Model 038K

Model T2-69

H.M.V. 038K & T2-69

DISMANTLING

(1) Disconnect power plug from mains.

(2) Check that pickup is securely fastened to its rest.

(3) Remove the lead of the external speaker from its winding posts; remove the screw holding the strap to the base section and take the lid off.

(4) Remove the two screws located on each side of the motor board.

(5) Remove the front (Phillips head) screw.

(6) Grip the escutcheon firmly at each corner and lift the motor board up, tilting it backwards. Care must be taken, as the internal speaker leads are short and undue haste may cause damage.

(7) Lift the motor board until the internal speaker is readily accessible; then slide the lead terminals off the contacts on the speaker, noting the polarity.

(8) The whole assembly can now be lifted clear of the cabinet for easy access to all parts.

Note: In order to avoid possible damage to the output transistors it is advisable — if testing is to be carried out after dismantling— to connect the external speaker and substitute a 47 ohm load for the internal speaker.

Access to the underside of the printed board can be gained by first unscrewing the cooling fins and then removing the two screws holding the printed board to the chassis, after unsoldering the necessary leads.

IMPORTANT

It is desirable that, when any repairs are done to the audio amplifiers, the supply rail be reduced to half the nominal voltage to enable a quick check on the performance to be made without the possibility of damage occurring due to faulty components, etc.

This is best done by inserting a series resistor of 1000 ohms between the rectifier diodes and the supply rail before the electrolytic filter capacitor.

With the function switch to "Gram" (with Model T2), the supply rail (under no-signal conditions) for both models will be 14.5 volts; the voltage at the junction R31/32 (Vm) will be 6.0 volts.

The amplifiers will continue to operate, but at reduced power and with non-symmetrical clipping of the output stage due to the shift in centre voltage Vm. If the amplifiers do not operate, do not restore the full supply rail voltage until the fault has been rectified.

Note: It is most important that the compensating diodes, biasing the output stage, are functioning correctly.

Incorrect polarisation or failure of either diode will cause self-destruction of the transistor output pair.

A check on the voltage indicated (1.2V) and the total amplifier quiescent current will verify that these diodes are functioning correctly.

ALIGNMENT PROCEDURE, MODEL T2-69

In any case where a component replacement has been made in either IF or RF circuits of the receiver, all circuits should be realigned. IF alignment should always precede RF alignment. An output meter, having a resistance of at least 500 ohms, should be connected across the voice coil of one speaker.

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, in order that overloading shall be avoided.

Note:

(a) The tuning tool should be a small plastic screwdriver with a tip which fits cleanly into the tuning core.

(b) When tuning the core, do not use any downward pressure, as the threaded former has enough resilience to detune the circuit, after the pressure is released.

IF Alignment

(1) Set the signal generator to 455 Kc/s, with 30% modulation at 400 c/s. Turn the receiver volume control to maximum and set the tuning control to the LF end of the band.

(2) Inject the signal into the aerial section of the gang. Adjust the cores of T5, T4 and T3 in that order for maximum reading on the output meter. Start alignment of each IF transformer by first screwing its core well out, and then screwing the core into the coil until resonance is obtained.

RF Alignment

(1) Set the controls as for IF alignment. A coil comprising 3 turns of 16-gauge DCC wire about 12" in diameter should be connected across the output terminals of the generator. The coil is placed concentric with the rod aerial at a distance of not less than one foot from it.

(2) Check that the pointer coincides with the setting line when the gang capacitor is fully enmeshed. If necessary, the pointer may be adjusted by releasing the two grub screws on the dial drum to the gang. After adjustment, the grub screws should be tightened.

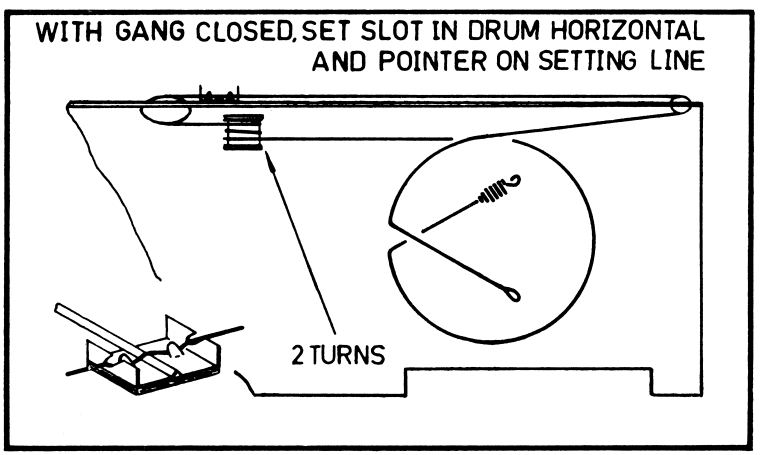
(3) Set signal generator to 600 Kc/s.

(4) Turn tuning control until the pointer is exactly over the 600 Kc/s calibration mark. Adjust the core in T2 for maximum reading on the output meter.

(5) Set signal generator to 1500 Kc/s.

(6) Turn tuning control until the pointer is exactly over the 1500 Kc/s calibration mark. Adjust VC3 and VC1 in that order for maximum reading on the output meter.

(7) Repeat operations (3) to (6) for optimum alignment.



DIAL CORDING DIAGRAM.