Form 13079

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., DECEMBER 1, 1938

ELIMINATION OF AUDIO OSCILLATION OR HOWL - MODEL 94BP4

Should the green lead from #8 pin (to volume control) of the 1C5-G socket be in too close proximity to the blue lead connected to the same socket, a high pitched audio oscillation is likely to result. The two leads should be spaced from each other as far as possible. It is also important that the green lead from tuning condenser to loop antenna be dressed between the 1C5-G and 1H5-G tubes.

REDUCTION OF "POPPING" INTERFERENCE ON AC/DC RECEIVERS

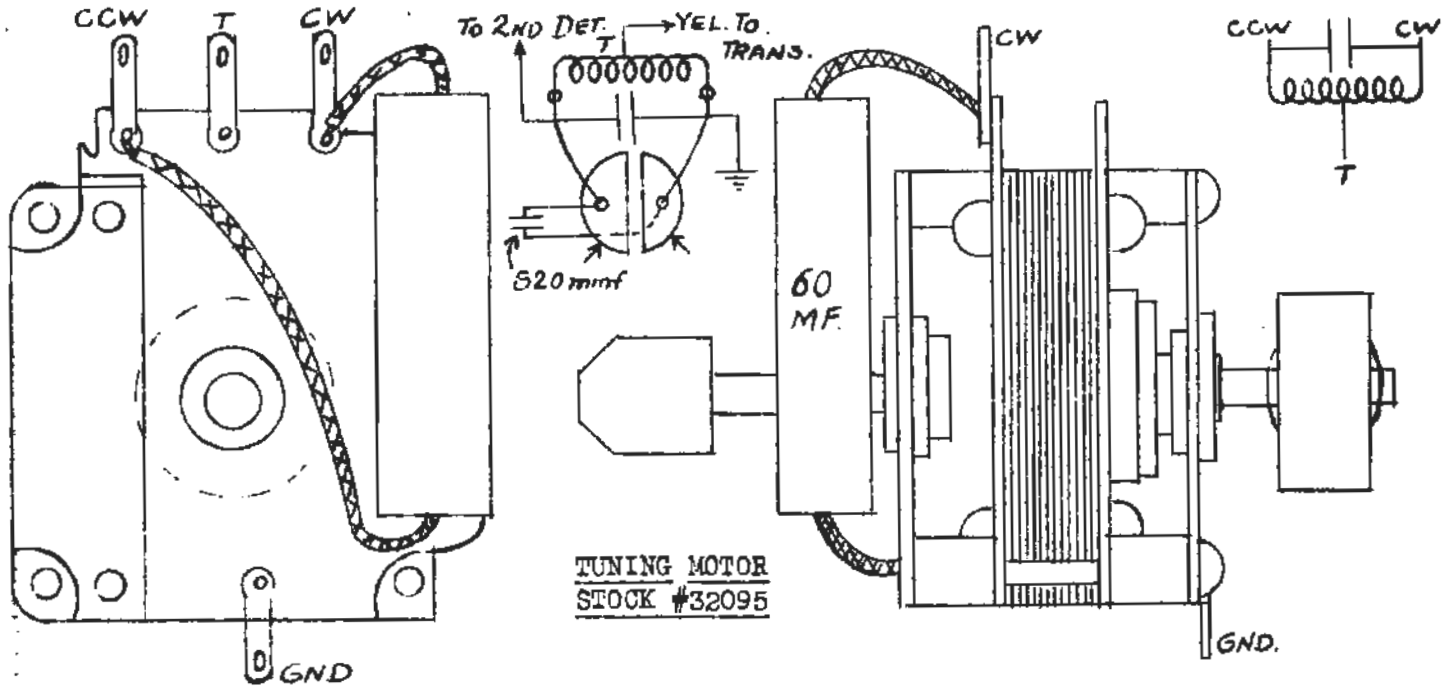
Where AC/DC receivers are used with an external antenna which is exposed to steam, smoke, snow, or other influences of similar nature, a static accumulation may occur on the antenna and will produce objectionable interference by discharge to ground, chassis or other nearby objects. This condition can be obviated by connecting a 1 megohm resistor in parallel with the isolating capacitor which is normally used in series with the antenna input, thus maintaining the antenna at ground D-C potential at all times. Comments on this suggestion shall be appreciated.

