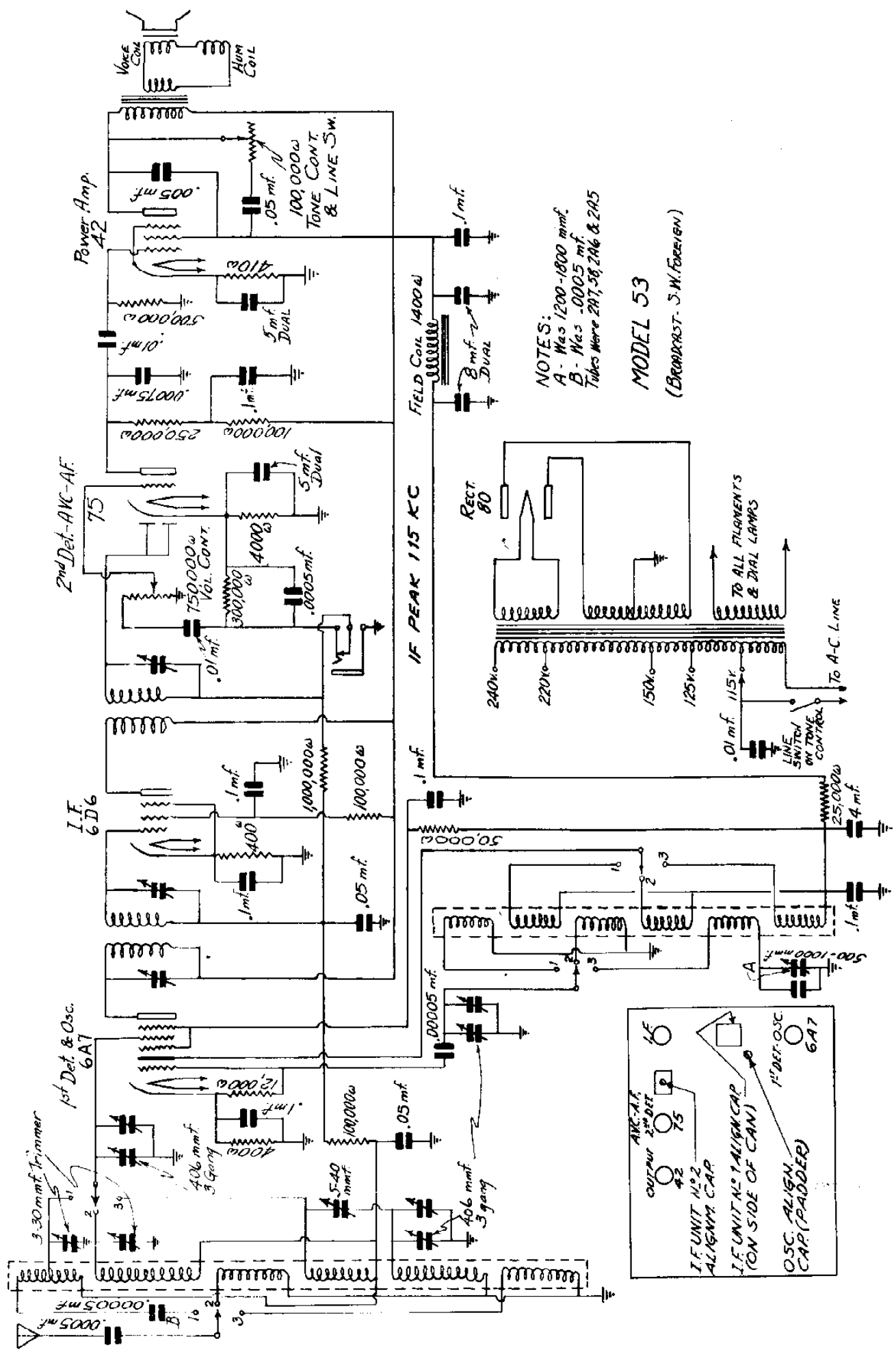


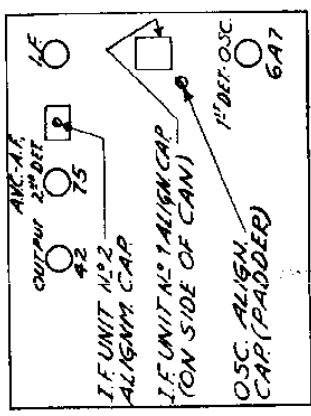
MODEL 53
Schematic
Socket Layout

PILOT RADIO CO. (New Co.)



