HT-37 vfo alignment

The goal is to achieve the following VFO frequencies at the given points on the tuning dial.

dial	VFO frequency
3500	5.500MHz
3600	5.400MHz
3700	5.300MHz
3800	5.200MHz
3900	5.100MHz
4000	5.000MHz

1, Set OPERATION control at STANDBUY. Set band switch to 80. Warm up 15 minutes.

2, Connect a frequency counter to pin 1 of V8.

3, Set the FREQUENCY dial to 3900 kilocycles. Adjust L1 for 5.100MHz on the counter.

4, Set the FREQUENCY dial to 3600 kilocycles. Adjust C3 for 5.400MHz on the counter.

The adjustments of L1 and C3 interact. You may have to repeat steps 3 and 4 several times over or under correcting at one end or the other until you achieve the proper combination of L and C.

VFO BANDPASS TRANSFORMER ADJUSTMENT

NOTE, The bandpass transformer is labeled T1 and T3 in the documentation.

The goal here is to equalize the VFO output at the end points of the dial. The spec limits are 0.84vpp minimum and 1.13vpp max. We will first address the end point balance, then we will address the signal level.

1, Set OPERATION control at STANDBUY. Set band switch to 80. Warm up 15 minutes.

2, Connect a scope to pin 1 of V8. Note the signal level peak to peak at each end of the band.

3, Tune to the end with the lowest signal and adjust the top of T1 for an increase of ½ of the original difference between the two ends. Note the signal level.

4, Tune to the opposite end of the band and note the level. If the level is still higher adjust the bottom of T1 down by ½ the difference.

5, Repeat steps 2 through 4 until a balance is attained.

6, Once a balance has been attained set the dial to the point of highest VFO output. Adjust C15 for 1.13vpp at pin 1 of V8. Rotate the dial and find the point with the lowest output from the VFO, it should not be less than 0.84vpp.