

Instrucciones para el Modelo R-3-B (Receptor á Baterías)

INSTALACIÓN

Lugar para el Receptor—Coloque el instrumento cerca del lugar donde penetren en la habitación los hilos de antena y tierra y, si fuera posible, á donde alcance el cable de las baterías las que pueden esconderse en una caja ó compartimento apropiado.

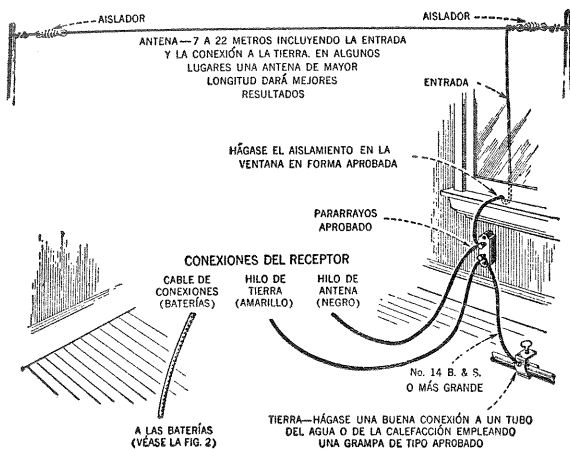


Figura 1

Antena y Tierra—El sistema de antena que se recomienda aparece en el dibujo de la Figura 1. Es muy importante que se haga una buena conexión tanto á la antena como á la tierra, tal como aparece en el dibujo.

Baterías—Se necesitan las siguientes baterías:

Batería "A"—Se puede usar uno cualquiera de los siguientes tipos:

- (1) Un acumulador de 2 voltios, o bien
- (2) Seis pilas secas de 1½ voltios—Burgess No. 6, Eveready No. 7111, o su equivalente.

Batería "B"—Cuatro pilas secas de 45 voltios cada una. Se obtendrá el resultado más económico empleando las del tipo extra grande (llamadas de servicio pesado "heavy duty") tales como la Eveready No. 486 ó No. 870, la Burgess No. 21308, ó una equivalente.

Asegúrese que el Interruptor (Figura 3) se encuentra en la posición "desconectado." Conecte entonces las baterías tal como aparece en la Figura 2, (a) o (b), según sea el tipo de la batería "A" que se use.

Importante—Al usar una batería "A" de 3 voltios, según se demuestra en la Figura 2 (b), téngase cuidado de abrir el conector entre los terminales 1 y 2 en la parte posterior del chasis. Al usar un acumulador de 2 voltios como en la Figura 2 (a), el conector debe estar cerrado. La posición exacta del conector se demuestra en la parte superior a la derecha de cada diagrama.

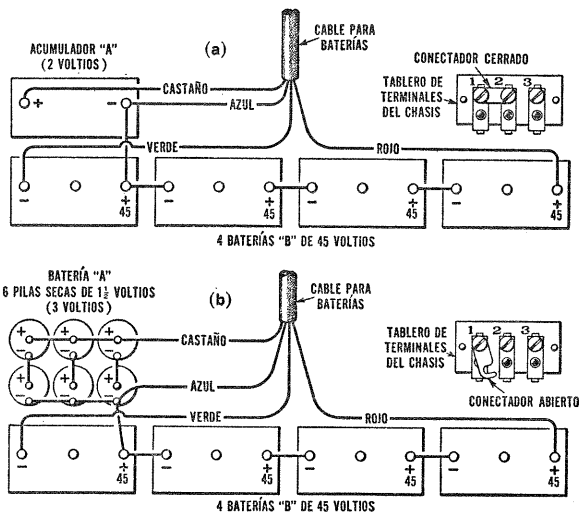


Figura 2

Radiotrons—Desempaque los tubos Radiotrons con cuidado é inserte cada uno en su respectivo "socket" ó portatubo de acuerdo con el dibujo-diagrama de los Radiotrons que se encuentra en la parte posterior del receptor. Coloque firmemente en su sitio cada una de las tres pantallas metálica tubulares encima de cada uno de los tres tubos Radiotrons de acuerdo con los círculos dobles que aparecen en el diagrama. Ahora conecte los tres hilos flexibles cortos que llevan pinzas en sus extremos libres al terminal superior ó del tope de los tubos RCA-32 y RCA-34 tal como se muestra en el diagrama.

