


DATE <u>7-3-61</u>	TMC SPECIFICATION NO. S 588	
SH. <u>1</u> OF <u>6</u>		
COMPILED BY C. G.	TITLE: <u>TEST PROCEDURE FOR TR-090</u>	JOB <u>A</u>
APPROVED 		

1. EQUIPMENT REQUIRED:

- a. Sweep Generator Telonic Model HD7
- b. VSWR Kit Rho-Tector Model TRB-1 with 1:1 and 1.2:1 loads.
- c. Oscilloscope
- d. Detector Jig (1N34B)
- e. 200 ohm and 600 ohm transformer load jigs.

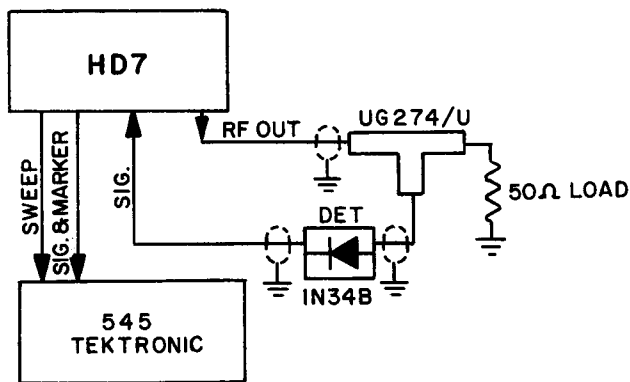
2. PROCEDURE:

- 1. To check insertion loss, set up equipment as indicated in figure 1.
- 2. To check frequency responses, set up equipment as indicated in figure 2.
- 3. To check VSWR, set up equipment as indicated in figure 3.
- 4. Record results on test data sheet.

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INSERTION LOSS:

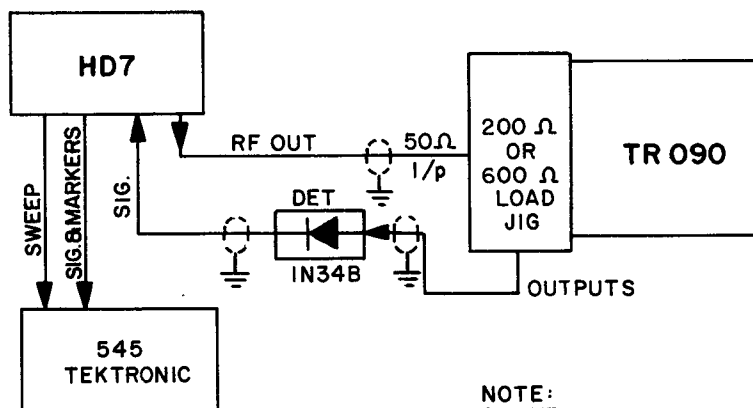
1.
 - a. Set up the equipment as shown in figure 1A and set the HD7 for one division of deflection on the scope and a sweep from 2 to 32MHz.



NOTE:
 USE 52 Ω COAXIAL CABLE.
 KEEP LENGTHS AS SHORT
 AS POSSIBLE.

FIG. 1A

- b. Remove the 50 ohm load and set up the equipment as shown in figure 1B using the 200 ohm load jig.



NOTE:
 DO NOT CHANGE THE SCOPE
 OR GENERATOR SETTINGS.

FIG. 1B

DATE _____
SH. 3 OF 6
COMPILED BY _____

TMC SPECIFICATION NO. S 588

TITLE: TEST PROCEDURE FOR TR-090

JOB A

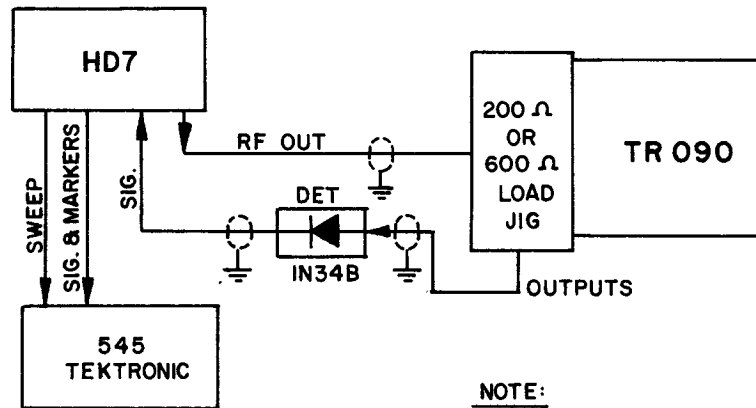
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- c. Check the output at the output jacks of the 200 ohm load jig. The trace on the scope should be between 1.25 and 1.59 divisions in amplitude. (This represents an insertion loss of \pm ldb or less).
- d. Replace the 200 ohm load jig with the 600 ohm load jig.
- e. Check the output at the output jacks of the 600 ohm load jig. The trace on the scope should be between 2.19 and 2.7 divisions in amplitude. (This represents an insertion loss of \pm ldb or less).
- f. Record results of steps c and d on test data sheets.
- g. Insertion loss \pm ldb maximum.

