

APPROVED

G. T. O.

Pag Issue A

BAND WIDTH COMPARISON TEST

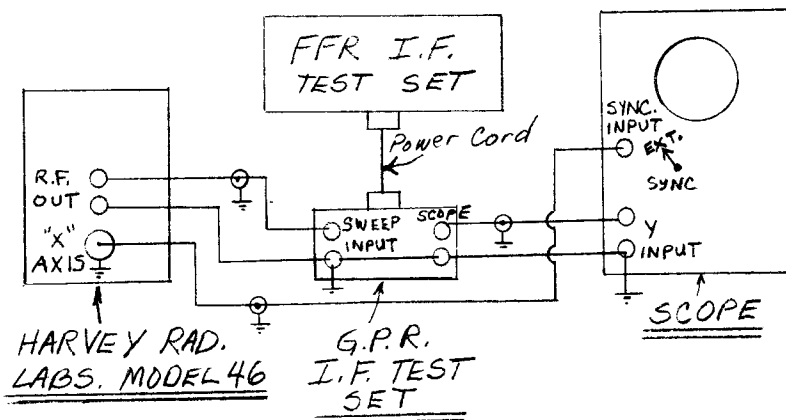
The mutual inductance must be adjusted by observing the swept frequency response of an I.F. transformer due to the fact that the correct value of coil spacing is in a region of constant voltage ratio between the two coils. Merely adjusting for the correct voltage ratio does not necessarily give the correct bandwidth for a transformer.

EQUIPMENT REQUIRED

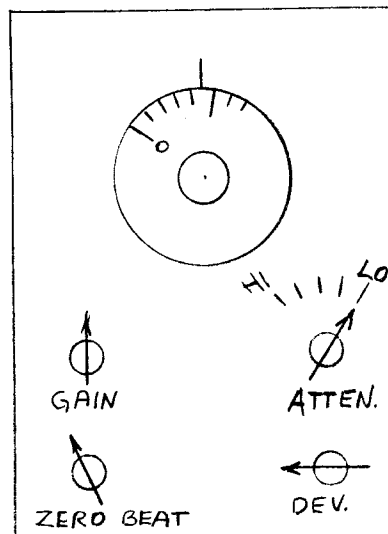
1. Oscilloscope
2. Harvey Radio Labs. Sweep Generator Model 46
3. F.F.R. I.F. Test Set
4. G.P.R. I.F. Test Set

TEST PROCEDURE

1. Connect the above equipment as shown in the following schematic:



2. Throw the "A.C. SWITCH" ON in the F.F.R. Test Set.
3. The Harvey Radio Labs Sweep Generator controls should be set as shown below.



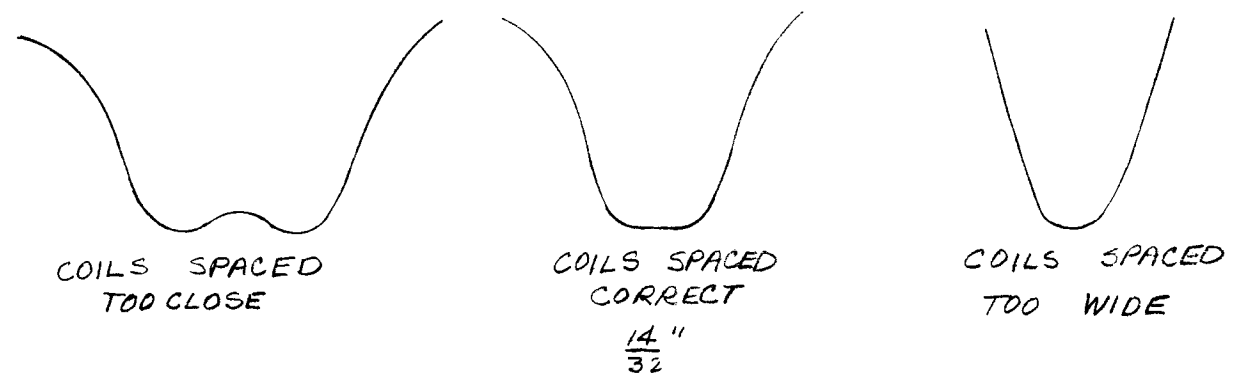
DATE 6/3/55  
SH. 3 OF 3  
COMPILED BY  
H. Herz HHH

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4. Mount a "STANDARD" G.P.R. I.F. Transformer in the G.P.R. Test Set.
5. Turn "B" On in the G.P.R. Test Set.
6. Observe the swept waveform on the scope.
7. Mount the G.P.R. "Standard" I.F. Mask of frequency response on the scope face.
8. Adjust the scope and sweep generator controls until the two waveforms coincide.
9. Remove "Standard" I.F. and put in the production units.
10. Peak slugs in both ends for maximum amplitude and flatness on the top of the waveform.
11. If I.F. production unit waveform does not coincide with the mask the spacing of the coils is incorrect.
12. The spacing of the coils must now be adjusted in accordance with the charts below:



13. Every hour of testing should be followed by a rechecking of scope controls with the "STANDARD" I.F. transformer.
- N.B. During the adjusting of the production units the Scope "X" and "Y" axis controls ONLY may be used to position the waveform opposite the mask.

DATE 1/16/56  
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Re: I.F. Transformer A-940

1. D.C. Resistance Measurement (100%)

D.C. resistance of all coils to be measured on an ohm-meter which has been standardized with the Standard (3.5 ohm) Resistor. Coils should measure 3.5 ohms  $\pm$  0.3 ohms.

2. Bandwidth Comparison Test (3%)

The first three transformers in every run of 100 must have the bandwidth comparison test as described on pg. 2,3. Spacing of the coils should be established and the remaining 97 transformers should be spaced accordingly. Bandwidth comparison is not required on the remaining 97 transformers.

It is very important in all production runs in groups of 100 ach all cores, capacitors and coil wire should be identical and from same stock pile.