MANEJO

Las perillas de manejo montadas en el tablero del frente del receptor aparecen en la Figura 3. Maneje el aparato como sigue:

1. Coloque el Interruptor en la posición "conectado," hacia la derecha.



Figura 3

2. Avance la perilla del Regulador del Sonido hasta más ó menos la mitad de su carrera y haga girar lentamente la perilla de sintonización (ó Selector de Estaciones) hasta escuchar una estación. (El cuadrante de sintonización está calibrado y marcado en kilociclos para facilitar el hallar las estaciones cuya frecuencia de transmisión se conoce.) Si no capta ninguna estación avance un poco más el Regulador del Sonido hacia la derecha y repita la sintonización.

3. Una vez que ya se esté recibiendo una señal reduzca el volumen á un nivel bajo girando hacia la izquierda el Regulador del Sonido. Reajuste ahora el Selector de Estaciones con exactitud dejándolo en medio de aquellos dos puntos donde la señal desaparece ó donde la calidad de la reproducción comienza á sufrir. En esta posición se obtendrá la espléndida bondad de reproducción que es posible con este receptor.

4. Ahora ajústese el Regulador del Sonido de modo que se obtenga el volumen deseado.

5. Cuando se haya concluido de usar el receptor y no se quiera escuchar más vuelva á colocar el Interruptor en la posición "desconectado," hacia la izquierda.

NOTA—Muchas veces podrá mejorarse los resultados cambiando entre sí la posición de los Radiotrons de un mismo tipo.

Importante—Para evitar dañar los tubos Radiotrons téngase cuidado de cortar la corriente, poniendo el interruptor en la posición "desconectado," antes de intercambiar entre sí ó retirar de sus "sockets" los tubos Radiotrons. Obsérvese la misma precaución al cambiar ó instalar nuevas baterías.

Instructions for Model R-3-B (Battery Operated Receiver)

INSTALLATION

Location—Place the instrument near the antenna lead-in and ground connections and, if possible, where the battery cable will reach a compartment suitable for concealing the batteries.

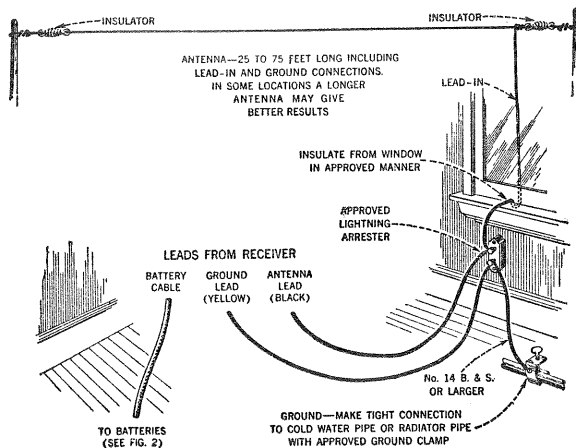


Figure 1

Antenna and Ground—The recommended antenna system is shown in Figure 1. It is important that a good ground connection be provided. Make connections to the antenna and ground as illustrated.

Batteries—The following batteries are required:

"A" Battery—Either of the following types may be used:

- (1) One 2-volt storage cell; or
- (2) Six 1½-volt dry cells—Burgess No. 6, Eveready No. 7111, or equivalent.

"B" Battery—Four 45 volt dry batteries. Most economical performance will be obtained by using the extra large (heavy duty) "B" batteries, such as Eveready No. 486 or 870, Burgess No. 21308, or equivalent.

Make certain that the On-Off Switch (Figure 3) is in the "off" position, counter-clockwise. Then connect the batteries as illustrated in Figure 2, (a) or (b), according to the type of "A" battery used.

Important—When using 3-volt "A" supply as shown in Figure 2 (b), be sure to open the link connecting terminals 1 and 2 on the rear of the chassis. For 2-volt "A" supply as in Figure 2 (a), the link should be closed. The proper link position is shown by the inset in each diagram.