MODIFIED ELECTRIC TUNING DRIVE

Details covering the rubber friction drive, and capacitor type motor used on some of the current 1939 models are given on page 2 of this issue. The information applies to 50-60 cycle instruments only. The 820 mmf. capacitor is stocked as #12536.

REDUCTION OF RESIDUAL HUM
Models HF-2, HF-4, and U-130

It may be found in a few instances that hum induction will take place between the power transformer wiring and the volume control circuit. This can be prevented or remedied by dressing the brown lead connected to #6 (P) terminal of the 5T4 socket well away from the #6 (blank) pin of the 6K7 I-F socket and from the black lead connected to same.



TUNING MOTOR
STOCK #32095

MODIFIED ELECTRIC TUNING DRIVE SYSTEM

Some 1938-39 electric tuning models incorporate a drive motor corresponding to the above diagram. This motor employs a friction clutch, its flywheel requires no adjustment, and starting is accomplished by means of a capacitive phase shifting circuit. Replacement stock numbers and models involved are as follows:-

	MODELS 98K, 99T, 99K 910KG, 911K, 11Q4, 11QK	MODELS HF-2, HF-4, U-126 U-128, U-130 & 11QU	MODELS HF-6, HF-8, U-132, U-134
(a) Motor and Capacitor -	#32095	#32095	#32095
(b) Motor Mounting Bracket -	#32087	#32090	#32089
(c) Drive Gear Assembly -	#32091	#32091	#32092

Stock #31235 motor having mechanical clutch, is replaceable for service purposes where desired by the modified motor #32095 (a) if the revised bracket (b) and drive (c) are used as specified above. The #31235 motor will be continued as a replacement part.

COMPONENTS OF MOTOR AND GEAR ASSEMBLIES APPLICABLE TO ALL MODELS

Stock #32088 - Capacitor - 60 mfd. 40 volts
" #32093 - Damper (Flywheel) - For rear end of motor shaft
" #32096 - Disc - Friction disc and pinion gear
" #31239 - Gear - Knob shaft drive gear and hub
" #32086 - Roller - Rubber friction roller for front end of motor shaft
" #31681 - Shaft - Dial drive knob shaft
" #32094 - Washers - Assorted washers for mounting damper

NOTE #1 - When installing motor on all "Victrola" models remove thrust spring on motor shaft by pulling out with long-nose pliers.

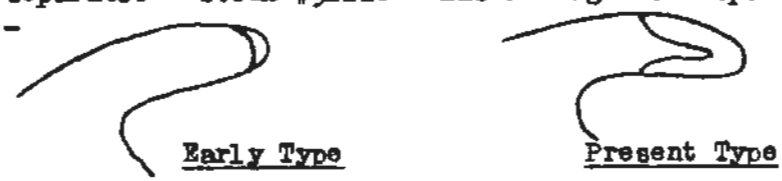
NOTE #2 - Rubber roller is attached to shaft with shellac.

NOTE #3 - An 820 mmf. must be added across the eelector disc circuit.

AUTOMATIC RECORD CHANGER ADJUSTMENTS
1938-39 Victrolas

The following points should be given special attention when servicing automatic record changers in the field:

(1) Jamming of 10 inch records is generally related to adjustment of record separator knives. More satisfactory operation is obtainable by using a spacing of .058 inches for 10 inch records in lieu of the originally specified .055 inches. If adjustment does not give foolproof operation, replace the separator knives. The present type of separator - Stock #31126 - has an edge corresponding to the right diagram below -



Early Type Present Type

(2) Needle landing in 10 inch position on a 12 inch record may be caused by sluggish action of pickup locating lever (17). It is advisable, for such a case to increase the strength of the pickup locating lever tension spring, or replace it with spring stock #31875.

(3) If the needle misses the record due to excessive vibration on landing, the locating lever (14) spring (#35 on U-125, #33 on others) should be made heavier, or replaced with stock #32436. If difficulty persists, used spring Stock #31875.

(4) Bent guide posts on the motor mounting bracket may bind against the motor board causing mechanical hum or rumble. The posts may be removed from the bracket entirely by sawing, if care is exercised in centering motor in respect to turntable spindle and its coupling.

