Radiola 26

Portable
Super-Heterodyne

Second Harmonic

Instructions Book 5344-A

Radio Corporation of America

233 Broadway **10 South LaSalle Street** **28 Geary Street**
New York City **Chlcatto, Illinois** **San Franclaco. California**

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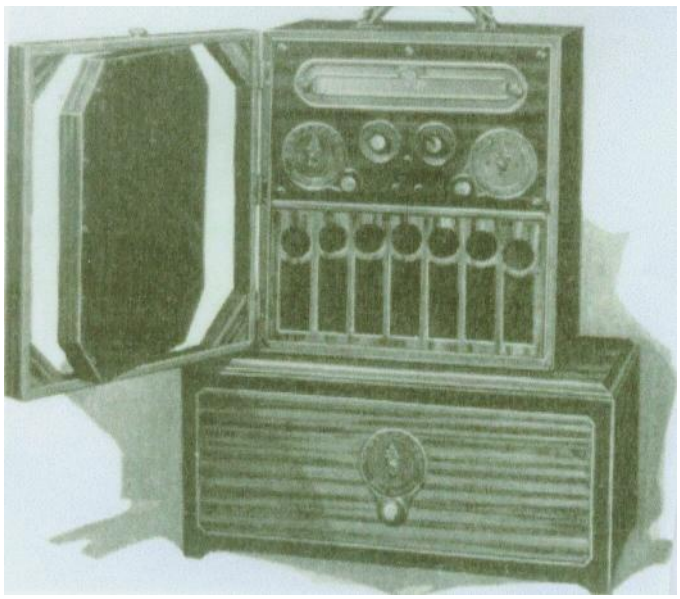


Radiola 26 with Home Battery Box

Radiola 26 as a Portable Unit

INTRODUCTION

RADIOLA 26 has been designed to fill the need for a self-contained radio receiver which can be readily carried from room to room in the home or used wherever music and entertainment may be desired. It has been designed par- ticularly for broadcast reception over the wavelength band of 220 to 550 meters or approximately 550 to 1350 kilocycles. The well-known and efficient 6-tube super-heterodyne circuit is used affording extreme sensitivity. The small loop antenna mounted in the swinging door provides both local and long distance reception. Provision is made for the use of an aerial to cover extreme distances. Simplicity of operation supreme selectivity and unusually fine tone quality are other features that will be greatly appreciated. A loud speaker is built into the cabinet and space is also provided for all necessary batteries for portable use. The Radiola 26 employs six Radiotrons, model UV-199 which are included.

Radiola 26, when used in the home, is intended to be placed upon the Home Battery Box which serves as a housing for a set of larger batteries. The larger batteries are strongly recommended for home use, as they provide longer battery life and therefore greater economy.

The Home Battery Box also contains a separate antenna Coupler permitting the use of an antenna when the set is in a shielded location.

ADDITIONAL EQUIPMENT REQUIRED

1 Set of "A," **"B"** and "C" batteries as, follow:

BATTERIES REQUIRED

NOTE:—*The fact that the Radio Corporation of America does not list batteries of all manufacturers is not intended as a reflection on the products of any battery manufacturer not listed. Any battery having dimensions, capabilities and satisfactory terminal connections similar to those of the batteries listed may be used.*

1. For Portable Use

A—3 dry cells for use, connected in series, l ½ volts each and equipped with screw and knurled nut terminals, such as:

3 Eveready Dry Cell Radio “A” Batteries, No. 7111 or
3 Columbia Ignition No. 6 Dry Cells, or
3 Burgess No. 6 Radio "A" Cells, or
3 Ray-0-Vac No. 1211 Radio "A" Cells

OR EQUIVALENT

B—Four blocks of 22 ½-volt intermediate size (4 1/8" x 2 9/16″ x 2 ¾") "B" battery, connected in series, such as:

4 Eveready No. 768 Plate Batteries, or
4 Burgess No. 5156 Plate Batteries, or
4 Ray-0-Vac No. 5151-BP
OR EQUIVALENT

C—3 individual "unit cells" small size (l 7/8" x 1") arranged in series to give a total of 4 ½ volts.

