TMC SPECIFICATION

NO. S S 966

REV: D

COMPILED: JZ | CHECKED: [illegible] | APPD: [illegible] 6/10/65 | SHEET COVER OF

TITLE:

Typed by mtp 6/9/65

TEST PROCEDURE

for

R G C B - 1

TMC SPECIFICATION

NO. S 966

REV: 0

COMPILED: JZ | CHECKED: | APPD: | SHEET 1 OF 6

TITLE: TEST PROCEDURE FOR RGCB-1

Typed by mtp 6/9/65

I. EQUIPMENT REQUIRED

1. RGCB-1 Test Jig.
2. Simpson VOM 260 or equivalent.

II. PRELIMINARY ALIGNMENT

1. Inspect the unit for any visible shorts or miswires.
2. Turn BFO ON/OFF switch to ON position.
3. Test the resistance from J101-A to ground. The resistance should be infinite.
4. Test the resistance from J101-C to ground. The resistance should be infinite.
5. Test the resistance from C106-⊖ to ground. With the meter connected in Reverse Polarity, the resistance should be 200 ohms ±20%. For this test, all the boards must be connected. If A4245 is disconnected, the resistance will rise to 2 K or greater.
6. Test the resistance from B+ to ground. A good tie point to connect the meter to is F103. The resistance (using the meter in Positive Polarity) should be 2 K or greater.

III. ALIGNMENT PROCEDURE

1. Connect the main cable from the test jig to J102. Turn the BFO ON/OFF switch to ON position.
2. Connect the shielded cable from the test jig to J103 (Remote BFO in).
3. Turn both controls (ERROR and CORRECTOR) on test jig, to their maximum counter-clockwise positions (extreme left).
4. Conn ct the power cable and turn on the RGCB-1.
5. Set test jig selector switch to ERROR.

III. ALIGNMENT PROCEDURE - Cont'd

6. Adjust R108 (board A4280) for a reading of 4.7 volts. Turn ERROR control fully clockwise, and adjust R108 for -4.7 volts. Keep going back and forth until both voltages are equal and opposite. Voltage should be 5V ±5%.

7. Turn the ERROR control to the right. The right light on the RGCB-1 should turn on.

8. Place the direction switch on the test jig to the right position. The meter should indicate 110 to 120 V RMS. This indicates the correct rotation.

9. Place the direction switch on the test jig to the left position. The meter should indicate some low a-c voltage.

10. Turn the CORRECTOR control to the right (being careful not to overshoot) until the right indicating light turns off. Observe the meter. The voltage will stay in the same position or drop slightly for one second after which the meter will read ZERO. This is the brake voltage.

11. Turn the ERROR control to the right slowly. At an error of 0.3 volts or less, the right indicating light should turn on. NOTE: This voltage is 0.3 volts from whatever the meter was reading.

12. Turn the CORRECTOR control to the right carefully until the indicator light turns off.

13. Turn the ERROR control to the left until the left indicating light turns on. The panel meter should read 0.7 volts or less than its former reference. This is the sensitivity test.

14. With the direction switch on the test jig to the left position, the meter should read 115 volts. This indicates the correct rotation.

15. Place the direction switch in the right position. The meter should indicate some low a-c voltage.

III. ALIGNMENT PROCEDURE - Cont'd

16. Turn the CORRECTOR control to the left (being careful not to overshoot) until the indicating light turns off. The voltage stays the same or drops slightly for 1 second, and then returns to ZERO. This indicates the brake voltage.

17. Note that when the ERROR control is adjusted, the CORRECTOR control should turn about the same amount to turn off the indicating lights. Therefore, the controls should always be in approximately the same position when the indicating lights are turned off. The ERROR control should have the same sensitivity as in Step 11 when the rotation is in the same direction; i.e. either a continuous rotation right or left.

18. With an ohmmeter, test the resistance between TP1 and TP2. It should be ZERO. These test points are located on the test jig.

19. Turn the BFO ON/OFF switch to the OFF position. If the indicating lights (or light) turn on, they should turn off within four seconds.

20. Check the resistance between TP1 and TP2. It should be infinite ohms. These test points are located on the test jig.

21. Turn the ERROR control to the extreme right and to the extreme left. Both indicating lights should stay off. Turn the BFO ON/OFF switch to the ON position.

22. Disconnect the shielded cable from J103 and connect it to J104. Turn the RF GAIN ON/OFF switch on the RGCB-1 to the ON position.

23. Connect a 100 K load to the RF GAIN OUT, J105.

24. Connect a VOM d-c meter across the load resistor.

25. Adjust the ERROR voltage for ZERO volts, and adjust R143 (board A4280), the d-c reference control for a reading of -5 volts across the load resistor.

