

DATE 4/18/55
SH. 1 OF 4

TMC SPECIFICATION NO. S 255

COMPILED BY
A.R.B.

TITLE: TEST PROCEDURE - SPURIOUS RESPONSE AMC-6 JOB

APPROVED

1. Previous to Spurious Response Tests, the receiver employed as the detector should be tested as to its own spurious response. It should be in excess of 80 db.
2. Equipment should be set-up as indicated in Fig 1.
3. The value of the dummy antenna resistor R should be such that the combination of this resistor together with the generator internal impedance in the parallel combination of generators presents an impedance of 70 ohms to the AMC-6.
4. With the circuit constants known, and the input impedance of the AMC-6 being 70 ohms, The attenuator setting of each generator can be determined to produce a strong interfering unmodulated radio signal across the input of the AMC-6. Each of the interfering signals is then at a magnitude E at the multicoupler input, at which level the Spurious Response Tests are to be conducted.
5. Generator # 1 is set to F1, Generator # 2 is set to F2. The receiver is tuned to F3, where $F3 = F1 - F2$. The R.F. Gain Control is adjusted to give a convenient reference level at the detector output. This level should be well below the overload point of the receiver. The AVC action of the receiver should be disabled. Without altering the setting of the R.F. Gain Control, reduce the output of Generator #2 to zero, Generator #1 should then be adjusted to F3 with the output reduced to provide the same voltmeter indication.
6. The Spurious Response in db. may then be calculated.
$$S.R. = 20 \text{ Log } \frac{\text{Original attenuator setting (at F1 and F2)}}{\text{Attenuator setting at F3}}$$
7. A suggested setting for the signal generators is as follows:

Gen. #1	Gen. #2	
F1 (mc)	F2 (mc)	F3 (mc) = F1 - F2
4.5	2.0	2.5
9.0	2.0	7.0
13.0	2.0	11.0
19.0	2.0	17.0
29.0	2.0	27.0

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TMC SPECIFICATION NO. S 255

TITLE: TEST SET-UP SPURIOUS RESPONSE AMC-6 JOB

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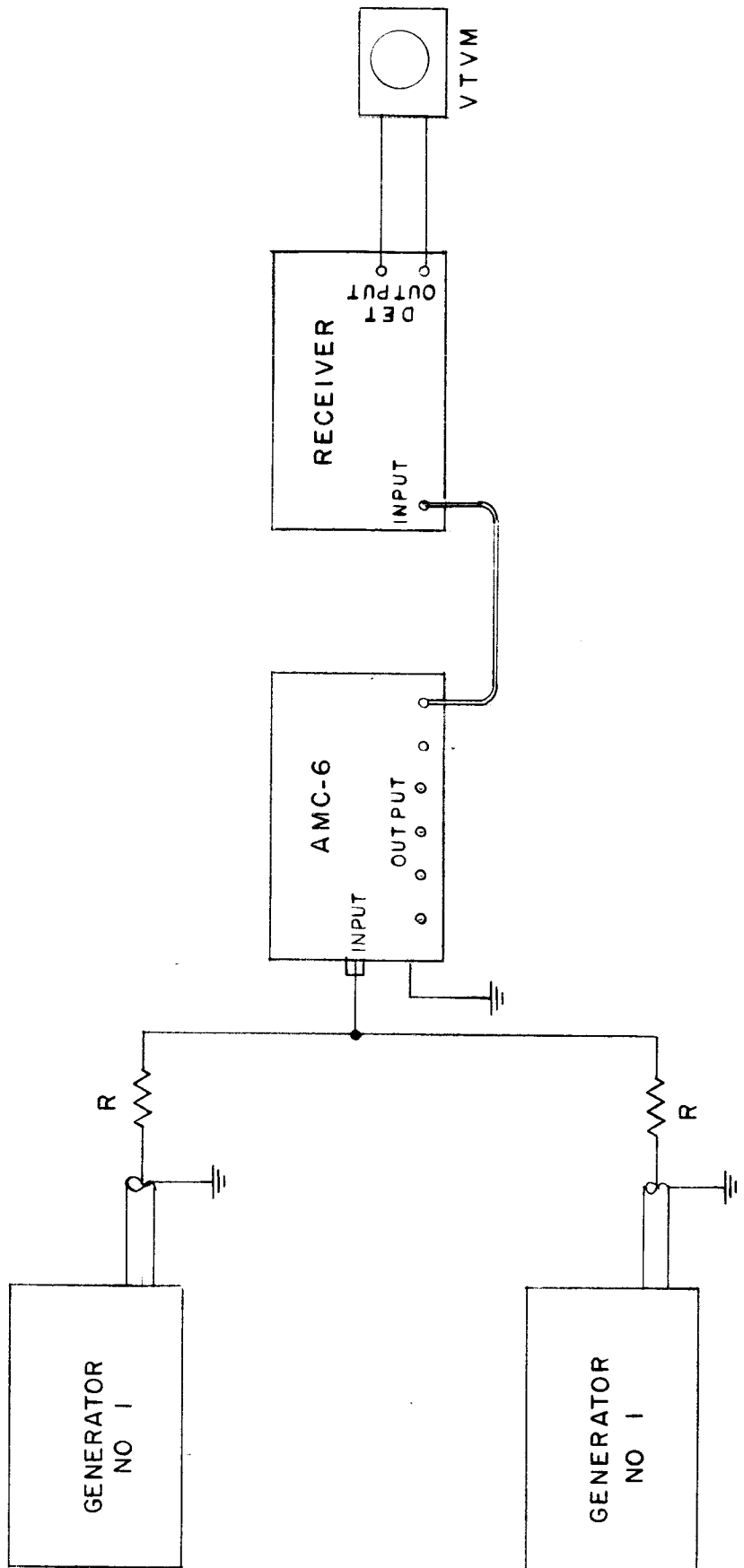


