HIS MASTER'S VOICE R53B, R43B
RECEIVER ALIGNMENT PROCEDURE

In any case where a component replacement has been made in either the tuned I.F. or R.F. circuits of a receiver, all circuits must be realigned. I.F. alignment should always precede R.F. alignment, and even if only one coil has been serviced the whole of the realignment should be done in the order given. An output meter should always be connected across the voice coil terminals of the speaker to indicate when the circuits are tuned to resonance. In carrying out the following operations, it is important that the input to the receiver from the signal generator should be kept low and progressively reduced as the circuits are brought into line, so that the output meter reading does not exceed about 1 volt.

I.F. ALIGNMENT

Set receiver controls as follows:

Volume Control — Max.
Bass Control — Pos. 5.
Treble Control — Pos. 5.
Wave - Change — Medium - Wave "Distant".
Tuning Control — Condenser fully enmeshed.

(1) Connect the output of a signal generator through a 0.1 mF. condenser to the stator plates of the front section of the ganged condenser.
(2) Tune the signal generator to exactly 457.5 Kc/s.
(3) Adjust the I.F. transformer trimmer screws for maximum reading on the output meter, commencing with the second I.F. transformer and following with the first.
(4) Continue this alignment on each transformer in turn until no greater output can be obtained. It is necessary to repeat this procedure twice to ensure correct alignment.

Note: If the trimmer screws are screwed too far in, it may be possible to obtain a false peak due to coupling effects between the iron cores. Start alignment of each individual transformer by first screwing its core well out, and then advancing the core into the coil until resonance is obtained.

R.F. ALIGNMENT (MEDIUM-WAVE)

(1) With the controls set as for I.F. alignment, connect the signal generator output leads in series with a 200 mmF. condenser to the aerial and earth terminals of the receiver.
(2) Check that, when the gang is fully enmeshed, the pointer coincides with the setting line at the extreme right-hand side of the dial scale.
(3) Tune the signal generator to 600 Kc/s.
(4) Rotate the tuning knob until the pointer is exactly under the 600 Kc/s calibration mark on the dial and adjust the padder screw for maximum response.
(5) Tune the signal generator to 1500 Kc/s.
(6) Rotate the tuning knob until the pointer coincides with the 1500 Kc/s calibration mark and adjust the oscillator trimmer and aerial trimmer in turn for maximum response.
(7) Repeat operations (3) to (6) inclusive for correct alignment.

R.F. ALIGNMENT (SHORT-WAVE)

(1) Set wave-change switch to "Short-Wave" (extreme anti-clockwise) position. Remove the 200 mmF. condenser from the output lead of the signal generator and replace with a 400 ohm non-inductive resistor; connect to the aerial and earth terminals as before.
(2) Rotate the tuning knob until the pointer coincides with 17 Mc/s calibration mark.
(3) Tune signal generator to 17 Mc/s.
(4) Adjust the S.W. oscillator trimmer for maximum output. Two settings may be found at which this trimmer will peak; care must be taken that the setting finally chosen is that which gives the lowest capacity. Failure to select the correct position of the two will cause serious tracking error and loss of sensitivity.
(5) Tune the signal generator and receiver to 17.5 Mc/s.
(6) Adjust the S.W. aerial trimmer for maximum output whilst "rocking" the gang condenser slightly to obtain the true resonance point.
(7) Note that the signal is still tuned in correctly on the dial; if not, readjust the S.W. oscillator trimmer slightly until the dial reads correctly, and repeat operation (6).