AM ALIGNMENT

CHANNEL SELECTOR: Set tuner to channel 4 position.

SIGNAL INJECTION: To tuner feed-thru, L2, in mixer grid circuit.

BIAS: -4.5 volts to I-F A-G-C, L2U, on V.O.S. panel.

SCOPE: Connect to L24U on V.O.S. panel, video second detector output.

OUTPUT LEVEL: Not to exceed 2.0 volts peak-to-peak during pole and sweep alignment. Not less than .2 volts peak-to-peak as null, during trap alignment, is approached.

1. Adjust tuner pole, T1A, for maximum at 47.4 MC. This is a temporary setting for trap alignment.

2. Adjust trap VC3 for minimum at 41.25 MC.

3. Adjust traps VC2C and VC4C for minimum at 47.4 MC.

4. Repeat steps 2 and 3. Bias may be reduced as trap minimum is approached.

5. Adjust tuner pole, T1A, for maximum at 45.0 MC.

6. Adjust VC1C and T2C for maximum at 42.7 MC.

7. Adjust T3C for maximum at 45.75 MC.

8. Adjust T1C for maximum at 43.85 MC.

* These traps are sharp. During adjustment, the generator output frequency may change with generator attenuator setting. This must be compensated for at the generator.

SWEEP ALIGNMENT

SIGNAL INJECTION: To antenna terminals through an antenna matching network (generator to 300 ohms).

CHANNEL SELECTOR, BIAS, SCOPE and OUTPUT LEVEL: Same as above under AM alignment.

1. Inject 65.75 MC, AM, 30% modulated signal, into antenna. Adjust fine tuning control for minimum output. Do Not Disturb fine tuning during balance of I-F adjustments.

2. Inject channel 4 sweep signal (69 MC with 6 MC sweep width) into antenna. If necessary, adjust the following poles to bring the curve within limits (See curve, figure 2).

a. Tuner I-F pole, T1A, to set carrier level.

b. T1C, 3rd V-I-F pole, to adjust curve tilt.

c. T2C, 2nd V-I-F pole, and VC1C, 1st grid pole, to adjust 42.7 MC (sound side) slope.

d. T3C, 1st V-I-F pole, to adjust carrier level.

4.5 MC TRAP ALIGNMENT

1. Inject 4.5 MC AM signal into L24U or use station signal.

2. Connect 4.5 MC detector (see circuit, figure 1) to L3U.

3. Connect 20,000 ohms/volt meter, set to 2.5 volt range, to detector output.

4. Turn contrast control fully clockwise (to maximum).

5. Adjust 4.5 MC trap (T1U) for minimum indication.

Figure 1. 4.5 mc, Detector Tube

Figure 2. Overall R-F I-F Response Curve
PHILCO Chassis 9L35 and 9L35U
Service Material, Continued

CHASSIS REMOVAL
1. Remove knobs and cabinet back.
2. Disconnect speaker leads and remove pilot lamp socket from mounting clip in front of control panel.
3. Remove 2 screws mounting range switch and 2 screws mounting control panel to top cabinet block.
4. Remove top front trim strip by removing 3 screws.
5. Remove safety glass by tilting top forward and lifting out.
6. Remove screw from mask and lift out.
7. Remove 2 screws holding top chassis bracket to chassis.
8. Remove 2 screws mounting bottom chassis bracket to bottom cabinet block.
9. Remove 4 nuts and washers mounting CRT frame to cabinet.
10. Remove chassis and CRT assembly from front.

NOTE: Exercise care to prevent damage to bottom trim strip when removing chassis.

RECEIVER CONTROL LOCATIONS
1. Vertical Linearity—Adjust with a thin screwdriver through the hollow brightness shaft.
2. Height—Adjust with a thin screwdriver through the hollow vertical hold shaft.
3. Horizontal Hold Centering—Adjust with a thin screwdriver through the hollow horizontal hold control shaft.
4. Width—Remove back. Width control is at lower left.
5. Fusible B+ resistor—Remove back. Resistor is a plug-in at left center of chassis, between yoke and tuner.
6. Tubes—All tubes (except CRT) are accessible after removing back. 1G1GT, high voltage rectifier, is in cage.

HORIZONTAL OSCILLATOR ADJUSTMENT
Allow set to warm up. Tune in a picture.
1. Short out the horizontal ringing coil, T2U, by placing a jumper across C15U.
2. Set the horizontal hold control, VRO2 shaft, to the center of its range.
3. Adjust the horizontal hold centering control, VR2 screwdriver adjustment, to set the oscillator to the correct horizontal line frequency (to stop the picture; it will not be stable).
4. Remove the shorting jumper from across C15U and adjust the ringing coil (T2U) core for stable picture sync.