Form 13079

OVER THE SOLDERING IRON

RCA VICTOR

PREPARED FOR THE INFORMATION OF RCA VICTOR DISTRIBUTORS' SERVICE MANAGERS

SERVICE DIVISION - RCA MANUFACTURING CO., INC. - CAMDEN, N. J. - JULY 15, 1938

VIBRATOR INTERFERENCE - MODEL 8M4

Noise or hum interference may develop when the Local-Distance switch is operated on the local position, if there are poor grounds at the car battery or insecure contact between various members of the car chassis. The interference can be eliminated by installing a 500 ohm resistor, preferably a flexible pigtail type, in series with the BLACK lead to the Local-Distance switch on the control head assembly.

PUSH BUTTONS NOT LATCHING - 1939 ELECTRIC TUNING

As in previous designs, the position of the chassis in the cabinet with respect to the push buttons, is important in obtaining positive latching action. It may be necessary in some cases to elevate the front of the chassis slightly (appx. 1/8") by placing washers under its mounting feet, in order to obtain the best operation.

MECHANICAL MOTOR RUMBLE - 1939 ELECTRIC TUNING

Under certain conditions related to acoustics of room, placement of instrument, and general noise level, the mechanical noise of some electric tuning motors may be found objectionable. Should such a condition exist, it may be due to an unbalanced flywheel or noisy gear system. Check to see that intermediate gear Stock #31238 is the "micarta" type, and that the flywheel, Stock #31240, is correctly "balanced." The standard replacement units meet these requirements.

PICKUP FALLING OFF RECORD - 1939 AUTOMATIC RECORD CHANGER

A clockwise twist in the pickup cable will tend to throw the pickup off the record. When securing the pickup lead to the cabinet, before plugging the cable into the chassis, the lead should be twisted about 1/4 turn in the direction (counter-clockwise) tending to hold the pickup on the record.

ELECTRIC TUNING MECHANISM - 1939 INSTRUMENTS

Operation of the electric motor tuning mechanism is described in Service Notes pertaining to the particular model. This information and the accompanying illustration should be studied by everyone concerned with the sales, demonstration and service of instruments involved.

The principal of operation necessitates that the mechanism go through several quick reversals on arriving at the desired station frequency and before reaching a dead stop. Three or four reversals are not considered excessive, and are within factory tolerance of adjustment. The number of reversals and consistency of operation depends mainly on the flywheel friction adjustment, however, in some cases the selector disc and station setting contacts are involved. The following suggestions may be helpful where excessive pointer oscillation is experienced in the field:

Oscillation On Certain Buttons Only-Related To Selector Disc

(1) Check contact tip of selector assembly for loose fit in body. See that nose of contact is not burned nor distorted out of correct shape.

(2) Clean the insulating gap of selector disc, being sure to remove all metal particles and metallic fragments from beveled edges of the brass. Each contact should be checked to assure that clearance exists (appx. .010") between it and the disc when stopped in position on the station.

(3) Inspect the insulating gap to see that it has not changed shape due to bending or warping. Replace the disc if cleaning and adjustment fail to give correct operation.

Oscillation On All Buttons - Related To Motor Flywheel

(1) Slow oscillation indicates friction adjustment of flywheel is too tight. Loosen set screw slightly.

(2) Rapid oscillation indicates friction adjustment is too loose. Tighten set screw slightly.

(3) If definite adjustment cannot be reached, remove spring from behind flywheel set screw and increase its length by stretching; replace and make the necessary adjustments. A heavier and stronger spring Stock #31242 is supplied as replacement.

(4) See that leather friction pad is not binding in its hole, and that it is saturated with lubricant. "Neats-Foot" oil should be used for this purpose.

(5) The balance of the flywheel sometimes prevents correct adjustment. The standard service replacement flywheel stock #31240 may be used to definitely eliminate this cause.

(6) The number of oscillations varies somewhat with line voltage. Avoid making adjustments at very low (105v) or very high (125v) voltages. Adjustments made at 115-118 volts provide good operation of the rated range.

(7) Stability of adjustment is slightly better if made after a brief run-in period.

