25054
Beat Oscillator
Stock No. 9606
—INSTRUCTIONS—

DESCRIPTION

The Beat Frequency Oscillator is an important auxiliary to short wave receiving sets and serves the purpose of enabling the listener to obtain code messages and other continuous wave broadcasts. It may also be used in locating regular broadcast or other modulated forms of transmission by the "birdie" method and its value in this field will be most evident in cases where the signal strength is very low or the carrier is not modulated continuously.

This Beat Oscillator is of the electron-coupled type known to afford excellent frequency stability and the complete unit as shown in Figure 1 consists of the coil assembly, tube socket, switch, control rod and terminal boards, with the necessary tube, coil and other shields, leads and connectors, all assembled complete on a metal base ready for attachment in the receiver cabinet or other desired location. Its overall dimensions are 7 inches wide, 2¾ inches deep and 7 inches high.

The oscillator tube is not supplied and the type selected will be in accordance with heater or filament voltage as follows:

For 2.5 volts use RCA-58 tube.

For 6.3 volts use RCA-6D6 tube.

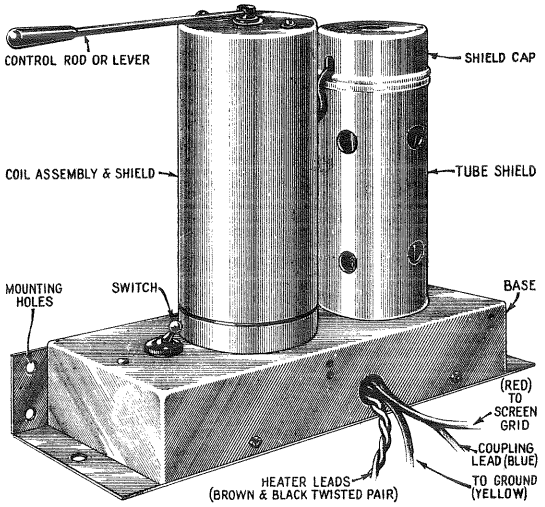
The coil assembly includes the coil and two variable capacitors as well as other capacitors and resistors.

The Beat Oscillator may be used with any type of receiver in conformance with the opening paragraphs under Installation, either AC or DC and of any line voltage or frequency.

INSTALLATION

Before commencing installation check the receiver characteristics for compliance with the following requirements:—

1. Short-wave superheterodyne type.
2. Intermediate frequency between 415 and 700 k.c.
3. Extra power available for the additional heater filament of the Beat Oscillator tube without overloading transformer, rectifier or vibrator or affecting plate or bias voltages of any tubes.
4. Correct heater voltage (2.5 or 6.3) for oscillator tube.



Mounting

The Beat Frequency Oscillator may be mounted in any position and is easy to install by following these instructions.

1. Decide on location for mounting. The unit may be attached in any position, horizontally or vertically, inside or outside the cabinet as for example:—

(a) Inside the cabinet at the top right hand side, looking in the back of the cabinet, with the lever projecting near the speaker and the switch accessible at the back.

(b) Attached to the chassis in position shown in Figure 1 with the unit projecting out at the back of the cabinet.

(c) On the outside of one side of the cabinet.

2. Hold the unit in the selected location and mark the position of the mounting holes. There are two sets of holes in the base, one set for attaching at right angles to and the other parallel to the mounting surface. Check to make sure that the oscillator is free from obstructions, with clearance for at least a half circle movement of the control rod,