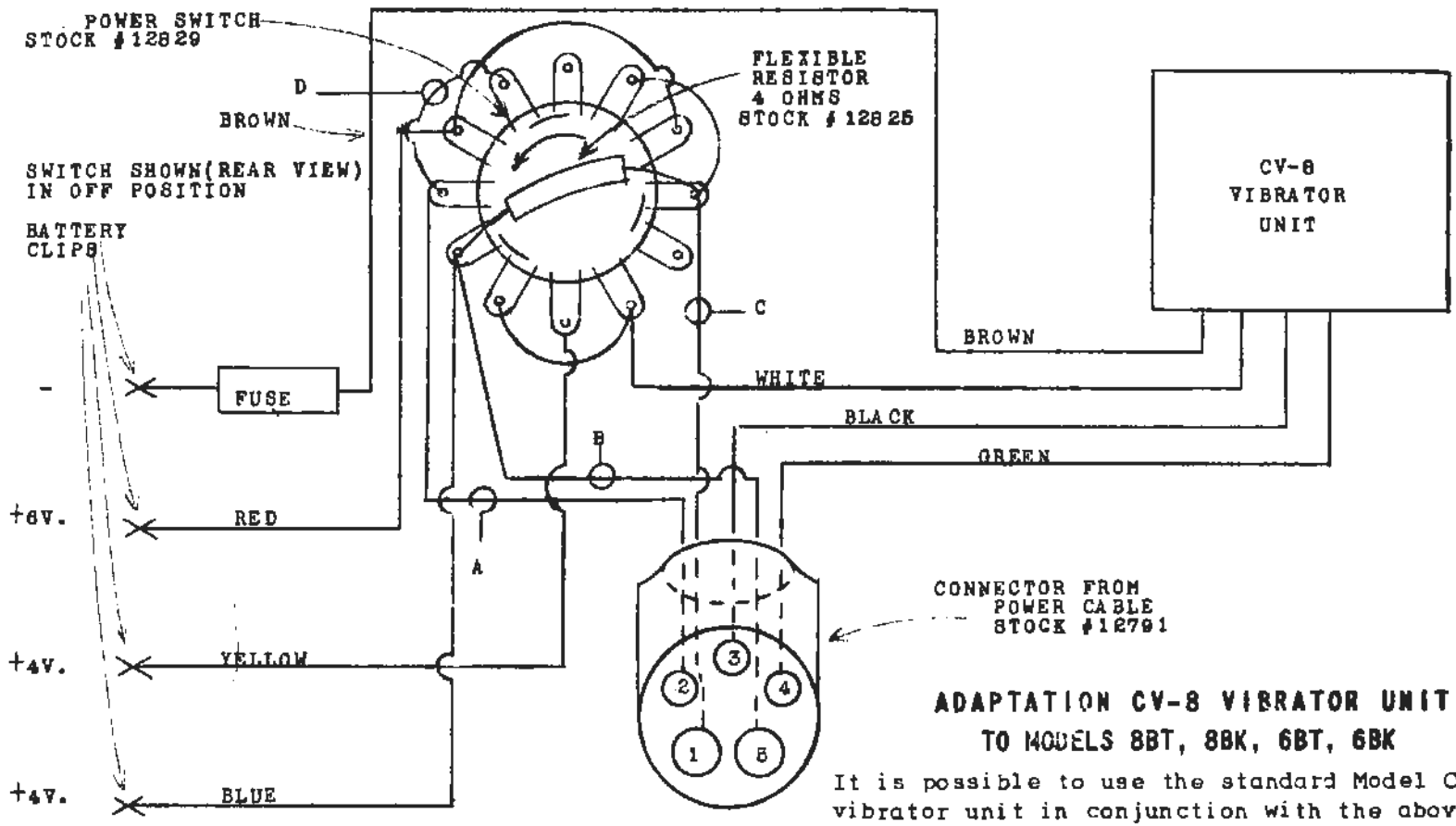
REDUCTION OF LOW FREQUENCY RESPONSE - MODEL U-125

The low frequency response provided in Model U-125 may be lessened in a simple manner, where such a change is desired, by connecting a 500,000 ohm, 1/4 watt resistor directly across the pickup circuit. This resistor may be installed at the terminals of the crystal cartridge under the pickup head.

SERVICE NOTE CORRECTIONS

Over the Soldering Iron - November 10, 1938 - On Page 4 in last sentence transpose gray and black. The black is for use on Model U-125.

