| DATE 5/18/54 SH. 1 OF 5 COMPILED BY K.Z. | TMC SPECIFICATION NO. S-176 | |
|---|---|---|
| | TITLE: Production T sting of Disc. Networks for RSD-2 | JOB 170 |
| APPROVED KZ A. J. J. | Page Issue A | |

COMPLETE INSTRUCTIONS

PRODUCTION TESTING OF THE DISCRIMINATOR NETWORKS FOR THE RSD-2

| DATE 5/18/54 SH. 2 OF 5 COMPILED BY K.Z. | TMC SPECIFICATION NO. S-176 | |
|---|---|---|
| | TITLE: Production Testing of Disc. Networks for RSD-2 | JOB 170 |
| APPROVED KZ A.J.T. | Page Issue A | |

1. OBJECT: To pre-test the discriminator assemblies intended for use in the Model RSD-2 (A,B,C,D,& E). This examination will serve to weed out faulty units before they are potted in wax compound.

2. TEST EQUIPMENT REQUIRED:

(a). 1- Audio Signal Generator: Hewlett Packard 200 or Heathkit AG8

(b). 1- V.T.V.M. (High Impedance D.C. Type): Heathkit V6 or RCA WV - 97A

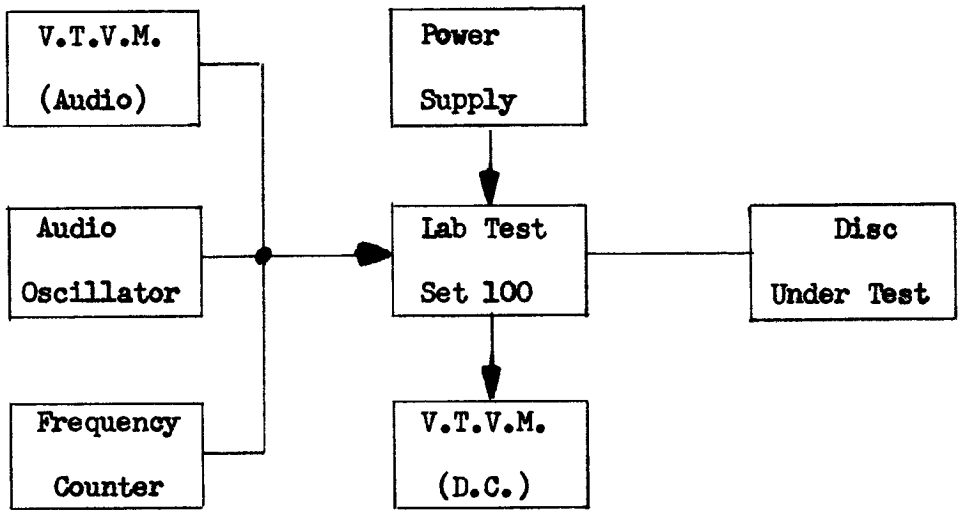
(c). 1- V.T.V.M. (Audio Type): Daven 170 or Heathkit AV2

(d). 1- Frequency Counter: Berkeley 5500 or Berkeley 5556

(e). 1- Power Supply: Lambda 25 or Lambda 41

(f). 1- Lab Test Set: TMC Model 100

3. GENERAL INSTRUMENT LAYOUT:



4. TEST INSTRUCTIONS:

WARNING

ENOUGH VOLTAGE APPEARS ACROSS THE DISCRIMINATOR TERMINALS TO CAUSE THE OPERATOR TO RECEIVE A DISTURBING SHOCK OR TO DESTROY A PORTION OF THE LAB TEST SET WHEN IT IS UNLOADED. FOR THIS REASON A SAFETY SWITCH HAS BEEN INSTALLED ON THE TEST SET FRONT PANEL.

UNDER NO CIRCUMSTANCES SHALL THE TESTER DEPRESS THE SAFETY SWITCH WHILE TOUCHING THESE TERMINALS OR WHILE THE DISCRIMINATOR UNDER TEST IS DISCONNECTED.