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2. FREQUENCY RESPONSE:

- a. Set up the equipment as shown in figure 2, with the TR-090 inserted into the 200 ohm load jig and check both outputs.
- b. Record the results on the test data sheet.
- c. Frequency response should be $\pm .5$ db from 2 to 32MHz.
- d. Repeat test using the 600 ohm load jig.



NOTE:

USE 52 Ω COAXIAL CABLE.
 KEEP LENGTHS AS SHORT
 AS POSSIBLE.

FIG. 2

DATE _____
SH. 5 OF 6
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TMC SPECIFICATION NO. S 588

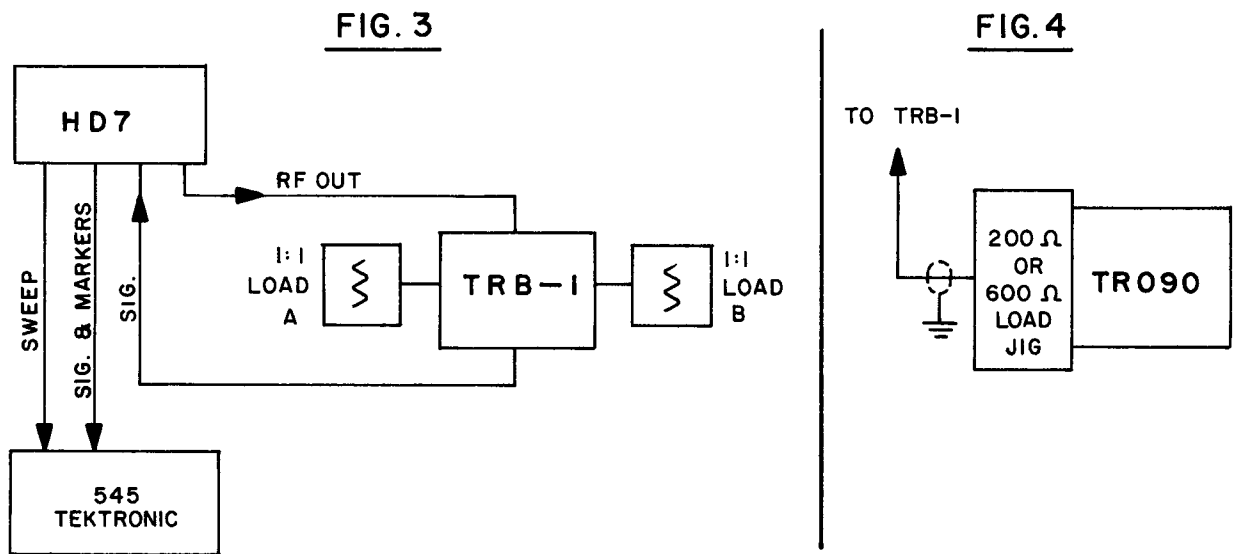
TITLE: TEST PROCEDURE FOR TR-090

JOB A

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3. V.S.W.R.

- a. Set up the equipment as shown in figure 3 and observe the output on the scope. There should be no deviation from a straight line.



- b. Replace load B with the 1.2:1 load.
- c. Set the scope to give deflection easily readable and note the maximum deflection.
- d. Replace the 1.2:1 load with a UHF to BNC adaptor and hook up the TR-090 as shown in figure 4 using a short 52 ohm cable and the 200 ohm load jig.
- e. Note the waveform on the scope. The VSWR should not exceed the calibrated line on the scope which represents 1.2:1 VSWR.
- f. Repeat steps d and e using the 600 ohm load jig.
- g. Record results on test data sheet.

DATE 7-3-61
SH. 6 OF 6
COMPILED BY
C. G.

TMC SPECIFICATION NO. S 588

TITLE: TEST PROCEDURE FOR TR-090

JOB A

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TEST DATA SHEET.

TR-090

MFG NO. _____

DATE _____

TEST FREQUENCY RANGE 2 TO 32MHz.

	200 OHM SIDE	600 OHM SIDE
VSWR 1.2 MAX.		
RESPONSE ± 0.5db MAX.		
INSERTION LOSS ± 1db MAX.		

TESTER _____