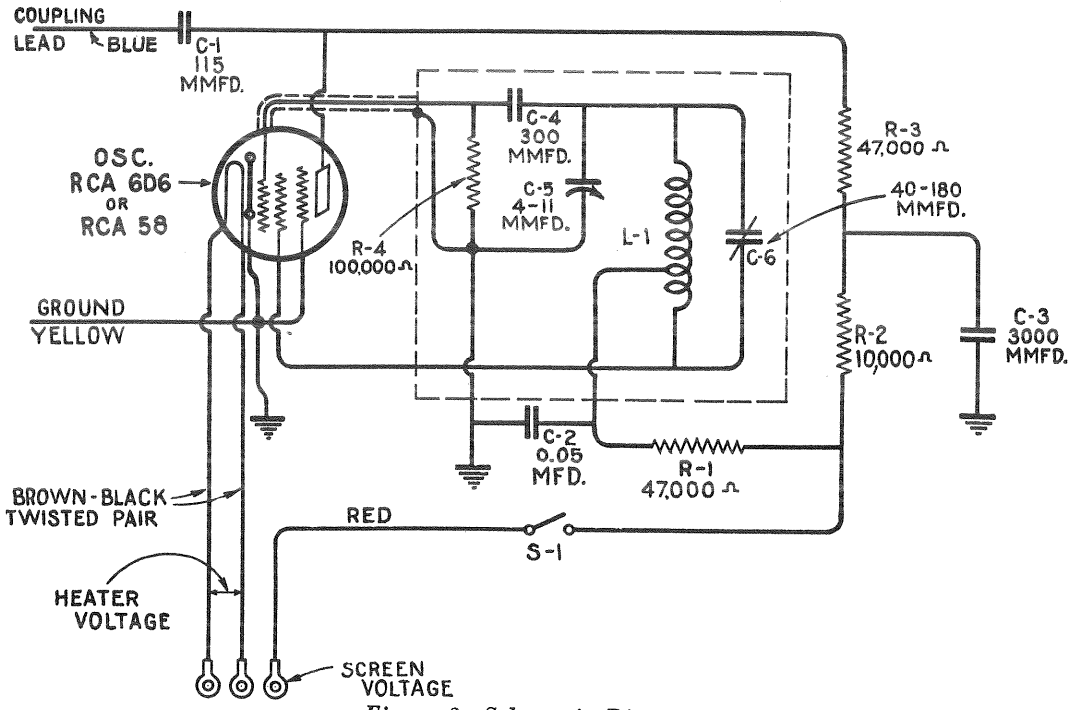


Figure 2—Schematic Diagram

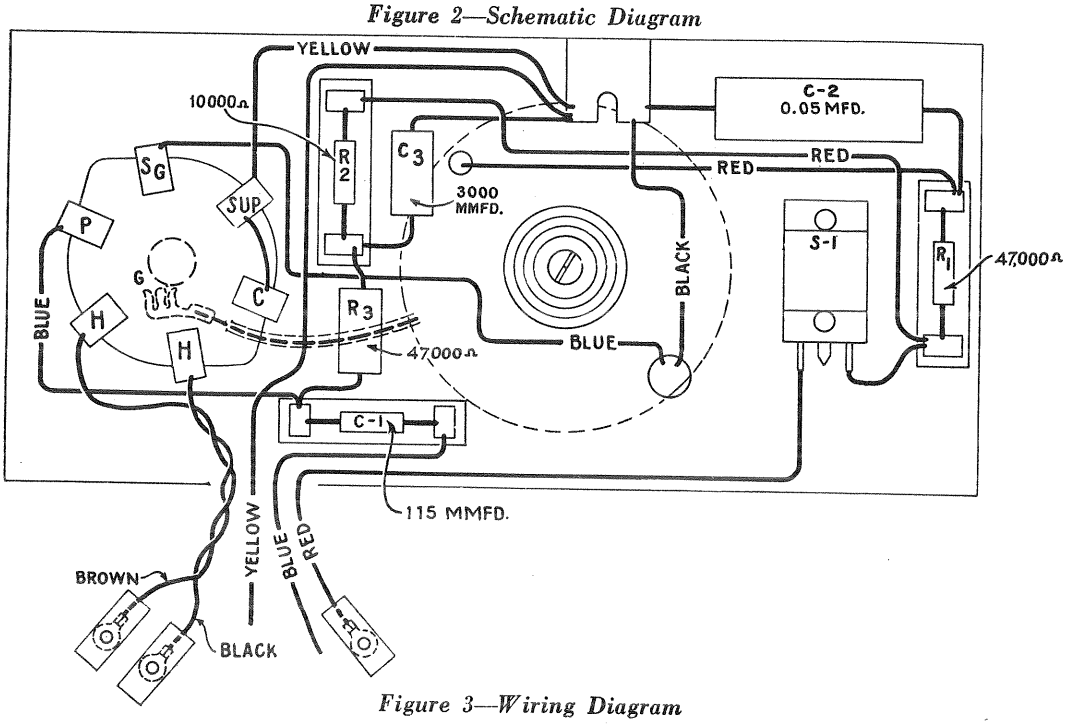


Figure 3—Wiring Diagram

switch accessible, and provision for making connections.

3. Drill holes for mounting.

4. Install tube in socket by removing shield cap, inserting tube in place, attaching spring connector on shielded lead to dome terminal of tube, and replacing shield cap.

5. Attach unit in place with either wood screws or small bolts, nuts and washers as required for particular location.

Note—A setting or adjustment of the main tuning capacitor will be necessary when first operating. This is made with a screwdriver through a hole in the bottom of the chassis under the coil assembly and this fact should be borne in mind when making the installation.

Connections

See that the receiver power switch is *off* and proceed to make connections as follows:—

1. Attach the connectors of the brown-black twisted pair to the heater or filament prongs of any one of the receiver tubes having the proper filament voltage. Make a final check on tube voltages after clipping on.

