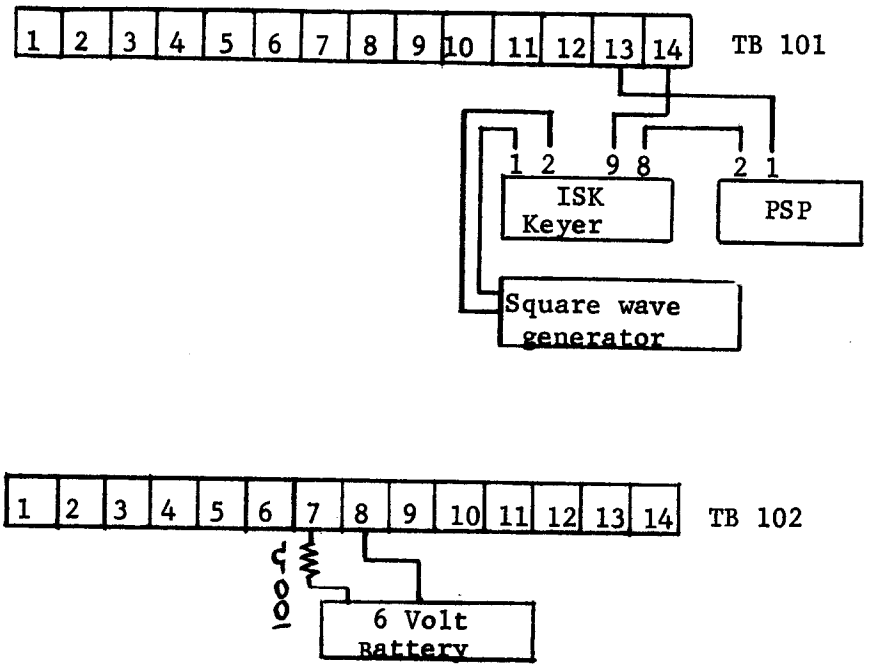
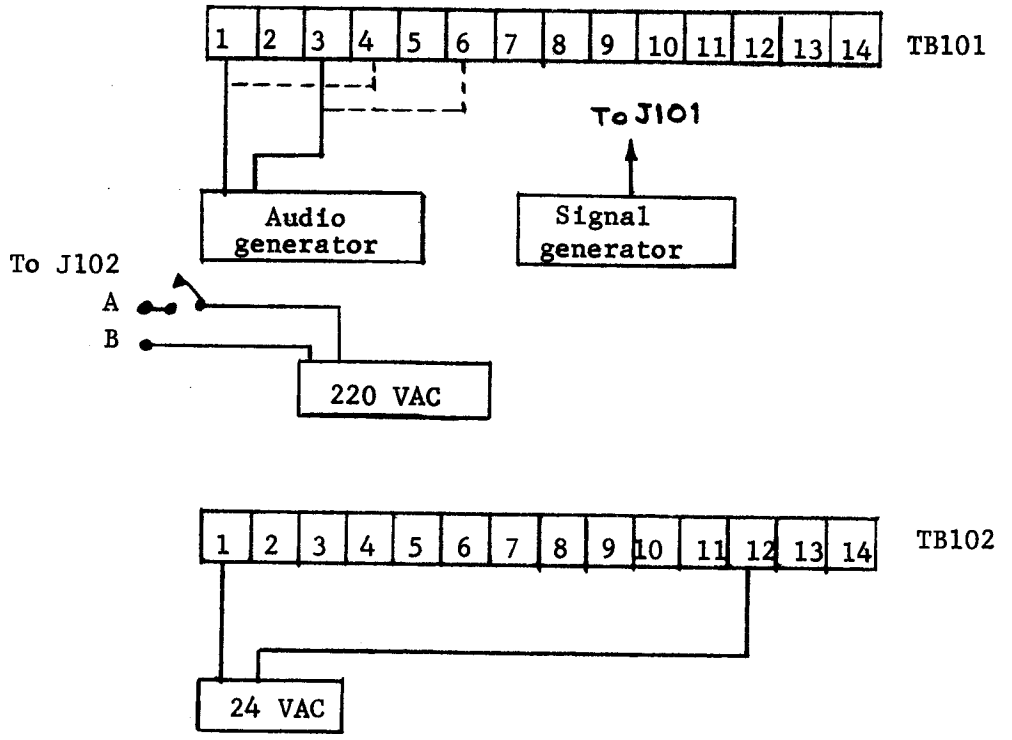

1 2 3 4 5 6 7 8 9 10 11 12 13 14
TB 101
1 2 9 8 2 1
ISK Keyer
PSP
Square wave generator
1 2 3 4 5 6 7 8 9 10 11 12 13 14
TB 102
100Ω
6 Volt Battery

FIG. 2


1 2 3 4 5 6 7 8 9 10 11 12 13 14
TB101
To J101
Audio generator
Signal generator
To J102
A
B
220 VAC
1 2 3 4 5 6 7 8 9 10 11 12 13 14
TB102
24 VAC

TEST EQUIPMENT REQUIRED

1. Audio Generator, H.P. Model 200 CD. Or equivalent.
2. Square wave generator, measurement, Model 71 or equivalent.
3. Signal generator, measurement, Model 82 or equivalent.
4. 24 VAC supply.
5. 15K Keyer
6. PSP power supply
7. 6 volt BATTERY.
8. Multimeter, Simpson, Model - 260
9. 100ohm resistor.

