DATE 23/5/61 SH. 1 OF 6 COMPILED BY RWT/hh	TMC SPECIFICATION NO. S - 10069	
	TITLE:	JOB
APPROVED R. W. Thomas.		

PRODUCTION TESTING

OF

MODEL AFU-1

T.M.C. (CANADA) LIMITED

OTTAWA ONTARIO

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I N D E X

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1.) TEST EQUIPMENT REQUIRED

A) H.V. Leakage Tester: Slaughter Model 122

B) Signal Generator: Measurements Model 82or T.M.C. Model VOX.

C) 50 Ohm Probe-T-Connector: Hewlett Packard Model 455A

D) 50 Ohm Load Resistor: M.C. Jones Model 636N

E) V.T.V.M.: Hewlett Packard Model 410B

F) 50 Ohm Interconnect Cables: RG-8/U

G) Electronic Counter: Hewlett Packard Model 524D

2.) TEST PROCEDURE

2.1 Preliminary Inspection.

2.1.1 Inspect assembly against assembly drawing for errors.

2.1.2 Check that all screws are tight and see that the alignment of the coil clips is correct.

2.2 ELECTRICAL TESTS

2.2.1 With the unit assembled and a coil inserted, connect one lead of the H.V. Leakage Tester to the chassis and the other to the centre conductor of one of the SO-239 connectors.

Increase the applied voltage to 1,000 V AC and then rotate the capacitor shaft through 360°.

No crackling should be audible from the arc detector and the "A.C. Microamps" should not exceed 800 with the compensation knob set to Position "C".

2.2.2 See Figure I.

Connect a length of 50 ohm coaxial cable with a PL-259 plug on one end to the signal generator. Connect the PL-259 plug end of a similar 50 ohm cable to the first by means of a back-to-back connector. Connect the free end of the cable to the 50 ohm load via the VTVM Probe-T-Connector.

Set the signal generator to 4.4 Mc/s and increase the output level until the VTVM registers 1.0 volt unmodulated.

Remove the back-to-back connector linking the two lengths of cable and insert the Model AFU-1 in its place.

Ensure that the 4.4 - 8.3 Mc/s coil is clipped inside the unit and that the chassis is attached to the side plate tightly with all four screws.

Adjust the capacitor and observe that the VTVM reading passes through <u>two</u> sharp minima. The reading at the minima must be less than 0.1 V.

2.2.3 Repeat the procedure of 2.2.2 for a frequency of 8.3 Mc/s.

2.2.4 Repeat the procedure of 2.2.2 for frequencies of 8.2 Mc/s and 15.1 Mc/s but with the 8.2 - 15.1 Mc/s coil clipped in.

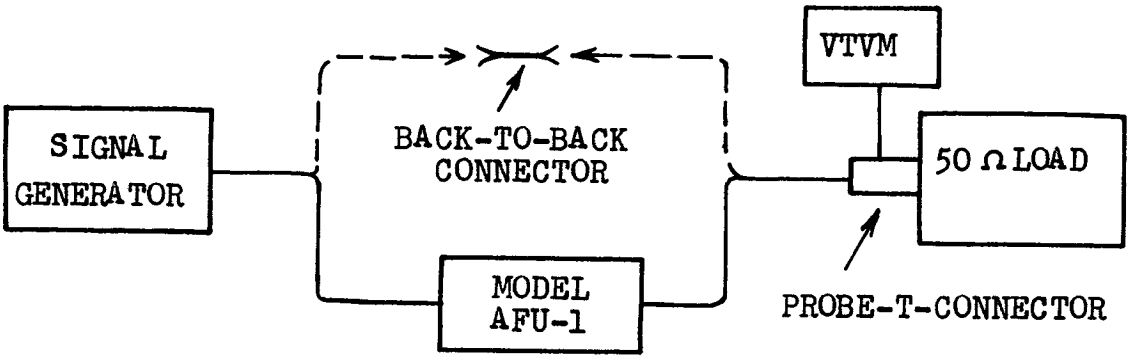

FIGURE I

3.) SETTING-UP INSTRUCTIONS

3.1 Assemble the equipment as shown in Figure II.

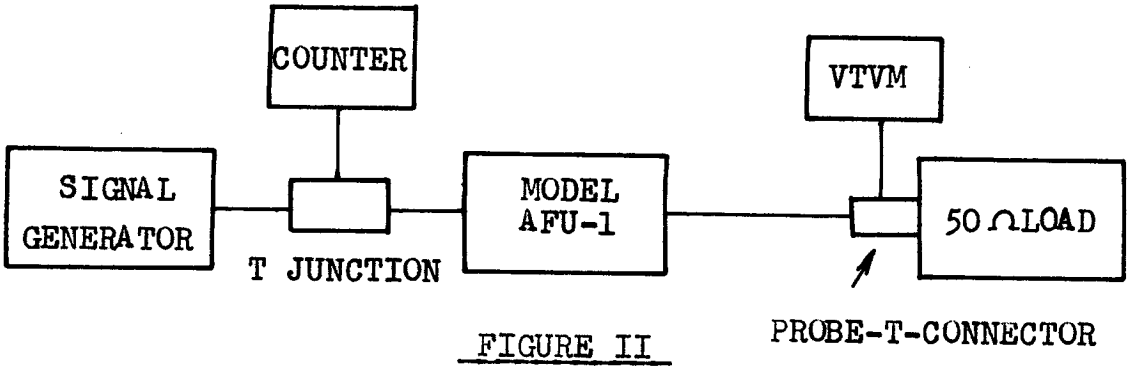

FIGURE II

3.2 Set the signal generator to the exact frequency required using the counter as a monitor.

3.3 Ensure that this frequency is covered by the coil clipped into the Model AFU-1.

3.4 Adjust the output level of the signal generator to give a reading of approximately 1 volt on the V.T.V.M.

3.5 Adjust the tuning capacitor on the AFU-1 to give the best minimum reading on the V.T.V.M.

Check the frequency once more by means of the counter and if still correct, lock the capacitor shaft, making sure that the shaft does not turn.

3.6 Ensure that the correct identification slip is inserted at the front panel of the unit. The slip should bear the transmitter frequency, which is one half of the frequency to which the AFU-1 has been set.