Note—Do not connect to rectifier filament.

2. Attach the connector on the red lead from the switch to the screen grid terminal of any easily accessible tube having a screen voltage of approximately 100.

3. Attach the yellow lead to any accessible receiver ground terminal or to point at —B voltage if the chassis is not grounded to the rectifier system. This connector should be as short as possible.

4. Wrap the blue lead a few turns around an unshielded portion of the I.F. or detector grid lead in the receiver so as to provide a small capacitance. The number of turns will depend on the receiver circuits and several trial wrappings should be made to determine the most satisfactory number of turns.

Difficulty may be experienced in obtaining the proper amount of coupling and the following procedure is advised in making this connection.

(a) Make wrap of about 4 turns as explained above.

(b) Adjust the Beat Oscillator to the proper frequency as explained under Operation.

(c) Gradually unwind the turns. There may be no response due to excess oscillator input into the receiver. If all turns are unwound and satisfactory results not obtained, move the blue lead slowly away from the I.F. or detector grid lead. It may be necessary to go to a distance of 6 or 8 inches. In such event there may be no means of supporting the blue lead adequately in the required position. It should then be wrapped one turn around the grid lead and a capacitor connected from the end of the blue lead to ground (chassis). The size of the capacitor must be decided by trial and may be anywhere between 10 and 1000 mmfd. for first trial.

OPERATION

1. Turn oscillator switch *off* and carefully tune the receiver to an unmodulated or weakly modulated carrier at any frequency.

2. Turn oscillator switch *on* and move the control rod into line with the screws holding the shield. (The oscillator switch controls the plate and screen grid supply voltages to the oscillator but the filament remains constantly heated thus rendering the tube ready for instantaneous operation.)

3. Adjust the main tuning capacitor of the Beat Oscillator with screwdriver, through hole in bottom of Beat Oscillator chassis, to closely approximate zero beat. This capacitor and the one operated by the control rod are both variable air-dielectric capacitors and are effectively connected in parallel.

4. Adjust the auxiliary tuning capacitor by means of the control rod to produce a suitable note. This capacitor is actually a vernier control which permits adjustment of the Beat Oscillator output frequency over a very limited range on either side of the signal intermediate frequency (zero-beat position).

Note—With the main tuning capacitor set at 460 k.c. and the control rod at the center of rotation, the range of the auxiliary capacitor will be approximately 3500 cycles on each side of zero beat.

5. For c-w (code) reception adjust the Beat Oscillator frequency to a value one or two kilocycles above or below the intermediate frequency of the receiver so as to provide an audio-frequency beat note when the receiver is tuned to resonance with any carrier. The gang capacitor in the receiver should be adjusted to the center of the carrier by listening to the "swish" or "key clicks" before turning *on* the Beat Oscillator switch. Adjust the pitch with the control rod—never by means of the receiver tuning control knob.

The pitch may be varied at will either to satisfy personal preference or to eliminate interfering signals. Best intelligibility and greater apparent volume due to the inherent sensitivity characteristic of the human ear will result using a moderately low pitch or beat frequency in the order of 500 to 1000 cycles, but *audio-image interference* will decrease with ascending pitch.

Audio-image interference is an effect entirely distinct from that commonly referred to in superheterodynes by the term *image frequency response*. By the latter is meant interference set up by an incoming carrier on the same side of the desired carrier as the *radio-frequency* oscillator signal but removed from the desired carrier by *exactly* twice the receiver intermediate frequency.

Audio-image interference is created when an interfering signal of a frequency close to that of the desired signal, passes through the receiver and is converted to an intermediate frequency which is located on the same side of the I-F frequency, formed by the desired signal, as the Beat Oscillator frequency. If this

undesired I-F frequency is separated by *exactly* twice the separation of the Beat Oscillator frequency from the desired I-F frequency a *true audio-image interference* will result. If one merely visualizes the sharp selectivity curve of the superheterodyne, he will observe at once that the attenuation offered by the tuned circuits of the receiver to such *image* responses will increase very rapidly as the Beat Oscillator separation is widened.

Beat notes produced by other signals than that causing a *true audio image* ordinarily will be distinguishable from the desired signal because of the dissimilarity of pitch. In cases where both sound almost alike, confusion between the desired and undesired signals can practically always be eliminated by shifting the setting of the Beat Oscillator to the opposite side of the I-F frequency.