Over the Soldering Iron - October 13, 1938 - On Page 7, under "Modifications of Push Button Ranges" change Oscillator Coil (L-12) to Stock #31415.



ADAPTATION CV-8 VIBRATOR UNIT TO MODELS 8BT, 8BK, 6BT, 6BK

It is possible to use the standard Model CV-8 vibrator unit in conjunction with the above 2-volt battery models for 6-volt operation by effecting the following changes, employing the cable connector and power switch which are part of the existing 2-volt receivers:-

(1) Remove connector (Stock #12791) from battery cable of 2-volt set and install it in place of connector on CV-8 cable, connected as shown above.

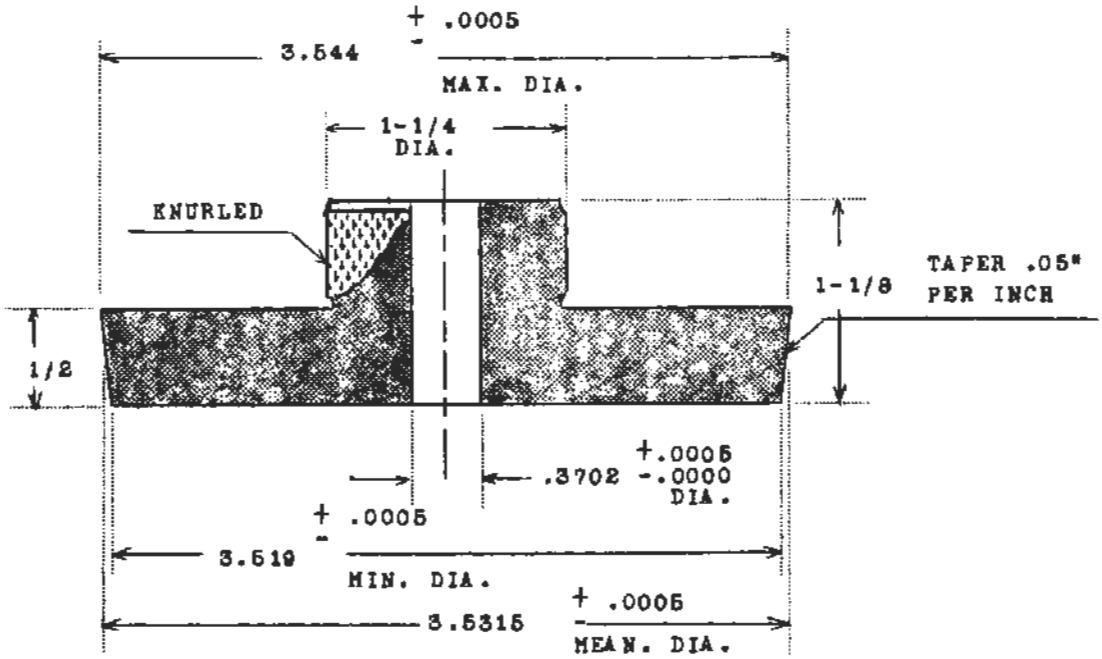
(2) Remove all external connections from power switch (Stock #12829) and wire CV-8 cable to switch as shown. Jumpers on switch may be left intact, except add "D."

(3) Add 4-ohm resistor (Stock #12825) across 2-volt circuit at switch as shown.

Note that A, B, and C are new leads which must be added to cable assembly.

CENTERING TOOL FOR MODEL R-93B TYPE MOTOR

Sketched below is a tool similar to that used for factory assembly and precise centering of the rotor laminations on Model R-93B and other models employing the same motor. This tool may be duplicated at a moderate cost by a local machinist using the dimensional and specification data provided herewith.



MATERIAL: - Good grade steel, or tool steel.

TREATMENT: - Case harden and accurately grind to specified dimensions. The outer diameter (3.5315) and center hole (0.3702) are the only critical dimensions.

INSTRUCTIONS FOR USE

(1) Smooth salient poles of rotor with fine sandpaper.

(2) Loosen three clamping screws of rotor lamination assembly; slide adjustment tool over spindle, and gently tap tool and laminations so as to correctly center rotor. Retighten screws and remove tool by pulling or lightly jolting lower end of spindle against rigid surface.