A. MECHANICAL INSPECTION:

1. Check for proper placement at printed circuit boards.
2. Check value of AC fuse, FI-F2, they should be 1/4 amp.

B. MANUAL KEYING TEST:

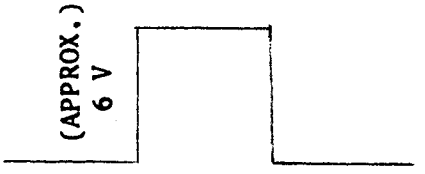
*NOTE - Check appropriate column on test report sheet.

1. Connect 115 VAC to J103 and turn power switch, 5-1, on power lamp should light.
2. Set KMCU-1 controls in the following manner, R-21-full CW, Keying Selector-50V, R-9 Mid Range, Keying Control - LOCAL.
3. Connect Simpson 260 set at RX-1 to terminal 5 & 6 (CHG) of TB-102, depress test key (S-3), meter should read Short. Release Key, meter should read Open.
4. Set R-21 Mid Range, depress test key, meter should read Short. Release key and meter will read short for approximately, 3-4 sec. at witch time it will read Open.
5. Repeat Test #3 for terminal 7 & 8 (RFC) - 9 & 10 (CMO).
6. Return R-21 to full-CW.

* NOTE - Check appropriate column on test report sheet.

C. REMOTE KEYING TEST:

1. Keying control Remote ; and test equipment set up per fig 1, sheet 2.
2. Set square wave generator output for 50 volts, and Frequency for 21 CPS.
3. Adjust PSP for 50 volts peak at pins 13 & 14 of TB-101 on KMCU-1.
4. Connect 6 volts BATTERY across terminals 7 & 8 of TB-102, connect scope across same terminal.
5. The following wave form should be observed.



6. Repeat Test 4 & 5 for terminals 9 & 10 of TB-102.

7. Change keying selector to 100 volts, at the same time adjusting PSP output to 100 volts at terminals 13 & 14 TB101 on KMCU-1.

8. Wave form on scope should be the same as in Test C-5.

9. Reduce square wave generator output to 0 volts.

10. Change keying selector 20 MA, and set PSP MA meter to read 20 MA.

11. Advance square wave generator output to 50 volts.

12. Wave form same as in Test C-5.

13. Repeat Test C-8 THRU 11 for 60 MA position.

14. This complets DC keying test remove loads from 13 & 14 of TB-101, also BATTERY from 7 & 8 of TB-102.

*NOTE - Check appropriate column on test report sheet.

D. TONE KEYING TEST:

1. With Keying control in Remote, change keying selector to tone bridge.

2. Connect audio generator to terminals 13 & 14 of TB-101.

3. Adjust generator output for .1 volts, & frequency at 400 CPS.

4. Connect Simpson 260 across terminals 9 & 10 of TB-102, meter should read Short.

*MOTE: Threshold control may have to be slightly rejusted.

5. Tune generator from 400 CPS. to 7000 CPS. meter must continue to read Short.

6. Turn off generator, meter should read Open.

7. Change keying selector to tone term and repeat test D-2 thur. 6.

*NOTE - Check appropriate column on test report sheet.

E. MONITOR TEST:

1. Connect test equipment as follows: and as per FIG. 2, sheet 2.

   Signal Generator .7 volts but at 20 MC to J-101. Audio generator .1 volts out at 300 CPS., to 1 & 3 of TB-101, 220 VC supply to A & B of J-102. Set audio monitor switch to channel 1.

2. With equipment connect as above, the ON AIR indicater (GREEN) Lamp will light.

3. Tune audio generator from 300 CPS. to 6000 CPS, GREEN light must remain on.

*NOTE - Repeat above test on Channel 2 input, terminals 4 & 6 of TB-101, and audio monitor switch set to channel 2.

4. Reduce audio out put to 0 volts GREEN light should go OUT and after approximately 2 sec. failure indicator, (RED lamp) will Start to flash.

5. Advance audio out to .1 volt.

6. Red Lamp should go out and Green Lamp will light.

7. Reduce signal generator output to 0 volts, green lamp will (Go out and red lamp should light.

8. Reduce audio generator to 0 volts. Connect 220 VAC to A & B of J-102. Ready Lamp (AMBER) should light.

*NOTE: Check appropriate column on test report sheet.

THIS COMPLETES TEST OF KMCU-1. REMOVE ALL TEST EQUIPMENT. AFFIX TEST STAMP TO BACK OF PANEL.

CL	TMC SPECIFICATION		NO. S 978
REV: 0 A B			
COMPILED:	CHECKED:	APPD:	SHEET 7 OF 7

TITLE: KMCU-1 TEST REPORT

SERIAL NO. _____

MFG. NO. _____

A. MECHANICAL INSPECTION:

1. Placement of printed circuit boards. _____
2. Primary Fuse. _____

B. MANUAL KEYING TEST:

3. CHG. Keying _____
4. K-2 delay _____
5. RFC to CMO Keying _____

C. REMOTE KEYING:

5 & 6. 50 Volt Keying _____
8. 100 volt keying _____
12. 20 MA keying _____
13. 60 MA keying _____

D. TONE KEYING TEST:

4. Tone bridge keying _____
5. Tone keying response _____
7. Tone keying _____

E. MONITOR TEST:

2. ON AIR Lamp _____
3. Audio response _____
4. Failure Lamp _____
8. Ready Lamp _____

TESTER: _____

DATE: _____

REVISION SHEET	THE TECHNICAL MATERIEL CORP. MAMARONECK NEW YORK	S-978 LIST NO. Ø

DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
6/23/65		1 of 7		O=ORIGINAL RELEASE FOR PRODUCTION.	
11/11/65	A	6	15154	Revised per EMN	
10-30-67	B	2, 3, 4 5, 6	18581	REV. PER EMN	