3 Eveready No. 935 Unit Cells, or
3 Burgess No. 1 "Uni-Cel", or
3 Ray-0-Lile No. 1 "Single Cell"
OR EQUIVALENT

2. *For Home Use*

For general non-portable or home use the batteries in the Home Battery **Box** should always *be* used because of their longer **life.**

A--Six radio "A" dry cells, l ½ volts each, such as those listed below, for lighting the filaments. These are connected in two groups, each of three cells in series, both groups being connected in parallel, as:

6 Eveready Dry Cell Radio "A" Butteries, No. 7111, or
6 Eveready Columbia Ignitor No. 6 Dry Cells, or
6 Burgess No. 6 Radio "A" Dry Cells, or
6 Ray-0-Vac No. 1211 Radio "A" Cells
OR EQUIVALENT

B—Two 45-volt blocks of "B" battery such as:

2 Eveready No. 767 (Horizontal) or Eveready No. 772 (Vertical) or
2 Burgess No. 2306 (Horizontal) or Burgess No. 2308 (Vertical) or
2 Ray-0-Vac No. 2301 (Horizontal) or Ray-0-Vac No. 2303 (Vertical)
OR EQUIVALENT

Four 22 ½-volt blocks of "B" battery may be used instead of the two 45-volt units if desired, as:

4 Burgess No. 2156, or
4 Evereadv No. 766, or
4 Ray-0-Vac No. 2151
OR EQUIVALENT

C—One 4 ½-volt dry cell "C" battery such as:

1 Eveready No. 771 *"C* Battery, or
1 Burgess No. 2370 Battery, or
1 Ray-0-Vac No. 231-R "C" Battery
OR EQUIVALENT

INSTALLATION

Radiola 26 is completely self-contained requiring no external connections. Since the signal is picked up by a loop (which may be mounted either in the front cover or on the back of the cabinet), it will be well to keep this loop away from large surfaces of metal such as radiators, pipes or pianos. In particular, it should be kept away from walls using metal lath. If metal lath is used for all the walls of a room, it may be necessary to place Radiola 26 near a window. This condition is most likely to be met in a modern apartment building or in a modern hotel.

Radiola 26 should be placed on a table or desk that is practically level so that the swinging door of the cabinet will stay in any position in which it is placed.

A loop antenna is highly directional, that is, it will receive best when either end is pointed toward the broadcast station desired. It will practically exclude signals coming from a direction at right angles to that in which it is pointed. If excessive interference is caused by a nearby broadcasting station, it is often possible to tune out the nearby station merely by turning the loop at a right angle thereto.

The loop may also be attached rigidly at the back of the cabinet where it can be used equally well except that the whole set will have to be rotated to get proper directional effect. This is of advantage when the set is being used in camp, or is being carried by the handle, or under similar circumstances, and also when an antenna is being used.

Battery Installation. The batteries required for operations of Radiola 26 are listed on pages 3 and 4';

To install the batteries proceed as follows: Open the door at the back of the cabinet. Place three ordinary l 1/2-volt dry cells on their sides and clamp in place as shown in Figure 4. Use standard battery connectors or obtain two pieces of insulated wire about four inches long, the ends of which should be skinned and cleaned for a distance of about one inch for making the connections between battery units.

Connect the positive (center) terminal of the top cell to the negative (edge) terminal of the middle cell with one piece of wire and then connect the positive (center) terminal of the middle cell to the negative (edge) terminal of the bottom cell. This will place the three cells of the "A" battery in series.

Now locate the connection block with five leads extending from its back at the side of the cabinet. One of these leads has a green braid with a yellow tracer and is equipped with a metal tag marked "-A" "+C" and also has a terminal near its middle, while the other end is attached at the upper left edge of the battery compartment. Connect this terminal to the negative (edge) terminal of the top "A" cell and screw the knurled nut down as tightly as possible. One of the other leads has a yellow braid with red tracer and two terminals, one near the middle and the other at the end, and is equipped with a metal tag marked "+A", "-B" "Ground". Connect the terminal near the middle of the lead to the positive (center) terminal of the bottom dry cell of the "A" battery. Use "Ground" connection only when an aerial is employed.

Connections from the terminal block to the catacomb are made through a 5 conductor cable connected to the "plug" section of the connection block. The two sections of the connection block are fitted together when the set is shipped. If they have come apart or have been separated to facilitate installation of batteries, put them together again. The pin arrangement is such that the two sections will fit together in but one way.