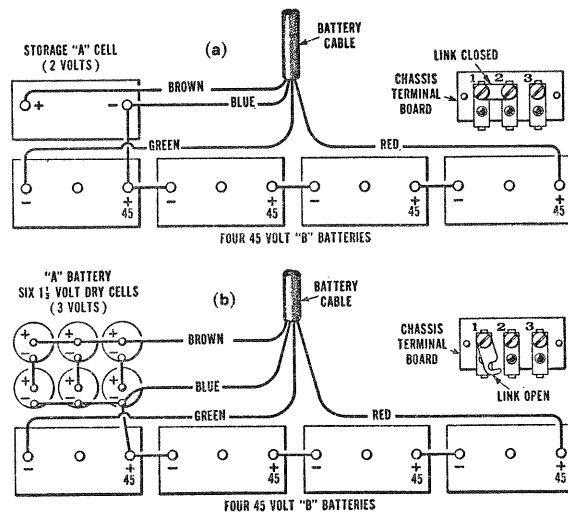


Figure 2

Radiotrons—Unpack the Radiotrons carefully and insert them in the proper sockets in accordance with the Radiotron diagram located on the rear of the receiver. Press the metal shields down firmly over the three Radiotrons shown by double circles on the diagram. Attach the three short flexible leads, equipped with spring contacts, securely to the top terminals of the RCA-32 and RCA-34 Radiotrons, as indicated on the Radiotron diagram.

OPERATION

The operating controls on the front panel are shown in Figure 3. Proceed as follows:

1. Set the On-Off Switch to the "on" position, clockwise.



Figure 3

2. Advance the Volume Control about one-half turn from the extreme counter-clockwise position and turn the Station Selector in either direction until a station is heard. (The dial scale is calibrated in kilocycles to facilitate selecting stations of known frequency.) If no station is heard, advance the Volume Control further in a clockwise direction and again rotate the selector.

3. After receiving a signal, turn the Volume Control counter-clockwise until the volume is reduced to a low level. Now readjust the Station Selector accurately to the position mid-way between the points where the quality becomes poor or the signal disappears. This setting provides the fine quality of reproduction possible with this instrument.

4. Adjust the Volume Control to obtain the desired volume.

5. When through operating, set the On-Off Switch to the "off" position, counter-clockwise.

NOTE—Improved performance may sometimes be obtained by interchanging Radiotrons of the same type in their respective sockets.

Important—To avoid damage to the Radiotrons, always set the On-Off Switch in the "off" position while interchanging or replacing Radiotrons, or while new batteries are being installed.

SERVICE DATA

Electrical Specifications

- 'A' Batteries Required.....Two volt storage battery or series parallel connection of four No. 6 dry cells delivering 3 volts.
- 'B' Batteries Required.....Four 45 Volt Blocks, preferably of Heavy Duty type.
- 'A' Battery Current.....0.55 Ampere
- 'B' Battery Current (Max. Volume Control)..0.032 Ampere
- Type and Number of Radiotrons.....2 RCA-234, 1 RCA-232, 2 RCA-230, 1 RCA-233—Total, 6.
- Undistorted Output.....0.4 Watt

This battery model Super-Heterodyne receiver incorporates such features as low current consumption Radiotrons,

single Pentode output stage and the inherent sensitivity, selectivity and tone quality of the Super-Heterodyne.

Service work in conjunction with this receiver will be similar to that of other Super-Heterodyne receivers. Line-up adjustments are made with a modulated oscillator and output meter. The I. F. amplifier uses one tuned and one untuned transformer. The I. F. frequency is 175 K. C. and the line-up capacitors should be adjusted for maximum output at this frequency. The three gang capacitor trimmers are adjusted for maximum output when the dial is set at 1410 K. C. and the oscillator at 1400 K. C.

Figure A shows the schematic diagram while Figure B shows the chassis wiring.

REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

Stock No.	DESCRIPTION	List Price	Stock No.	DESCRIPTION	List Price
RECEIVER ASSEMBLIES					
2012	Capacitor—1,200 mmfd.—Connected from second detector plate to ground.....	\$0.55	3515	Resistor — 1,800 ohms — Carbon type — ½ watt—Package of 5.....	\$1.00
2532	Capacitor—230 mmfd.—Located on resistor board—Package of 5.....	2.50	6142	Resistor — 6,000 ohms — Carbon type — ½ watt—Package of 5.....	1.00
2747	Cap—Contact cap—Package of 5.....	.50	6228	Resistor—200,000 ohms—Carbon type—½ watt—Package of 5.....	1.00
2963	Resistor — 8,000 ohms — Carbon type — 1 watt—Package of 5.....	1.10	6249	Resistor—1.5 ohms—Flexible type—Package of 5.....	1.00
2994	Coil—Located on resistor board.....	.45	6280	Resistor—400,000 ohms—Carbon type—½ watt—Package of 5.....	1.00
3076	Resistor — 1 megohm — Carbon type — ½ watt—Package of 5.....	1.00	6315	Resistor—45,000 ohms—Carbon type—½ watt—Package of 5.....	1.00
3078	Resistor—10,000 ohms—Carbon type—½ watt—Package of 5.....	1.00	6333	Cable—4 conductor—Braid covered cable—Connected to operating switch.....	.70
3079	Resistor — 40,000 ohms — Carbon type — ½ watt—Package of 5.....	1.00	6414	Capacitor pack—Comprising one 1.0 mfd., two 0.75 mfd. and two 0.1 mfd. capacitors in metal container.....	2.36
3118	Resistor — 100,000 ohms — Carbon type — ½ watt—Located on R. F. coil—Package of 5.....	1.00	6415	Transformer assembly—Comprising interstage and output transformer in metal container.....	3.84
3252	Resistor—100,000 ohms—Carbon type—½ watt—Package of 5.....	1.00	6416	Transformer—First intermediate frequency transformer.....	2.18
3297	Resistor—80,000 ohms—Carbon type—½ watt—Package of 5.....	1.00	6417	Transformer — Second intermediate frequency transformer.....	2.02
3358	Resistor — 3,000 ohms — Carbon type — ½ watt—Package of 5.....	1.00	6418	Coil—Detector oscillator coil.....	2.40
3368	Socket—UX type Radiotron socket.....	.40	6419	Coil—R. F. coil.....	1.04
3382	Resistor — 750 ohms — Carbon type — ½ watt—Package of 5.....	1.00	6463	Volume control—Complete with mounting nut.....	1.25
3456	Capacitor—0.05 mfd.....	.44	7241	Condenser—3 gang variable tuning condenser assembly.....	4.00
3460	Capacitor—1,200 mmfd.—Connected across plate and filament of second detector.....	.30	LOUDSPEAKER ASSEMBLY		
3471	Capacitor—0.025 mfd.—Connected in series with 10,000 ohms resistor across primary of output transformer.....	.32	2975	Rivet—Cone retaining ring mounting rivet —Package of 100.....	.50
3509	Socket—Five contact Radiotron socket.....	.36	6166	Board—Terminal board with two terminals —Located on cone bracket—Package of 5.....	1.00
3510	Shaft—Tuning condenser drive shaft.....	.46	8983	Magnet assembly—Comprising cone bracket core and magnet.....	5.52
3511	Scale—Dial scale and drum.....	.46	8984	Cone—Speaker paper cone—Package of 5.....	6.25
3512	Switch—Operating switch—3 pole—Single throw rotary type.....	1.50			
3513	Capacitor—700 mmfd.—Located on detector oscillator coil.....	.48			