If a beat note of approximately the same pitch as the desired signal is heard, the interfering signal must be either near the frequency of resonance or near the *audio-image* frequency. For the first condition, best discrimination will be obtained by using a fairly low pitch frequency on the opposite side of zero beat from the interfering frequency. Use of a relatively low pitch is recommended since for a given small frequency separation, say 100 cycles, two notes will be much more discernible in the region of 500 cycles than at 1500 cycles. When the interfering signal is at or near the *audio-image* frequency, however, two alternatives are possible. The oscillator frequency can be either adjusted to zero beat with the frequency of interference or swung through zero beat with the desired signal to some value on the opposite side of I-F resonance.

As an example to illustrate the latter alternatives, suppose that with the receiver tuned to a station the Beat Oscillator is adjusted to one kilocycle *above* the intermediate frequency and that an interfering signal is present at 1900 cycles above I-F resonance (100 cycles below the *audio-image* frequency). Thus, the desired signal will produce a one kilocycle note and the interfering signal a note of 900 cycles, these tones being sufficiently close that the former probably would not be readily discernible. By increasing the oscillator frequency 900 cycles, however, the desired signal would be heard as a 1900 cycle note and the undesired signal heterodyned to zero frequency. On the other hand, the oscillator frequency could be changed to a point on the opposite side of I-F resonance so that the desired signal would again be heard as a one kilocycle note. The interfering signal then would produce a note of 2900 cycles and so should cause no confusion.

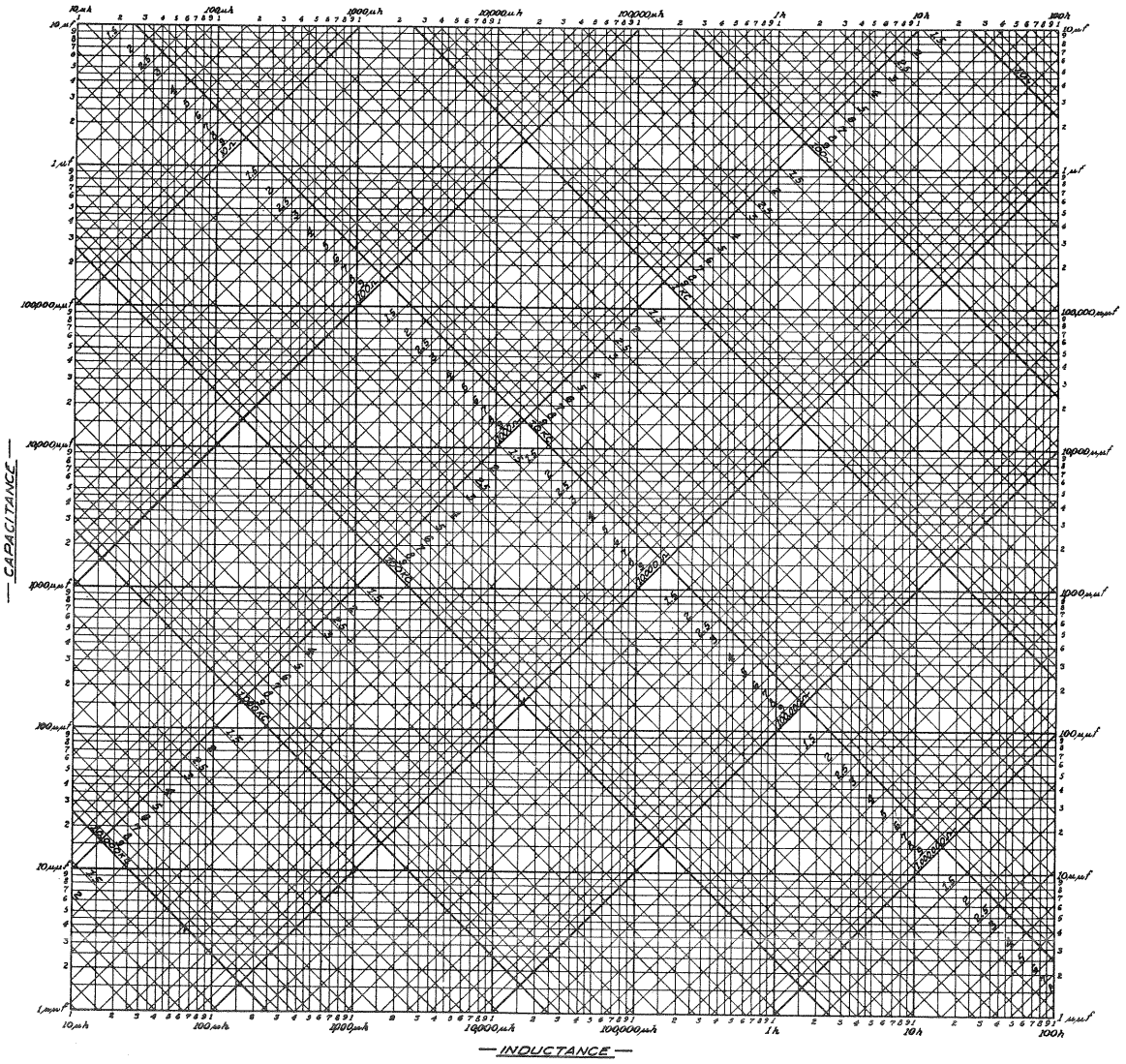
6. In locating weak, modulated signals the Beat Oscillator is tuned exactly to the intermediate frequency of the receiver so that an audio-frequency note of ascending pitch is obtained on each side of every incoming carrier. To adjust the Beat Oscillator in this manner, tune the receiver accurately to any carrier of suitable strength, turn the Beat Oscillator *on* and swing the control rod in either direction until "zero beat" is obtained. Any other carrier will be tuned to exact resonance when the gang or tuning capacitor of the receiver is adjusted for "zero beat" and weak signals will be heard almost as well as those of greater strength because of the heterodyne "whistle" produced while passing through resonance.

