Form 1079

OVER THE SOLDERING IRON
RCA VICTOR
PREPARED FOR THE INFORMATION OF RCA VICTOR DISTRIBUTORS' SERVICE MANAGERS

SERVICE DIVISION - RCA MANUFACTURING COMPANY, INC. - CAMDEN, N. J. - FEBRUARY 24, 1938

Hum and Instability - Models 94X, 94X1, and 94X2

Residual hum level evidenced on some of these instruments, both on and between carriers, may be reduced to an insignificant intensity by making the following circuit changes: -

(1) Cut off the blue lead from the dry electrolytic capacitor and disconnect it from the 6J7 cathode terminal.

(2) Install a 0.25 mfd. paper capacitor, Stock #30965 from the 6J7 cathode terminal to chassis ground.

(3) Try reversing speaker voice coil leads and leave them connected in the arrangement giving minimum hum.

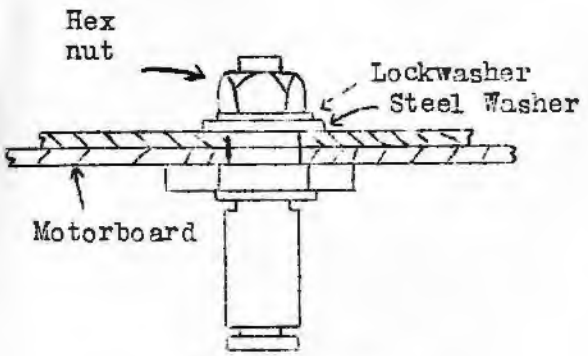
Should there be a tendency for the receiver to oscillate only when tuned to a station, the lead from the 2516G plate to the output transformer should be carefully dressed away from the 6J7 socket, preferably along the rear side of the chassis. The following circuit changes should be effected when aggravated cases of instability are experienced: -

(1) 94X-94X1-94X2 -- Change 2516-G plate by-pass capacitor C-11 (marked 72050-569) so as to connect from the 2516-G plate to 2516-G heater (H) lug adjacent to cathode (K).

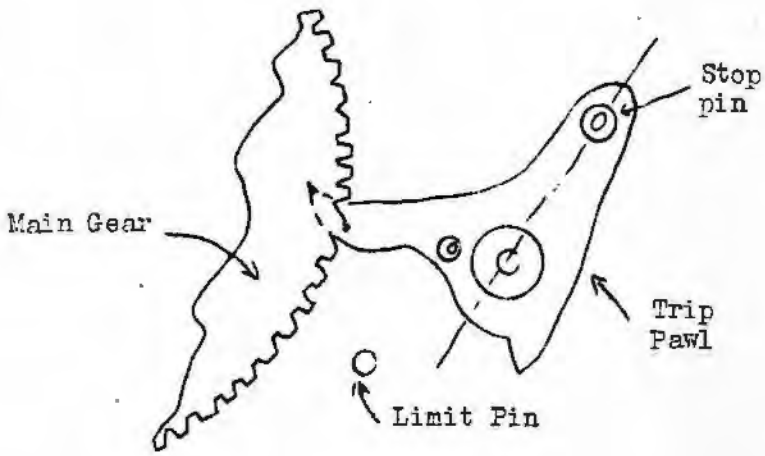
(2) 94X only -- Change 6J7 screen by-pass capacitor C-8 (marked 72050-503) so as to connect between 6J7 screen (SG) and the 6J7 heater (H) lug adjacent to cathode (K).

REPLACEMENT MOUNTING STUD STOCK #31023
For Automatic Record Changer Cam and Gear Assembly

Stock #31023 cam and gear mounting stud is being made available for service replacement use on the large automatic record changer mechanisms such as are employed on Models 331, 341, 381, D11-2, D22-1, 9U, 9U2, 15-U, U-106, U-107, U-108, U-109, etc. The stud, illustrated below, will facilitate and simplify repairs necessary where the original part has become loosened in its mounting; due to the fact that it is mountable by means of a nut and washer.



Stock #31023 Stud



Installation and Adjustment

(1) Remove entire motor assembly from the motor board.

(2) Remove cam and gear from stud.

(3) Extract original stud from board, using pin punch.

(4) Straighten motor board being sure it is normally flat in vicinity of stud mounting hole.

(5) Install new stud with nut and washers provided. It must be perfectly square or perpendicular to the motor board.

(6) Re-install cam and gear. Revolve the gear so as to carry mechanism thru a change cycle several times and note the engagement of roller on main link and the cam of the main gear. Bend the trip pawl stop pin toward or away from the lever so as to vary the roller engagement as required. The bend should be in the direction of the center line between pawl mounting stud and stop pin. The roller must be prevented from striking the edge of inside of the cam and causing a bind.

(7) If pin which limits movement of the trip pawl is sheared off from the motor board - replace it with a standard 8-32 screw, using locknuts to secure it to the board.

(8) Replace motor and adjust its position to give a free-running mesh between the pinion and the automatic main gear.

(9) Cover the main gear and cam with light grease such as "Socony-Vacuum No. 2".

RECTIFIER FAILURES - Model ACR-155

It is to be noted that the 5W4 tube may fail during the first few minutes of initial operation if the set has been unused or left standing idle for a protracted period. This condition results from filter electrolytic capacitors which have temporarily lost their capacitance or become "unformed." A very high surge current (beyond capacity of 5W4) is drawn by these capacitors, if in such a condition. In order to obtain correct operation, and proper forming of the capacitors, a 5T4 tube should be installed in the 5W4 position. It may be necessary to allow as much as 20 minutes after the set has been first turned "on" for the capacitors to form. Heating of the unit is normal during this period. The forming will be maintained indefinitely if the receiver is used frequently.

MOLDED MICA CAPACITORS

All replacement molded mica toothpick capacitors are built to the minimum tolerance specification, so that only one unit of each particular value must be stocked; this unit being usable in all applications irrespective of the tolerance requirement. Some capacitors removed from instruments will therefore have numerical markings that do not correspond to those of the replacement supplied. Molded mica capacitors now being used have markings that correspond to their capacitance value in micromicrofarads. Example: - 270 indicates 270 mmfd.

VIBRATOR HUM - Model 8M

Some instruments may produce a mechanical hum which is accentuated when the instrument is mounted in a car and attached to the instrument panel. If this condition is apparent, a strip of felt 1 3/4" X 1 1/4" X 1/2" should be installed between the vibrator unit and the power transformer, and cemented to the transformer.

SERVICE NOTE CORRECTIONS

Models 85E and U-102E - Stock #30607 Transformer should be rated 105-125/200-250 volts, 50-60 cycles. Stock #14657 should be eliminated from parts list.

Models 87K1 and 87T2 - Add to parts list Stock #30846, Adjustable Core and Stud for "A" band oscillator coil; and Stock #12007 Retaining Spring for Adjustable Core #30846.

Model U-109 - The "Tilt Compensating" Spring for the electric tuning motor is to be identified as Stock #30841.

Models 8M1 and 8M2 - Stock #12365 Volume Control (R-9) is for use as replacement on Model 8M2 only.

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