DATE 25/1/61 SH. 1 OF 8 COMPILED BY NK/hh	TMC SPECIFICATION NO. S - 10064	
	TITLE: FINAL TEST PROCEDURE FOR AMC 6-2/6-3	JOB
APPROVED	REV A	

FINAL TEST PROCEDURE

FOR

ANTENNA MULTICOUPLER

MODEL AMC 6-2, 6-3

T.M.C. (CANADA) LIMITED
OTTAWA ONTARIO

January 1961.

DATE 25/1/61 SH. 2 OF 8 COMPILED BY NK/hh	TMC SPECIFICATION NO. S - 10064	
	TITLE: FINAL TEST PROCEDURE FOR AMC 6-2/6-3	JOB
APPROVED M. Kr.		Dec.

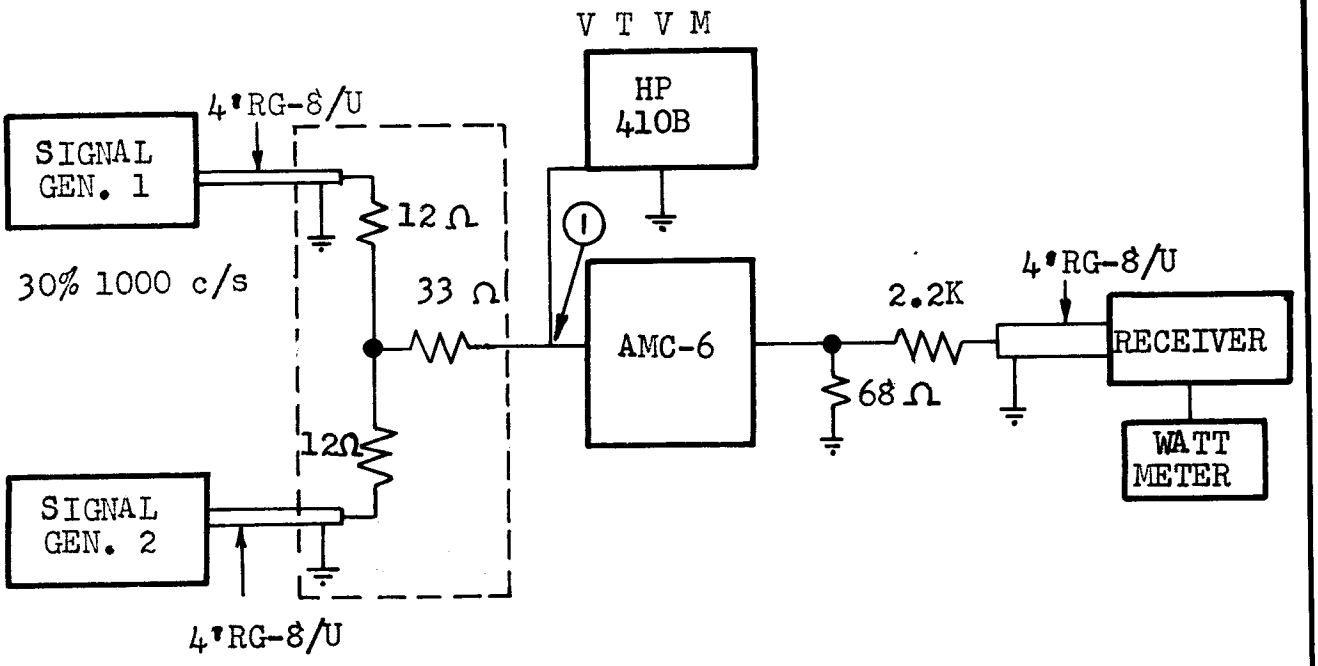
I N D E X

DATE Jan.25/61 SH. 3 OF 8 COMPILED BY NK/hh	TMC SPECIFICATION NO. S- 10064	
	TITLE: FINAL TEST PROCEDURE FOR AMC 6-2/6-3	JOB
APPROVED		Doc

FINAL TEST PROCEDURE FOR AMC 6-3

All measurements made in "FILTER IN" position.

1. MEASUREMENT OF CROSS-MODULATION (For Input Impedance 70 ohms).



(a) Each Signal Generator attenuator set to 200,000 uV and output adjusted at its prescribed frequency so that signal of .2 volts RMS R.F. appears at test point 1 measured with Hewlett Packard 410B Voltmeter.

(b) Attenuator settings reduced to 4200 uV.

(c) Receiver tuned to difference frequency and output adjusted to give reference level on the wattmeter.

(d) Output of Signal Generator No. 2 reduced to zero.

(e) Signal Generator No. 1 retuned to difference frequency, and attenuator setting adjusted to obtain reference level on the wattmeter.

(f) Spurious response is given by:

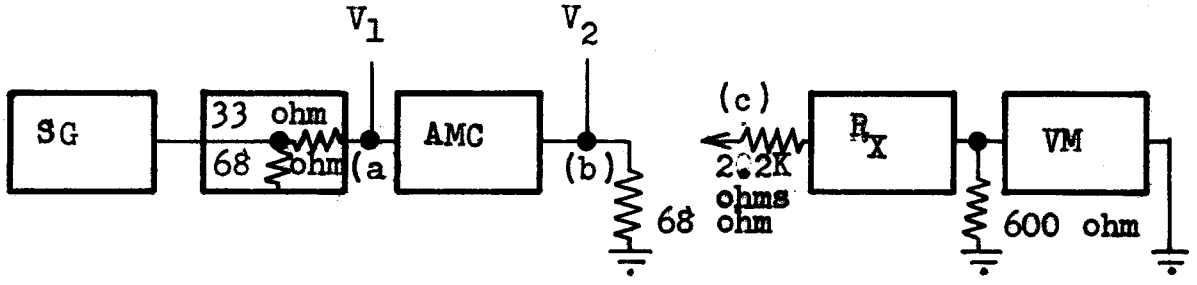
$$N \text{ db} = 20 \text{ Log}_{10} \frac{V2}{V1}$$

whence V_1 = 4.200 uV
and V_2 = attenuator setting obtained in (e)

Results to be better than 8 uV ($\leq$ - 55 db).

