



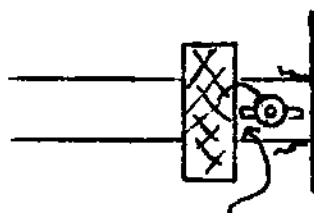
OVER THE SOLDERING IRON

PREPARED FOR THE INFORMATION OF RCA
VICTOR DISTRIBUTORS' SERVICE MANAGERS

SERVICE DIVISION RCA MANUFACTURING COMPANY, INC.-CAMDEN, N. J. - March 1, 1940

FREQUENCY RANGE - MODEL VA-20

Should it be desirable to employ a different range of frequency on the VA-20 wireless record player, this may be accomplished readily by removing turns from the oscillator coil. Resultant ranges for given number of removed turns are:-



Unwind turns to give desired range. It is not necessary to remove coil from the unit.

TURNS REMOVED

FREQUENCY RANGE

8	580 Kc - 710 Kc
16	630 Kc - 770 Kc
24	700 Kc - 850 Kc
32	760 Kc - 940 Kc
40	850 Kc - 1050 Kc
48	960 Kc - 1200 Kc
56	1100 Kc - 1400 Kc
64	1300 Kc - 1650 Kc

LOUDSPEAKER CONES - MODELS 8M, 9M1, 9M2, M50 & M60

Some misunderstanding exists as to the correct cones for the loudspeakers employed on these models.

A. Speaker marked 84391-1 is used in 9M1, 9M2, M50 and M60. The correct cone for this speaker is Stock #35913. This cone has a "buttercup" type of spider.

B. Speaker marked 84147-2 is used in 8M, but has two types of cones, which vary as to mounting dimension of the spider suspension.

- (1) Stock #35464 Cone fits speaker marked 84147-2 with a $2 \frac{3}{8}$ inch dimension between suspension points.
- (2) Stock #30872 Cone fits speaker marked 84147-2 with a $2 \frac{9}{16}$ inch dimension between suspension points.

MOTOR REVISION - MODEL R-98

The governor motor #31461 originally specified on Model R-98 is no longer used, and is replaced by the following:-

- I - MOTOR #32135 - Non-governed constant speed type (Same as used U-115).
- II - MOUNTING ADAPTOR KIT #35735 - for #32135 - containing:-
 - (a) 1 - Motor mounting adaptor plate.
 - (b) 3 - Screws for mounting plate to motor.
 - (c) 3 - Screws for mounting plate to motor-board.
 - (d) 3 - Spacers for separating plate from motor.
 - (e) 3 - Washers for motor mounting screws.

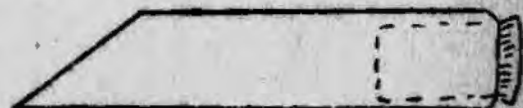
To install, assemble plate (a) to motor #32135 using spacers and screws provided. Mount motor and plate assembly to motor-board of cabinet, using the original flexible mounting grommets and eyelets. If necessary, shift motor or chassis slightly to give clearance between the two. Remove plug from leads of original motor and attach same to leads of new motor.

GOVERNOR FRICTION PAD #34058

Use of the revised felt friction pad #34058 referred to in "RCA Service Data On Governor Motors" is vital in effectively servicing these motors. The two types of pads are illustrated below:-



Revised Type



Original Type

As may be readily seen, the oil capacity has been materially increased and capillary "feed" improved.

LOUDSPEAKER CONE SUBSTITUTION

The Stock #35441 - Cone for Loudspeaker RL-79 supersedes and will be supplied against all orders for #32934, #33777, #33904, and #34029. List Price of #35441 is \$1.25.

LOUDSPEAKER CONE - Models BT40 and 94BP1

The cone for loudspeaker #33058 (marked 39128-1) is now available for replacement as stock #33062 - Cone. In many cases an off-center original cone may be quickly centered by bending the support webs of the speaker housing in the required direction.

TURNTABLE SPINDLE BEARING

Replacement spindle bearings for automatic record changer motor-boards are available as follows:-

#35846 BEARING - Spindle Bearing for Models U125, U25, U126 U26, U128, U129, U130, U30, U132, U134, 11QU, 12QU, and U46.

#35847 BEARING - Spindle Bearing for record changer RP145 used in Models U40, U42, U43 and VA22.

These bearings may be readily substituted for an original faulty bearing:

- (1) Remove motor and turntable assembly from motor-board.
- (2) Invert motor-board on a vise, supporting it solidly as close to the bearing as possible.
- (3) Strike the end (bottom) of the bearing a smart heavy blow with a hammer to drive it from the board.
- (4) Insert new bearing, resting its top flat surface against a rigid metal plate, and stake over its mounting collar with a screw driver or chisel. Be sure bearing is exactly perpendicular to surface of board.

PROTECTION AGAINST MICE -
Models 94BT2 and 94BK2

A number of cases of damage being caused by mice eating the push button coil assemblies and leads, have been reported. The special paraffine impregnation, the warmth of the receiver, and the fact that the instruments are used rurally possibly account for this unusual trouble.

A limited supply of chassis protective end covers are available upon distributors' requests. These covers may be used to completely block off the end openings and prevent access to the coil system. Installation may be made by spot soldering the cover to the chassis base.

Covers needed should be identified as #86361-1. They will be shipped "no-charge" as long as a supply is available.

LOUDSPEAKER CONES - MODEL BT42

Three types of loudspeakers have been employed in Model BT-42. Replacement cones are identified and available as follows:-

<u>Speaker Marking</u>	<u>Cone Stock No.</u>
84650-501	#33458
84650-502	#35483
84650-503	#35127

Cone Replacement On 4-Inch "Little Nipper" Speakers

To facilitate the economical servicing of the 4-inch "Little Nipper" speakers, two cone and voice coil assemblies have been made available.