REPLACEMENT PARTS

Stock No.	DESCRIPTION	Price List	Stock No.	DESCRIPTION	Price List
4244	Cap—Grid contact cap—Package of 5	$0.20	8077	Handle—Beat Oscillator Adjustment Handle—Complete with knob	$0.50
8076	Capacitor—115 Mmfd.—(C1)	.20	3078	Resistor — 10,000 Ohms — Carbon Type — ½ Watt—Package of 5—(R2)	1.00
8075	Capacitor—3000 Mmfd.—(C3)	.35	8074	Resistor — 47000 Ohms — Carbon Type — ½ Watt—Package of 5—(R1, R3)	1.00
4886	Capacitor—0.05 Mfd.—(C2)	.20	6955	Shield—Radiotron shield and shield cap	.25
5209	Coil—Beat Frequency Oscillator Coil Assembly—Complete with shield and control handle (L1, C4, C5, C6, R4)	7.28	4786	Socket—6-contact Radiotron socket	.15
			7900	Switch—Control switch—toggle type (S1)	.75

CHART OF FREQUENCY OR IMPEDANCE VS. INDUCTANCE AND CAPACITY

The Chart shown below provides a quick method of determining several unknown factors when one or more are known. The Chart covers a very wide range, namely, from 10 micro-henries to 100 henries inductance, 10 cycles to 50.000 kilocycles, 1 ohm to 10 megohms and 1 micro-microfarad to 10 microfarads. If, for example, one wishes to know the capacitance to use with a 10 henry inductor to have it resonate at 50 cycles, it can be readily seen that it would be a 1 mfd. capacitor. This is determined by finding the intersection of the vertical line representing 10 henries and the oblique line representing 50 cycles. The intersection occurs at the horizontal line representing 1 mfd. The other oblique line at this intersection represents the impedance at this frequency. This is approximately 3000 ohms.