CHASSIS INDENTIFICATION - NEW LINE RECEIVERS

Markings are now being stamped on the rear aprons of all chassis assemblies in current production. These markings are purported to facilitate the identification, in terms of model number, of any chassis which has been separated from its respective cabinet for service. A preliminary list is given below:-

Stamps On Chassis	Model(s) Used In	Stamps On Chassis	Model(s) Used In
RC-341	U-111	RC-331	HF-8
RC-348	95T5	RC-331-A	HF-6
RC-348-A	96T, 96T1	RC-331-B	U-134
RC-348-C	96E	RC-331-C	U-132
RC-349	97X	RC-335	911K
RC-350	9X, 9X1, 9X2, 9X3, 9X4	RC-335-A	98K
RC-351	96T2, 96K	RC-335-B	99K
RC-351-A	97T, 97E, 97KG	RC-335-D	U-126, U-128
RC-351-B	96T3, 96K2	RC-335-F	910KG
RC-351-C	U-124	RC-335-H	99T
RC-351-D	U-122E	RC-352-C	UY-124
RC-351-E	U-199	RC-354	U-130
RC-352	98X, 98YG, 98EY	RC-354-A	HF-4
RC-352-A	97Y	RC-354-B	HF-2
RC-352-B	UY-122E		

REDUCTION OF RUMBLE - MODEL R-91

It is possible to reduce the mechanical vibration and resultant hum by reversing one of the coils of the stator assembly. This may be done in a simple manner, without disconnecting leads, by removing one coil from the stator, turning it end-for-end, and replacing it on the stator so that its leads are toward the center bearing.

MICROPHONIC HOWL - MODELS 95T and 95T1

In order to minimize any "howl" that may occur at high volume, on very strong stations, the blue lead which runs from the 6A8 oscillator plate terminal to the oscillator coil should be cut as short as possible and kept separated from the chassis, tuning condenser and other leads.

LOW FREQUENCY RUMBLE ON MODEL R-94B

It has been found beneficial to check the tone arm mounting, in cases where "rumble" is experienced. The mounting nut will probably be found screwed too tight; and it will be necessary to loosen it about 1 complete turn.

SPEAKER RATTLE - MODELS 94X, 94X1 and 94X2

The mounting of the dry electrolytic adjacent to the speaker is such that the cone may possibly strike it, causing a bad rattle in the reproduction. This source should always be checked before replacing speaker parts. The electrolytic clamp can be bent so as to give ample clearance.

HIGH CAPACITY AUTO ANTENNAS WITH MODELS 6M, 6M1, 6M2, 6M3 & 6M4

On a number of cars having built-in antennas of relatively high capacitance it is frequently difficult to obtain best signals-to-noise ratio, due to improper matching of the antenna system to the input. This is particularly true where the insulated steel top insert, running board, or rear trunk is employed as antenna. Improved performance can be obtained by changing the value of the antenna series capacitor C-1 from 680 mmfd. to a value 300-400 mmfd. Correct matching is indicated by ability to reach a definite peak adjustment on the "Antenna Compensating Capacitor."

DIAL SLIPPAGE - MODEL 6M

The following procedure is suggested to overcome slippage of the dial drive, resulting from the dial scale rubbing against the case.

(1) Remove the three nuts which hold dial in place and take dial off of dial drive drum.

(2) Loosen two set screws on hub of dial drive drum. Move drum as far as possible toward chassis, allowing just enough clearance to prevent its scraping against the two brass screw heads.

(3) Replace dial and make sure that the dial scale is concentric with the shaft, before tightening the dial mounting nuts.

(4) Mount chassis as far back in case as possible.

(5) Mount chassis so that dial is centered from left to right with respect to the case.

(6) If dial scale is loose in its mounting, slightly crimp edge of brass mounting with diagonal cutters.

(7) See that rubber grommets are in place in shaft holes of case.

(8) Mount the case-end as far forward as possible.

MOUNTING WASHERS - MODELS 6M2 and 6M4

The large flat washer and two lockwashers originally supplied for mounting of the external speaker, are being omitted in some outfit packages, and substituted by two special type washers which are suitable for the same purpose.

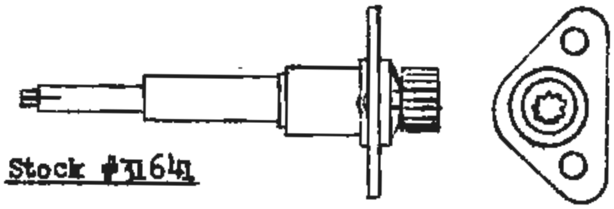
PUSH BUTTON ADJUSTMENT - MODELS 9M1 - 9M2

It is very important that the caution given in the instruction sheet relative to tightening the push button screws be observed. Forcing the adjustment screw past its normal stop will cause damage to the tuning assembly.