(g) Adjust bias potentiometer R155 for best compromise of cross modulation and gain(approx. 50 ohms at Pin 2 of V101 measured to ground)

2.) GAIN MEASUREMENTS: (For Input Impedance 70 ohms)



The 2.2K ohm resistor is to prevent any serious change in the AMC termination when the detector is connected.

(a) Connect point C to point A. Inject a signal of 100 uV (30% modulation) and calibrate receiver.

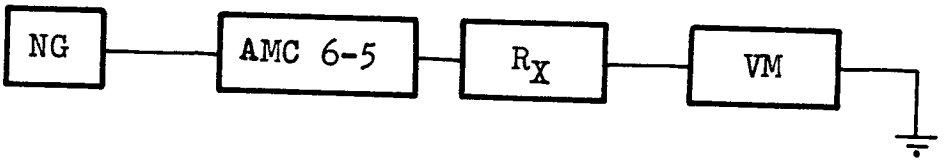
(b) Connect point C to point B and readjust signal generator to give same level as in step (a). The following readings are to be obtained at an output jack loaded with a 68 ohm non-reactive resistor.

FREQUENCY	V_1(uV)	V_2(uV)	GAIN DB	ATTENUATION DB
.53	100	≧5.6K		≧ 35db
1.0	100	≧1.6K		≧ 24db
1.5	100	≧ 200		≧ 6db
2.0	100	22/45	10±3	
2.2	100	22/45	10±3	
8.0	100	22/45	10±3	
16.0	100	22/45	10±3	
25.0	100	22/45	10±3	
28.0	100	22/45	10±3	

ALL MEASUREMENTS WITH FILTER "IN".

Gain in db = 20 log 10 $\frac{V1}{V2}$

3. NOISE MEASUREMENT



Follow the standard procedure for noise measurement in accordance with proceedings of I.R.E., 1953, paragraphs 10.1.2.2, 10.1.2.2.1, 10.1.4.

FREQ. Mc/s	NOISE FACTOR
2	≦6 db
3	≦6 db
8	≦6 db
16	≦6 db
28	≦6 db

4. JACK TO JACK ATTENUATION: (See Figure 1 attached)

Follow standard procedure of jack to jack measurement. The following results should be obtained: -

2.5 Mc/s	≥ 300K uV	≥ 70db
28 Mc/s	≥ 18K uV	≥ 45db

5. BACK TO FRONT ATTENUATION: (See Figure 1 attached)

Follow the standard procedure for back to front measurement. Attenuation to be greater than 300K uV.

6. INPUT IMPEDANCE:

2.5 Mc/s	VSWR ≤ 1.8: 1
28 Mc/s	VSWR ≤ 1.8: 1

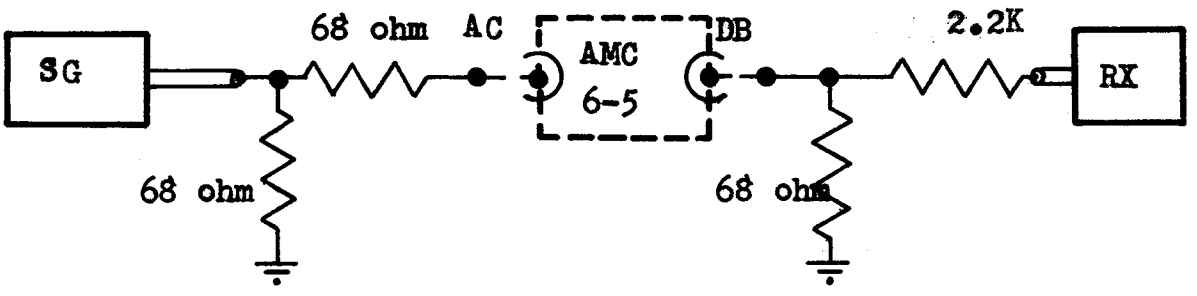
F I G U R E - 1

(For Input Impedance 70 ohms).

Calibrate receiver/wattmeter by connecting points A and B with Signal Generator Attenuator set for 10 micro volts. Interpose AMC between points A and B. For jack to jack attenuation C, D are output jacks. For back to front attenuation C is an output and D the antenna jack. Adjust Signal Generator Attenuator to regain wattmeter reading

$$\text{Attn} \text{ ---- } 20 \log_{10} \frac{\text{V reset}}{\text{V Cal.}}$$

Where V Cal is the 100 microvolt level and V reset is the attenuator reading necessary to regain wattmeter reading.



NOTES FOR TESTING AMC 6-2/6-3's WITH OTHER INPUT IMPEDANCES THAN 70 OHMS

For cross-modulation tests the input power for each signal is 0.25 uW. The following table gives you the voltage input levels for various input impedances:

IMPEDANCE IN OHMS	INPUT LEVEL IN uV
50 ohms	3500 uV
70 ohms	4200 uV
200 ohms	7100 uV

REVISION SHEET

THE TECHNICAL MATERIEL CORP.
MAMARONECK NEW YORK

S-10064
LIST NO.

DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
4/29/63	A	4	8929	Add letter "G" Adjust bias potentiometer, R155, for best compromise of cross modulation and gain(approx. 50 ohms at Pin 2 of V101 measured to ground.	

TMC FORM MLR-1, OGILVIE PRESS, INC. NO. 459M TYPEMASTER