Alignment Instructions for SABA Schwarzwald Automatic 14 V Stereo

AM Alignment

a) Cut out AVC by applying about 4.5 volts from a low-resistance battery to test points R (—) and Y (+).
b) Connect loudspeaker and output-meter to the output terminals.
c) Turn treble control to left stop.

460 kc IF Alignment

a) Press key M.
b) Connect a signal generator (460 kc, 30% ampl. mod.) through a 0.01 mf. capacitor to the control grid of the mixer tube ECH 81.

Attention! The coupling of the IF transformers decreases by turning the screw counter-clockwise and increases by turning clockwise.

IF Transformer IV

1) Adjust coupling subcritical with K 384/5.
2) Adjust both circuits with L 384 and L 385 to max.
3) If necessary repeat 1) and 2).
4) Adjust coupling critical with K 384/5 (max. output).

IF Transformer III

1) Adjust coupling subcritical with K 83/5.
2) Adjust both circuits with L 83 and L 85 to max.
3) If necessary repeat 1) and 2).
4) Adjust coupling critical with K 83/5 (max. output).

IF Trap 460 kc

1) Connect signal generator through dummy antenna (200 mmf. and 400 ohms in series) to antenna socket.
2) Press key L.
3) Adjust IF trap with L 1 to min.

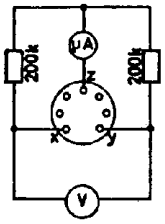
Alignment of Oscillator and Preselection

Check: with pointer stop on right, pointer must be at corresponding point on the dial. The rotor of the variable capacitor must be flush in the stator.

Connect signal generator through dummy antenna to antenna socket.

1a) Press key K. At 7.2 Mc adjust L 11 (osc.) and L 2 (ant.) to max.
1b) At 15.2 Mc adjust C 18 (osc.) and C 4 (ant.) to max.
1c) If necessary repeat 1a) and 1b).
2a) Press key M. At 570 kc adjust L 13 (osc.) and L 4 (ant.) to max.
2b) At 1520 kc adjust C 20 (osc.) and C 6 (ant.) to max.
2c) If necessary repeat 2a) and 2b).
3) Press key L. At 190 kc adjust L 15 (osc.) and L 6 (ant.) to max.

FM Alignment



a) Press key UK.
b) Connect a voltmeter (Ri ≧ 0.5 megohm, 10 volts full scale reading) to test points X and Y.
c) Connect zero-centre microammeter to test points X, Y and Z.

IF Alignment 10.7 Mc

Connect signal generator (10.7 Mc, unmodulated, output cable matched) through 1000 mmf. to low side of C 106 and chassis. Detune C 106 until the noise voltage disappears at the voltmeter (for this set receiver to 95 Mc).

IF Transformer IV (Ratio Detector)

1) Adjust coupling subcritical with K 381/3.
2) Adjust primary circuit with L 381 to max. at voltmeter.
3) Adjust secondary circuit with L 383 to zero at microammeter.

IF Transformer III

1) Adjust coupling sucritical with K 81/2.
2) Adjust both circuits with L 81 and L 82 to max. at voltmeter.
3) If necessary repeat 1) and 2).
4) Adjust coupling critical with K 81/2 (max. at voltmeter).

IF Transformer II

1) Adjust coupling subcritical with K 191/2.
2) Adjust both circuits with L 191 and L 192 to max. at voltmeter.
3) If necessary repeat 1) and 2).
4) Adjust coupling critical with K 191/2 (max. at voltmeter).

IF Transformer I

1) Adjust coupling subcritical with K 181/2.
2) Adjust both circuits with L 181 and L 182 to max. at voltmeter.
3) If necessary repeat 1) and 2).
4) Adjust coupling critical with K 181/2 (max. at voltmeter).

IF Transformer IV (Ratio Detector)

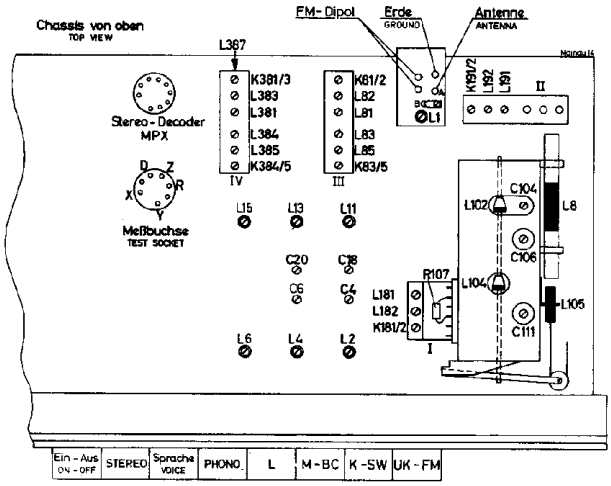
Signal generator must now be freq. mod. (freq. sweep 10 kc). Voltage between test points X and Y should be about 10 volts.

1) Tighten coupling with K 381/3 until the audio voltage at the output has fallen 20% below max.
2) Correct adjustment of secondary circuit with L 383 to zero at microammeter.
3) Correct adjustment of primary circuit with L 381 to max. at voltmeter.

Signal generator must now be 30% ampl. mod.

4) Adjust L 387 to min. audio voltage.
5) Tune out secondary circuit by turning out L 383.
6) Correct adjustment of primary circuit with L 381 to max. at voltmeter.
7) Adjust secondary circuit with L 383 to zero at microammeter.

Alignment of the FM Tuner

Connect VHF signal generator to dipole sockets.

1a) At 90 Mc adjust C 111 (osc.) and C 106 (r. f.) to max.
1b) At 100 Mc adjust L 105 (osc.) and L 104 (r. f.) to max. (L 105 by shifting the tuning rod, L 104 by shifting the core).
2) At 95 Mc adjust L 102 to max. (by shifting the core).
3a) Cut off plate voltage of r. f. ampl. (unsolder R 107). Increase input voltage to about 0.5 millivolt.
3b) Adjust neutralizing with C 104 to min.
3c) Re-solder R 107.
4) For exact alignment repeat 1) and 2).