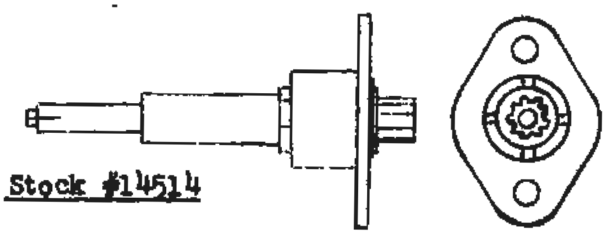
NEEDLE SCRATCH - MODEL U-134

Capacitor C-102, .025 mfd., associated with the H-F Tone control switch may be of the wrong value, in some cases, and "needle scratch" on phonograph reproduction will be excessive. Use of the new "Red Seal" needles will contribute appreciably to reduction of "needle scratch".

VERNIER TUNING DRIVES - 1937-38 RECEIVERS



Stock #31641



Stock #14514

Stock #31640

Three types of vernier drives were employed on tuning condensers of the 6 - 10 tube receivers. These drives are not interchangeable and it is therefore essential, where replacement is required, to order the correct part. Identification may be established by comparison with the illustrations, which are shown to scale, at the left. These drives are used on the following models:

86E	88K
86T	810T
86K	810T4
87T	810K
87K	810K1
87X	812X
87E	U-105
	U-107

Note that Stock #14514 supersedes Stock #14364.

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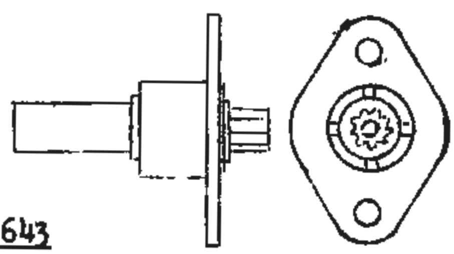
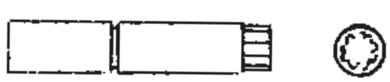


Stock #31643



Stock #30741

Two types of vernier drives are to be found on Models 87K1, 87T2 87K2 and U-106. When ordering replacements, the correct part may be identified by comparison with the two diagrams to the left. These are drawn actual size.

DIAL DRIVE CORD ASSEMBLY
Models 98K, 99T, 99K, U-126, U-128, U-130, HF-2 and HF-4

Additional tension is required on the drive cord when slippage or irregular tuning action is experienced on these models. The proper remedy is to fasten a spring Stock #31418 to the end of the cord which is normally fixed solid to the drum, and anchor its other end to the same lug occupied by the other #31418 spring. Refer to service note dial drive illustrations.

POINTER MISCALIBRATION - 1939 RECEIVERS

When transporting the new 1939 instruments, always turn the tuning control so pointer is not at either end of the scale. This will prevent vibration against the pointer stops and the miscalibration resulting therefrom.

SERVICE NOTE CORRECTIONS

Models 813K - 816K and 1937 Bound Volume --- The resistance values shown on the driver transformer windings are incorrect. Primary resistance should be 500 ohms, and the secondary resistance 160 ohms.

Model 911K - Stock #31530 Loudspeaker (ML70H2) is now specified in place of the Stock #31274.

Model U-111 - Stock #30888 Power Transformer 110/220 volts should be substituted in parts lists in place of Stock #30607. The latter is incorrectly specified.

Models R-93-B and R-93-C - The following should be added to existing parts list for R93B and R93C, to cover 220 volt motors.

Stock No.	Description	Unit List Price
31992	Motor-200-250 volts, 50 cycles - less Mountings	$ 8.65
31993	Motor-200-250 volts, 60 cycles - less Mountings	8.55
31994	Stator-Stator coils and laminations for 200-250 volts, 50 cycles	2.90
31995	Stator-Stator coils and laminations for 200-250 volts, 60 cycles	2.85

All prices are subject to change or withdrawal without notice.

NOTE: The following Stators appearing in R93B and R93C Parts Lists should be changed to read - "105-120 Volts" - Stk. Nos. 31042, 31043 and 31044.