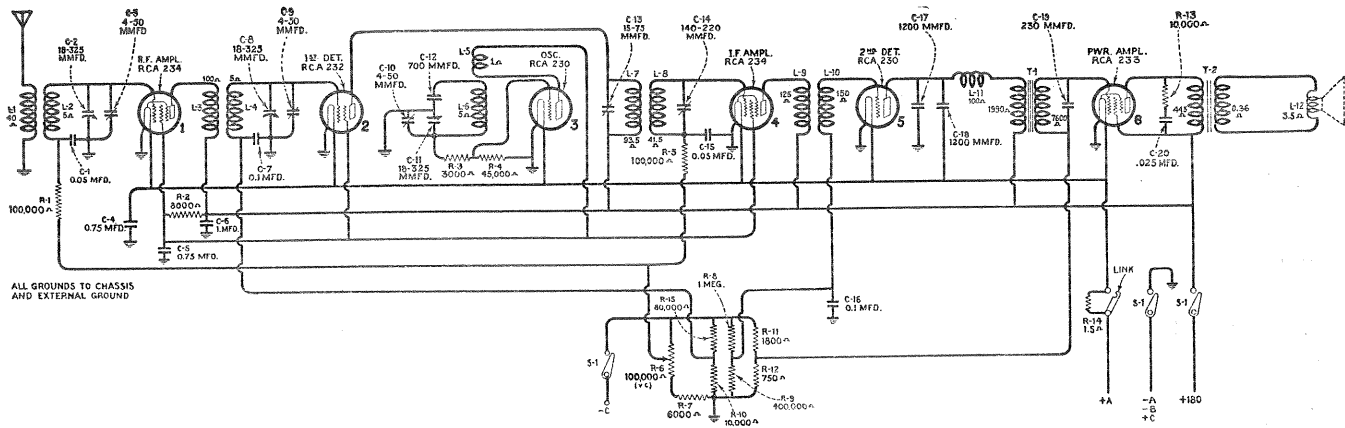
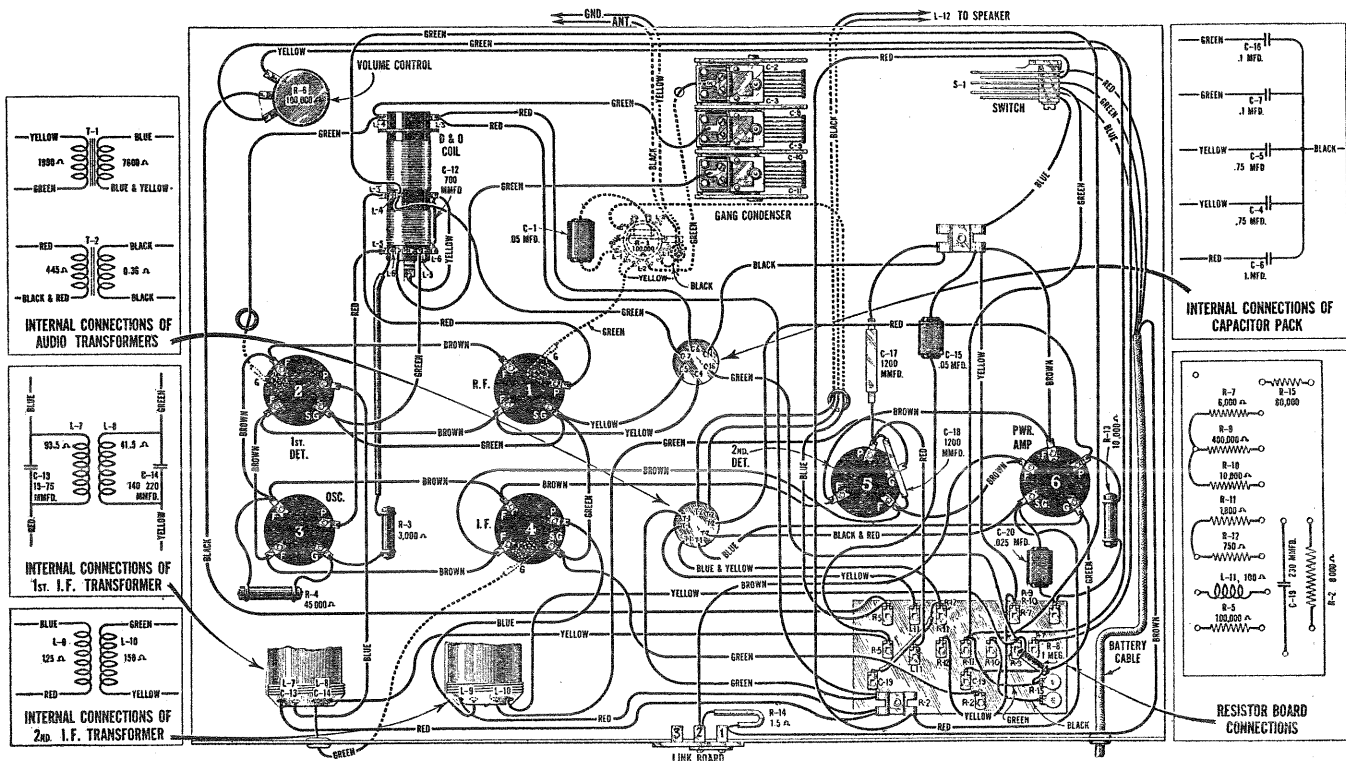


Figure A—Schematic Circuit Diagram

RADIOTRON SOCKET VOLTAGES

Voltages measured at maximum volume control and no signal impressed on input

Radiotron No.	Cathode or Filament to Control Grid, Volts	Cathode or Filament to Screen Grid, Volts	Cathode or Filament to Plate, Volts	Plate Current, M. A.	Filament or Heater, Volts
1. R. F. RCA-234	2.5	70	135	4.25	2.0
2. 1st Detector RCA-232	5.0	70	135	1.0	2.0
3. Oscillator RCA-230	—	—	70	4.5	2.0
4. I. F. RCA-234	2.5	70	135	4.25	2.0
5. 2nd Detector RCA-230	13.0	—	130	0.3	2.0
6. Power RCA-233	11.0	135	130	15.0	2.0



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Figure B—Wiring Diagram

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