Fig 1

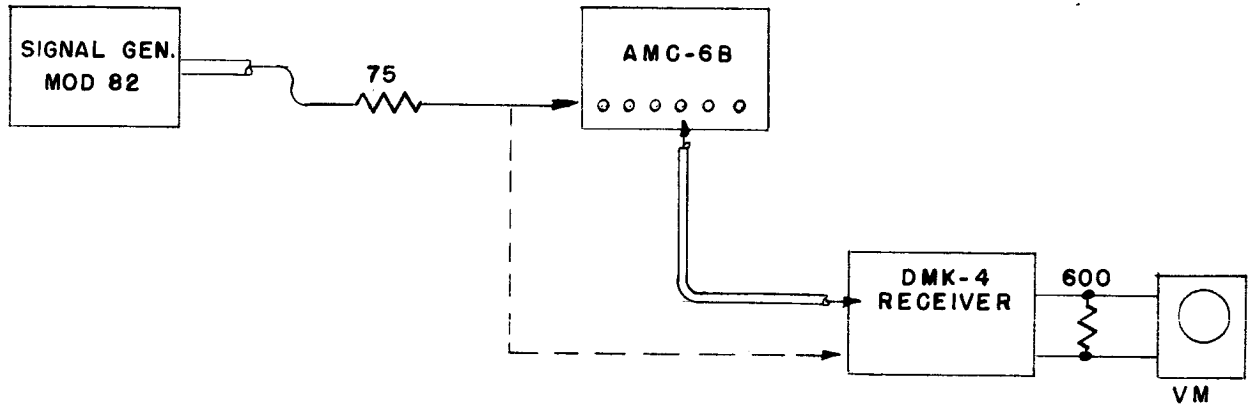
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TMC SPECIFICATION NO. S 255

TITLE: GAIN MEASUREMENT AMC-6

JOB

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1. Adjust Sig. Gen. for 10 uv output.
2. Receiver AVC "OFF", R.F. Gain below overload point.
3. With Sig. Gen. connected directly to receiver adjust Audio Output for convenient reference voltage V1.
4. Insert AMC-6 between dummy antenna and receiver and record new output voltage V2.
5. Gain or loss in db. = $20 \text{ Log } V1/V2$.
6. Perform at 2, 6, 11, 18, and 28 mc.

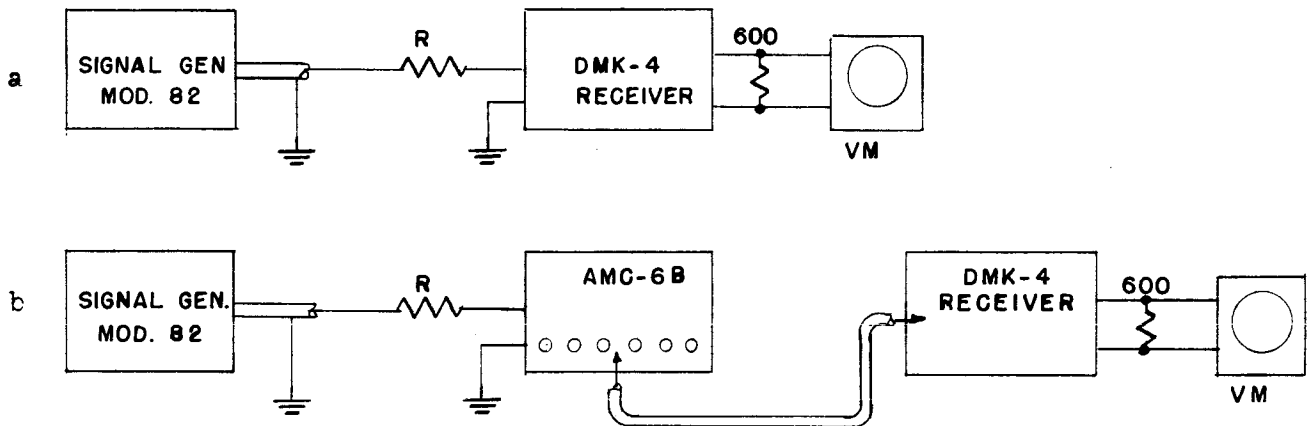
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TMC SPECIFICATION NO. S 255

TITLE: SIGNAL TO NOISE RESPONSE AMC-6

JOB

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1. Properly terminate generator with dummy R
2. Measure Signal/Noise of receiver by Modulation On/Off method at 2,6,11,18 and 28 mc. for a 10 to 1 signal to noise ratio. Receiver AVC "ON". R.F. Gain on "FULL".
3. Repeat, using test set-up (b)
4. Gain or loss in db = $20 \text{ Log } \frac{uv 1}{uv 2}$