A. GENERAL:

(a). Connect the power supply to the Jones strip on the rear of the Lab Test Set 100 and set the B+ for 300 volts.

(b). Connect the remaining instruments as shown in Part 3.

(c). Set the Audio Oscillator output for 3 volts RMS.

B. THE RFG DISCRIMINATORS:

CHART I

| Unit | $F_1$ | $F_c$ | $F_u$ |
|---|---|---|---|
| FD 117-2125 | 2085 | 2125 | 2165 |
| FD 117-2295 | 2255 | 2295 | 2335 |
| FD 117-2465 | 2425 | 2465 | 2505 |
| FD-117-2635 | 2595 | 2635 | 2675 |
| FD 117-2805 | 2765 | 2805 | 2845 |

(a). Turn the Selector switch to Position 1.

(b). Referring to Chart I(Above) set the audio oscillator at the appropriate $F_1$ for the discriminator being tested.

4. TEST INSTRUCTIONS:

B. THE RFG DISCRIMINATORS (Ctd.):

(c). Connect the allegator clips which emenate from the Lab Test S t front panel to the similarly numbered terminals on the discriminator can. For the RFG units only terminals 2,3,and 5 need be connected.

(d). Depress the safety switch and rotate the bias control until the Output terminal voltage just reaches the point of zero.

Bias cont. must be within $\pm 45^{\circ}$ from center of rotation.

(e). Set the audio oscillator for $F_u$.

THE OUTPUT AT THIS FREQUENCY MUST BE -11 VOLTS OR GREATER (NEGETIVELY) TO BE ACCEPTABLE.

(f). If the unit is passable, use the inspector's stamp on the can bottom.

C. THE BFO OR HFO DISCRIMINATORS:

CHART II

| Unit | $F_l$ | $F_c$ | $F_u$ |
|---|---|---|---|
| FD 116-425 | 385 | 425 | 465 |
| FD 116-595 | 555 | 595 | 635 |
| FD 116-765 | 725 | 765 | 805 |
| FD 116-935 | 895 | 935 | 975 |
| FD 116-1105 | 1065 | 1105 | 1145 |
| FD 116-1275 | 1235 | 1275 | 1315 |
| FD 116-1445 | 1405 | 1445 | 1485 |
| FD-116-1615 | 1575 | 1615 | 1655 |
| FD 116-1785 | 1745 | 1785 | 1825 |
| FD 116-1955 | 1915 | 1955 | 1995 |

(a). Turn th Selector Switch to Position 2.

(b). Referring to Chart II set the audio oscillator at the appropriate $F_c$ for the discriminator being tested.

4. TEST INSTRUCTIONS:

C. THE BFO OR HFO DISCRIMINATORS (Ctd.):

(c). Connect the Allegator clips which emenate from the Lab Test Set front panel to the similarly numbered terminals on the discriminator can. All five terminals must be used in this case.

(d). Depress the Safety switch and rotate the Center Frequency control until the Output terminal voltage reaches zero. Frequency cont. must be within $\pm 45^{\circ}$ from center of rotation.

(e) Set the audio oscillator for $F_1$.

THE OUTPUT AT THIS FREQUENCY MUST BE -8 VOLTS OR GREATER (NEGETIVELY) TO BE ACCEPTABLE.

(f). Set the audio oscillator for $F_u$.

THE OUTPUT AT THIS FREQUENCY MUST BE WITHIN $\pm 20\%$ OF THE OUTPUT OBTAINED AT $F_1$ TO BE ACCEPTABLE. THIS VOLTAGE IS POSITIVE.

(g). If the unit is passable, use the inspector's stamp on the can bottom.

MODEL RSD-2

# REVISION SHEET

S-176

| DATE | REV. | PAGE | ITEM | DESCRIPTION | REMARKS | APP. |
|---|---|---|---|---|---|---|
| 5/20 | A | All | - | S-176 was S-207 | WDE | A.J. |