RCA LOUDSPEAKERS AND REPLACEMENT PARTS

Ext.Dia. Cone Housing (inches)	Speaker Stk.No.	Spkr. No. Stamped on Spkr.Frame	V.C.Impedance (ohms)	Field D. C. Resis. (ohms)	Cone & Voice Coil Stk.No.	Dust Cap Stk.No.	Field Coil Stk.No.	Neut. Coil Stk.No.	Output Trans. Stk.No.	PLUG Contacts.	PLUG Stk.No.	TERMINAL BOARD No. Terms.	TERMINAL BOARD Stk.No.
5	9044	RL 57-1	4.0	5900	8987	N.U.	△ 9037	N.U.	6591		N.U.		N.U.
5	✱ 9426	67821-1	760.	P.M.	7594	N.U.	N.U.	N.U.			N.U.		N.U.
5	9429	RL 56-1	4.0	P.M.	7598	N.U.	N.U.	N.U.	6477		N.U.		N.U.
5	9435	RL 54-1	4.0	1364	8987	N.U.	△ 8988	N.U.	6467		N.U.		N.U.
5	9436	RL 57-3	4.0	1800	8987	N.U.	△ 9437	N.U.	6659		N.U.	3	6184
5	9458	RL 57-5	4.0	1500	8987	N.U.	△ 9459	N.U.	6764		N.U.		N.U.
5	9462	RL 54-5	4.0	5900	8987	N.U.	△ 7606	N.U.	6509		N.U.		N.U.
5	9467	RL 57-6	4.0	1800	8987	N.U.	△ 9437	N.U.	6788		N.U.	3	6184
5	9684	80864-1	4.5	3000	⊖ 12498	N.S.S.	12499	12731	12500		N.U.		N.U.
5	9750	80864-2	3.1	3000	⊖ 13148	N.S.S.	13149	I.F.C.	13151		N.U.		N.U.
5	✱ 9772	81362-2	3.0	6	⊖ 13703	N.S.S.	N.R.	N.U.			N.U.		N.S.
5-1/32	✱ 9470	73245-1	760.	P.M.	9471	N.U.	N.U.	N.U.			N.U.		N.U.
6-15/32	7847	RL 61A-1	4.0	1350	9492	N.U.	△ 7845	N.U.	7846		N.U.	3	4448
6-15/32	✱ 9491	RL 61-1	4.0	4	9492	N.U.	△ 9493	N.U.			N.U.		N.S.
6-15/32	9494	RL 61-2	4.0	4	9492	N.U.	△ 9496	N.U.	6982		N.U.		N.S.
6-15/32	9497	RL 61-3	4.0	40	9499	N.U.	△ 9498	N.U.	6988		N.U.		N.S.
6-15/32	9514	RL 61-4	4.0	1290	9492	N.U.	△ 9531	N.U.	4505		N.U.	3	4448
6-15/32	9547	RL 61A-3	4.0	1800	9588	N.U.	△ 9548	N.U.	4803		N.U.	3	4448
6-15/32	9561	RL 61A-2	4.0	1290	9588	N.U.	△ 9531	N.U.	4505		N.U.	3	4418
6-15/32	9586	RL 61A-4	4.0	1290	9588	N.U.	△ 9587	N.U.	4893	3M	(1) 5118		N.U.
6-15/32	9630	RL 61A-5	4.0	1800	9588	N.U.	△11672	N.U.	4893	3M	(1) 5118		N.U.
6-9/16	9043	RL 55-3	4.0	1364	9428	N.U.	△ 9041	N.U.	6467		N.U.	3	6184
6-9/16	9440	RL 55-1	4.0	1060	9428	N.U.	△ 9032	N.U.	6467		N.U.	3	6184
6-9/16	9447	RL 55-5	4.0	1350	9428	N.U.	△ 9448	N.U.	6730		N.U.	3	6184
6-9/16	9449	RL 55-4	4.0	1290	9428	N.U.	△ 9450	N.U.	6476		N.U.	3	6184
6-9/16	✱ 9453	RL 59-3	4.0	P.M.	9428	N.U.	N.U.	N.U.			N.U.		N.S.
6-9/16	9485	RL 55A-1	4.0	1800	9428	N.U.	△ 9486	N.U.	6788		N.U.	3	6184
6-9/16	9487	RL 55-6	4.0	1364	9428	N.U.	△ 9041	N.U.	6476		N.U.	3	6184
6-9/16	✱ 9687	72684-1	3.0	4	⊖ 12451	N.S.S.	12450	N.U.			N.U.	3	12482
6-9/16	9798	72945-2	3.2	1290	⊖ 13677	N.S.S.	13676	N.S.	13678	3M	(1) 5118		N.U.
6-9/16	9776	72870-1	3.2	1290	⊖ 13821	N.S.S.	13822	N.S.	13823	3M	(1) 5118		N.U.
6-5/8	9502	RL 59-5	4.0	P.M.	9428	N.U.	N.U.	N.U.	6996		N.U.		N.S.
6-41/64	9698	72742-2	3.2	1875	⊖ 12574	N.S.S.	12576	12446	12575	3M	(1) 5118		N.U.
6-41/64	9779	72854-2	3.2	825	⊖ 13902	N.S.S.	13901	N.S.	13903	5M	(2) 12567		N.U.
7-5/8	✱ 9538	RL 52-4	4.0	P.M.	9539	N.U.	N.U.	N.U.			N.U.	2	N.S.
8-13/64	7818	72203-2	2.0	1290	+ 9533	N.U.	9579	N.S.	4818		N.U.	3	N.S.
8-13/64	9532	72203-1	2.0	1070	+ 9533	N.U.	9534	N.S.	9535		N.U.	4	N.S.
8-13/64	9578	72203-5	2.0	1290	+ 9533	N.U.	9579	N.S.	4818	3M	(1) 5118	3	N.S.
8-13/64	9593	72203-4	2.0	1070	+ 9533	N.U.	9534	N.S.	9535	4M	(3) 5039	3	N.S.
8-13/64	9596	72253-2	2.0	4	9598	N.U.	9597	N.U.	5090	5M	(2) 12567	3	N.S.
8-13/64	9617	RL 63-5	2.2	1800	11235	N.U.	11234	11233	11229	4M	(3) 5039	3	11232
8-13/64	9618	RL 63-4	2.2	845	11235	N.U.	11254	11233	11253	3M	(1) 5118	3	11232
8-13/64	9621	RL 63A-2	2.2	1000	11235	N.U.	11470	11469	11253	3M	(1) 5118	3	11232
8-13/64	9634	76365-1	7.8	845	11836	N.U.	N.R.	N.S.	11837	3M	(1) 5118		N.U.
8-13/64	9635	76365-3	2.1	845	11838	N.U.	11844	11842	11843	3M	(1) 5118		N.U.
8-13/64	9636	76365-2	2.1	1800	11838	N.U.	11841	11842	11840	4M	(3) 5039		N.U.
8-13/64	9637	RL 63B-2	2.2	5500	11235	N.U.	11983	11233	11828	4M	(3) 5039	3	11232
8-13/64	9638	RL 63A-6	2.2	1290	11235	N.U.	12012	11469	11253	3M	(1) 5118	3	11232
8-13/64	9643	RL 63B-4	2.2	1060	11235	N.U.	12079	11233	12080	4M	(3) 5039	3	11232
8-13/64	9658	RL 63B-3	2.2	845	11235	N.U.	11254	11233	11253	6M	(4) 11953	4	11954