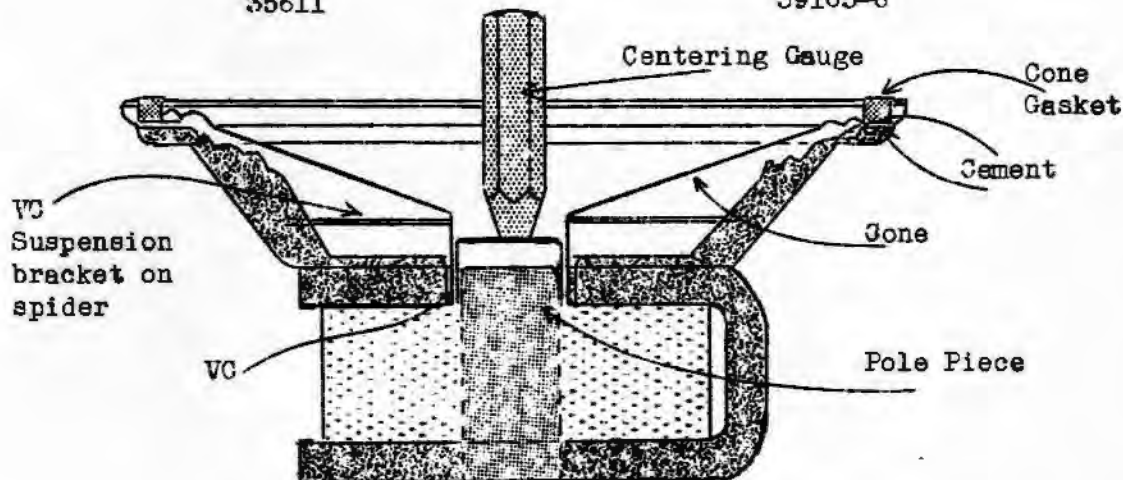
Cone No. 35323 - should be used for replacement on the following speakers:

<u>Speaker No.</u>	<u>Identification Marking On Speaker</u>
32575	39105-1
32963	39105-2
33740	39105-3
34173	39105-4
34569*	39105-3

* Speaker #34569 supersedes #32963, #33740, and #34173 as a replacement.

Cone No. 35120 - is a replacement for the following speakers.

<u>Speaker No.</u>	<u>Identification Marking On Speaker</u>
35119	39105-5
35611	39105-6



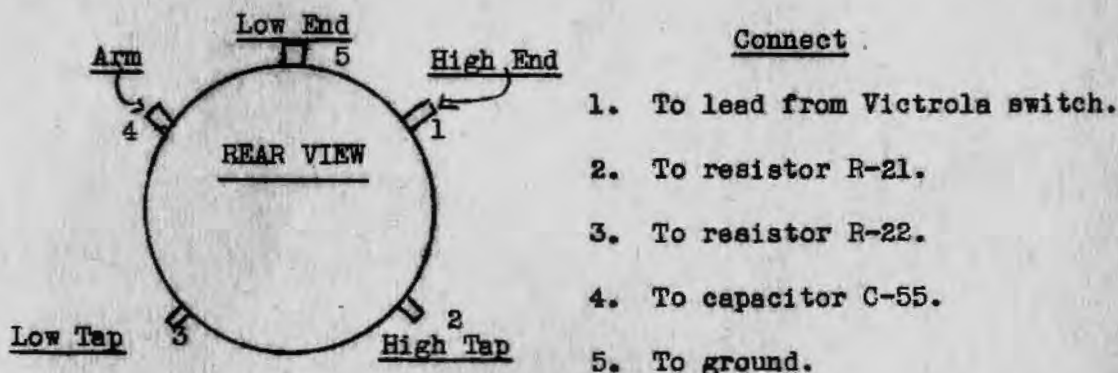
The following procedure should be used in making cone replacements:

- (a) Remove old cone, all surplus paper and cement from rim of speaker housing. See that air gap is uniform and clean.
- (b) Carefully insert centering gauge (RCA No. 35301) into voice coil, handle first, from winding end, and carefully lower cone into position. Check V.C. leads for proper position in respect to terminals.

- (c) With cone and voice coil properly centered replace washers and nuts on V.C. suspension bracket.
- (d) Apply a ring of cement (Ducco Household or Model Aeroplane Cement) around speaker housing under and over outer edge of cone, being careful not to get cement on inner slide of cone. Lay cone gasket over outer edge and place speaker in an inverted position on smooth flat surface with 1/2 inch hole in center for gauge handle to clear, until cement is dry (10 to 20 minutes).
- (e) Remove gauge from voice coil, with a rotary motion. Solder V.C. leads in place. Allow sufficient lead to give flexibility; dress them in the plane of motion; taking care that they do not strike against the cone or housing. Cement dust cap on cone over the pole piece.

VOLUME CONTROL CONNECTIONS - STOCK #31682
Models HF-6, HF-8, U132, and U134

The circuit shown in the service notes is incorrect and should be as shown below:-



LEATHER LID SEAL

The leather lid welt or beading used around the top edges of Victrola playing compartments can be obtained by ordering Stock #35578. This covers a 6 foot length.

SHORT WAVE SENSITIVITY - MODEL X-60

Where insufficient sensitivity is noted on the short wave band of Model X-60, addition of capacity coupling of 3 or 4 mmfd between signal and oscillator grids of converter tube will usually restore normal sensitivity to entire band. This coupling can be effected in several ways: (1) Unsolder one grid lead, take several turns around other lead to give desired capacity, resolder; (2) Twist several turns of insulated wire around both grid leads to give desired value of capacity coupling; (3) Install a 3 to 4 mmfd capacitor between tube grids.