NOTES:
 A - Has 1200-1800 mmf.
 B - Has .0005 mfd.
 Tubes Were 2A7, 5B, 2A6 & 2A5

MODEL 53
 (BRAND-5 W. FOREIGN)



PILOT RADIO & TUBE CORP.

ALIGNMENT OF INTERMEDIATE-FREQUENCY AMPLIFIER:

The I-F. peak frequency is 115 kc. Remove the chassis from the cabinet. To do this remove the slip-on knobs from the controls at the front of the receiver. Next remove the four screws which hold the chassis to the base of the cabinet. Set the signal generator at 115 kc. Connect the ground lead of the signal generator to the chassis of the receiver. Place the fixed condenser in series with the antenna lead from the signal generator (approximately .002 mf.) and connect the antenna lead to the control grid of the 6A7 tube. Adjust the intermediate-frequency capacitors of the I-F. unit No.1 and No.2 for maximum sensitivity. It is advisable to make these adjustments at least twice. Use a low input from the signal generator when aligning the receiver in order that greater accuracy may be obtained.

BROADCAST BAND ALIGNMENT:

Connect the antenna and ground leads of the signal generator to the antenna and ground leads of the chassis. Use a dummy antenna in place of the .002 mf. condenser, if one be available. Set the frequency range switch of the receiver in the broadcast position. Set the signal generator at 1400 kc. Rotate the tuning condenser of the receiver until the compass dial pointer coincides with the 1400 kc. calibration mark on the dial scale. Adjust the oscillator trimmer on the gang condenser until resonance is indicated in the loudspeaker circuit. Next adjust the heterodyne stage and preselector stage for maximum sensitivity. Next set the signal generator at a frequency of 1630 kc. Adjust the image suppression circuit condenser for minimum signal response, as noted in the loudspeaker circuit. When adjusting the image suppression condenser, a strong R-F. signal should be applied to the receiver. Again set the signal generator to 1400 kc. and adjust the oscillator, heterodyne stage and preselector trimmer condensers for maximum sensitivity. Next, set the signal generator at 600 kc. and rotate the tuning condenser on the chassis until resonance is noted in the loudspeaker output circuit. Adjust the 600 kc. alignment capacitor (padder) at the same time, slowly rocking the gang condenser to the right or left for maximum sensitivity. Again, set the signal generator at 1400 kc. Rotate the tuning condenser on the chassis until the compass dial pointer coincides with the 1400 kc. calibration mark on the dial scale. Readjust the oscillator, the heterodyne stage and the preselector circuit trimmer on the gang condenser for maximum sensitivity. Check the sensitivity of the receiver at 1000 kc. and 600 kc.

SHORT-WAVE BAND No.2 ALIGNMENT:

Set the frequency range switch of the receiver on position Band No.2. Set the signal generator at 6100 kc. (49 meters.) Adjust the Band No.2 alignment capacitor for maximum sensitivity. Set the signal generator at 2400 kc. Check the sensitivity of the receiver at this point also.

SHORT-WAVE BAND No.1 ALIGNMENT:

Set the signal generator at 17,800 kc. (16.85 meters). Rotate the tuning condenser until the signal is noted in the loudspeaker circuit. The compass dial pointer should then be approximately on the 17.8 megacycle mark on the dial scale. Adjust the Band No.1 trimmer for maximum sensitivity. Set the signal generator at 7500 kc. and check the sensitivity of the set at this point.

When making all adjustments, it is advisable to have the volume control and tone control turned on full in a clockwise direction.

HIGH BAND SECTION ALIGNMENT:

Rotate the frequency range switch to the position marked "High Band". Set the signal generator at 300 kc. Rotate the tuning condenser until the 300 kc. signal is noted in the loudspeaker circuit. The signal should be observed when the dial pointer is on the 1000 meter calibration. Adjust the First Detector and the Preselector circuit alignment capacitors for maximum sensitivity. There is no oscillator capacitor adjustment at 1000 meters.

Set the signal generator at 155 kc. Rotate the tuning condenser until the signal is noted in the loudspeaker circuit at 1930 meters on the dial. Adjust the "High Band" padder condenser for maximum sensitivity. Realign the set at 1000 meters and check the sensitivity at 1500 meters (200 kc.).