RCA LOUDSPEAKERS AND REPLACEMENT PARTS (Continued)

Ext.Dia. Cone Housing (inches)	Speaker Stk.No.	Spkr. No. Stamped on Spkr.Frame	V.C.Impedance (ohms)	Field D. C. Resis. (ohms)	Cone & Voice Coil Stk.No.	Dust Cap Stk.No.	Field Coil Stk.No.	Neut. Coil Stk.No.	Cutput Trans. Stk.No.	PLUG Contacts.	PLUG Stk.No.	TERMINAL BOARD No. Terms.	TERMINAL BOARD Stk.No.
8-13/64	9699	RL 63C-1	2.2	1290	⊖ 12642	13866	12012	11469	11253	3M	(1) 5118	3	12641
8-13/64	9711	RL 63C-3	2.2	1900	⊖ 12642	13866	12674	11469	11828	5M	(2) 12567	3	12641
8-13/64	✳ 9712	RL 73-1	2.2	P.M.	⊖ 12642	13866	N.U.	N.U.		3M	(1) 5118	2	12914
8-13/64	9714	RL 63D-1	2.2	700	⊖ 12642	13866	12912	N.U.	12913	3M	(1) 5118	2	12914
8-13/64	9717	RL 72-2	2.2	P.M.	⊖ 12642	13866	N.U.	N.U.	11828	3M	(1) 5118	2	12914
8-13/64	9720	RL 63D-3	2.2	1800	⊖ 12642	13866	11234	11233	11229	7M	(5) 13062	4	13063
8-13/64	9757	RL 63D-2	3.3	700	⊖ 13290	13866	12912	N.U.	13289	3M	(1) 5118	2	12914
8-13/64	9768	RL 63E-1	2.2	2000	⊖ 12642	13866	13660	11469	13661	3M	(1) 5118	2	12914
8-13/64	9771	RL 63C-4	2.2	1000	⊖ 12642	13866	13600	11469	11253	3M	(1) 5118	3	12641
8-13/64	9773	RL 63E-2	2.2	845	⊖ 12642	13866	11254	11233	11253	3M	(1) 5118	3	12641
8-13/64	11826	RL 63A-4	2.2	1875	11235	N.U.	11827	11469	11828	3M	(1) 5118	3	11232
10-1/4	✳ 9455	RL 47-1	4.0	P.M.	9432	N.U.	N.U.	N.U.			N.U.		N.S.
10-1/4	9480	RL 45-6	7.5	3000	9481	N.U.	△ 9490	N.U.	6887		N.U.	4	4193
10-3/8	✳ 7819	RL 64-1	4.0	P.M.	9432	N.U.	N.U.	N.U.			N.U.	2	N.S.
10-3/8	7824	RL 60A-2	4.0	41	8969	N.U.	△ 7825	N.U.	4599		N.U.	4	4193
10-3/8	✳ 9438	RL 50-6	4.0	6950	8969	N.U.	△ 9439	N.U.			N.U.	3	4473
10-3/8	✳ 9445	RL 60-1	4.0	1300	8969	N.U.	△ 9444	N.U.			N.U.	4	4193
10-3/8	9461	RL 60-2	4.0	1300	8935	N.U.	△ 9460	N.U.	6770		N.U.	3	4473
10-3/8	9463	RL 53-1	4.0	860	8969	N.U.	△ 9425	N.U.	6455		N.U.	5	5124
10-3/8	9472	RL 50-5	4.0	2950	8969	N.U.	△ 9031	N.U.	6569		N.U.	4	4193
10-3/8	9473	RL 60-4	4.0	1300	8969	N.U.	△ 9460	N.U.	6770		N.U.	3	4473
10-3/8	✳ 9474	RL 60-3	4.0	100	8935	N.U.	△ 9475	N.U.			N.U.	4	4193
10-3/8	9508	RL 62-1	7.5	850	7000	N.U.	△ 9509	N.U.	4506		N.U.	4	4193
10-3/8	9527	RL 60A-3	4.0	1300	8935	N.U.	△ 9460	N.U.	4472		N.U.	3	4473
10-3/8	9536	RL 60A-4	4.0	1070	8969	N.U.	△ 9537	N.U.	4637		N.U.	4	4193