III. ALIGNMENT PROCEDURE - Cont'd

26. Adjust the ERROR voltage to the following voltages, and read the following output voltages ±5% across the load resistor:

ERROR Voltage	Output Voltage
+5V	ZERO
+4V	-1V
+3V	-2V
+2V	-3V
+1V	-4V
ZERO	-5V
-1V	-6V
-2V	-7V
-3V	-8V
-4V	-9V
-5V	-10V

27. Turn the RF GAIN ON/OFF switch on the RGCB-1 to the OFF position. The output voltage should drop to ZERO.

TMC SPECIFICATION

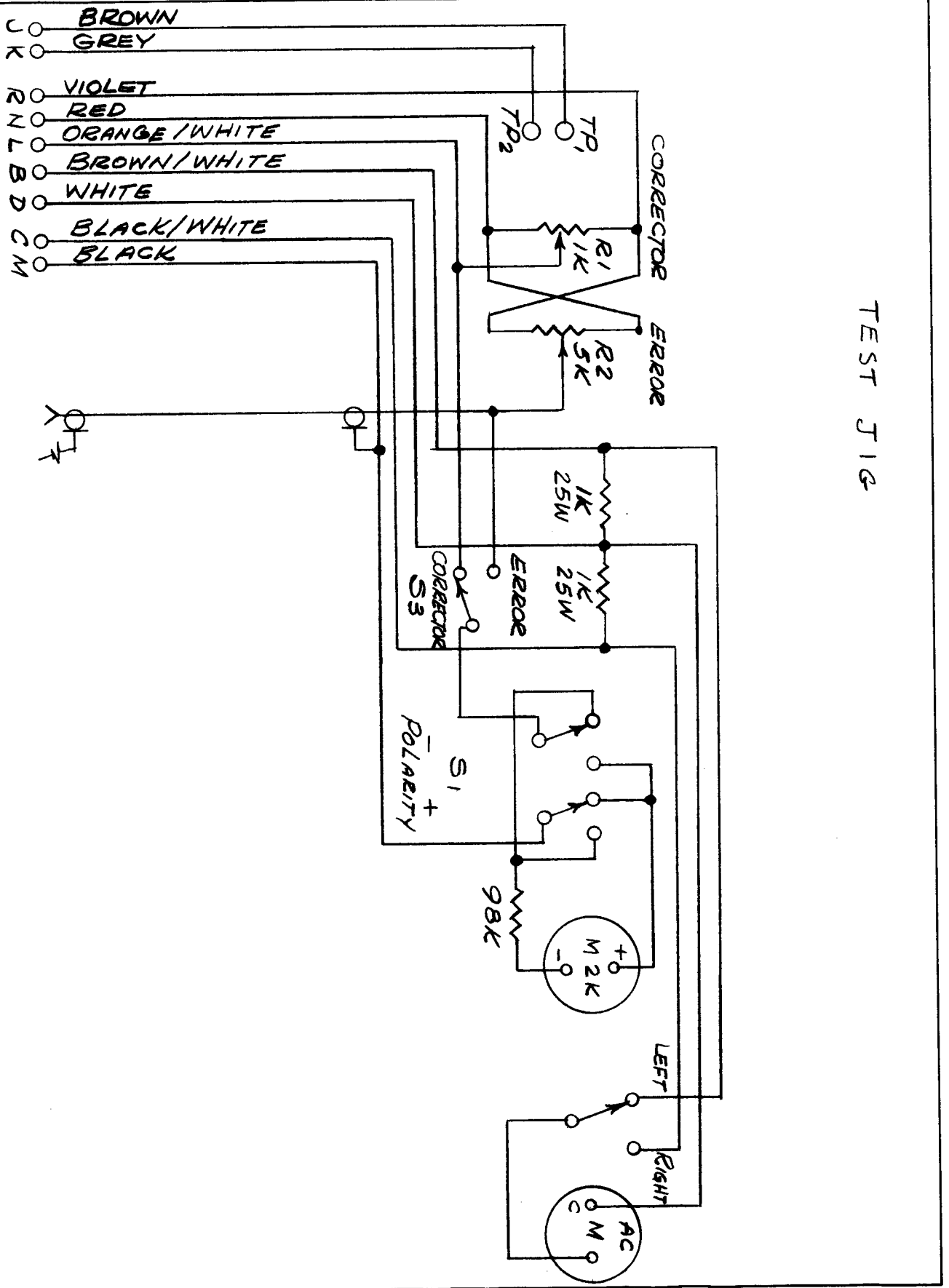
NO. S 966

REV:	0

COMPILED: JZ	CHECKED:	APPD:	SHEET 5 OF 6

TITLE: TEST PROCEDURE FOR RGCB-1

Typed by mtp 6/9/65



TEST JIG

TMC SPECIFICATION

NO. S 966

REV: D

COMPILED: JZ | CHECKED: | APPD: | SHEET 6 OF 6

TITLE: TEST PROCEDURE FOR RGCB-1

Typed by mtp 6/9/65

TEST DATA SHEET

SERIAL NO.: _____

MFG. NO.: _____

a. Direction of rotation is correct _____ OK

b. Indicating lights are correct _____ OK

c. Brake voltage _____ OK

d. BFO ON/OFF switch _____ OK

e. Sensitivity _____ OK

f. RF GAIN output _____ OK

g. RF GAIN ON/OFF switch _____ OK

DATE: _____

TESTER: _____

REVISION, SHEET				THE TECHNICAL MATERIEL CORP. MAMARONECK NEW YORK	S-966 LIST NO. Ø
DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
6/10/65		1 of 6		O=ORIGINAL RELEASE FOR PRODUCTION.	

TMC FORM MLR-1 2-65—AINS.