10-3/8	9541	RL 62-2	7.5	850	7000	N.U.	△ 9542	N.U.	7826		N.U.	4 3	4193 4473
10-3/8	9543	RL 60A-1	4.0	1975	8969	N.U.	△ 7835	N.U.	7834		N.U.	5	5124
10-3/8	9582	RL 60A-6	4.0	1975	8969	N.U.	△ 9583	N.U.	5080	4M	(3) 5039		N.U.
10-3/8	9589	RL 60B-1	4.0	1300	8935	N.U.	△ 9590	N.U.	4892	3M	(1) 5118		N.U.
10-3/8	9592	RL 60B-2	4.0	1070	8969	N.U.	△ 9591	N.U.	5041	4M	(3) 5039		N.U.
12-5/16	9619	RL 70-1	2.2	845	11258	N.U.	11254	11233	11253	3M	(1) 5118	3	11232
12-5/16	9620	RL 69-1	7.5	1700	8056	N.U.	△ 11189	N.U.	8057	4M	(3) 5039	2	8059
12-5/16	9622	RL 70A-2	2.2	1000	11258	N.U.	11470	11469	11253	3M	(1) 5118	3	11232
12-5/16	✳ 9629	RL 69-2	7.5	1700	8056	N.U.	11577	N.U.		4M	(3) 5039	2	8059
12-5/16	9639	RL 70A-4	2.2	1290	11258	N.U.	12012	11469	11253	3M	(1) 5118	3	11232
12-5/16	9652	RL 69-5	7.5	1700	8056	N.U.	△ 11189	N.U.	8057	4M	(3) 5039	2	8059
12-5/16	9694	RL 69-3	12.0	380	⊖ 12474	13867	△ 12566	N.U.	12568	5M	(2) 12567	2	8059
12-5/16	9696	RL 70C-1	2.2	1290	⊖ 12667	13866	12012	11469	11253	3M	(1) 5118	3	12641
12-5/16	✳ 9713	RL 71-1	2.2	P.M.	⊖ 12667	13866	N.U.	N.U.		3M	(1) 5118	2	12914
12-5/16	9716	RL 70B-1	2.2	700	⊖ 12667	13866	12912	N.U.	12913	3M	(1) 5118	2	12914
12-5/16	9719	RL 69-4	12.0	1700	⊖ 12474	13867	△ 11577	N.U.	13007	4M	(3) 5039	2	8059
12-5/16	9736	RL 70B-4	2.2	700	⊖ 12667	13866	12912	N.U.	12913	3M	(1) 5118	2	12914
12-5/16	9758	RL 70B-2	3.3	700	⊖ 13291	13866	12912	N.U.	13289	3M	(1) 5118	2	12914
12-5/16	9766	RL 70C-2	2.2	1000	⊖ 12667	13866	13600	11469	11253	3M	(1) 5118	3	12641
12-5/16	9767	RL 69A-3	12.0	336	⊖ 12474	13867	△ 13614	N.U.	12568	5M	(2) 12567	2	8059
12-5/16	9778	RL 70D-1	2.2	2000	⊖ 12667	13866	13660	11469	12913	3M	(1) 5118	2	12914
12-5/16	✳ 9780	RL 70B-5	2.2	2000	⊖ 12667	13866	13660	N.U.	13661	3M	(1) 5118	2	12914

N.S. -Not Stocked
N.U. -None Used
M -Male Section
⊖-Includes Dust Cap
P.M. -Permanent Magnet
N.R. -Not Replaceable
+ -Includes Cone Housing
I.F.C. -Included In Field Coil
✳-Does Not Include Cutput Transformer
(1) -For Female Section, Use Stock No. 5119
(2) -For Female Section, Use Stock No. 12493
(3) -For Female Section, Use Stock No. 5040
(4) -For Female Section, Use Stock No. 11934
(5) -For Female Section, Use Stock No. 13542
N.S.S. -Not Stocked Separately, Supplied With Cone
△-Includes Cone Housing, Coil, And Magnet Assembled