After the three cells of the "A" battery have been connected remove the packing block by pressing down on catacomb (using a screw driver as a lever) and pulling the block forward and out through the tube opening. Turn the "Battery" setting knob to the left until the pointer rests on "Off". Then unpack the six Radiotrons Model UV-l99 which will he found in the battery compartment of the portable unit. Before placing the Radiotrons in the sockets, make sure that the bayonet pin at the side of the Radiotron base is in line with the slot of the socket, then push the Radiotron down in the socket and turn it slightly to the right where it will remain in a' fixed or locked position. Turn the "Battery" control knob to "2" and see that the filaments of all the Radiotrons glow.

Turn the "Volume" control knob all the way to the right to determine if the third Radiotron from the left glows at normal brilliancy. After determining that all the Radiotrons are glowing properly, turn the "Battery" control knob back to "Off", remove the Radiotrons from their sockets and proceed with the installation of the "B" and "C" batteries.

Remove the "B" battery units from their cartons and place them in the right half of the battery compartment. They are to be stood on end in two rows with the tops facing outward as shown in Figure 5 and must he placed exactly as shown. The

proper batteries for this set (listed on pages 3 and 4) are equipped with binding posts on the negative end and with red wire leads with terminals on the positive end. Place them in the positions shown in Fig. 4. Connect the terminal at the *end* of the lead having yellow braid and red tracer and having a metal tag marked "+A","—**B",**

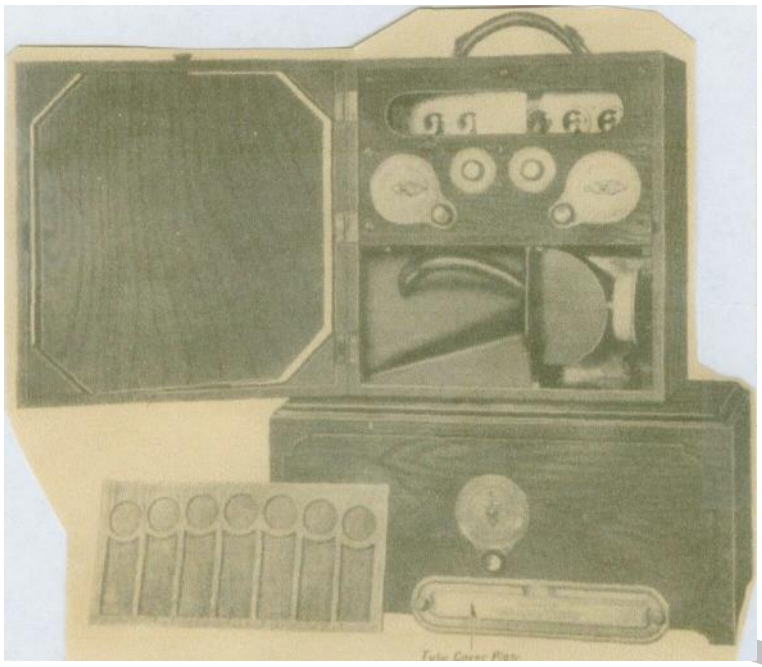


FIG. 3—Radiola 26 Showing Packing Block in Place

"Ground" to the negative (binding post) terminal of battery No. **1. Connect the** red wire lead from battery No. 1 to the post of battery No. 2. Connect the red wire lead from battery No. 2 to the post of battery No. 3. To the same post connect the lead with the maroon braid having a metal tag marked "+45B". Then connect the red wire lead from battery No. 3 to the post of battery No. 4. Finally connect the red wire lead from battery No. 4 and the red lead "+90V" from the battery connection block to the terminal post holding the "B" batteries in place.

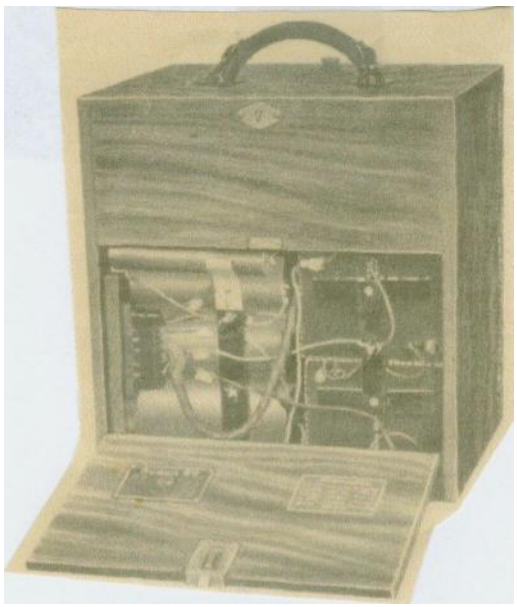
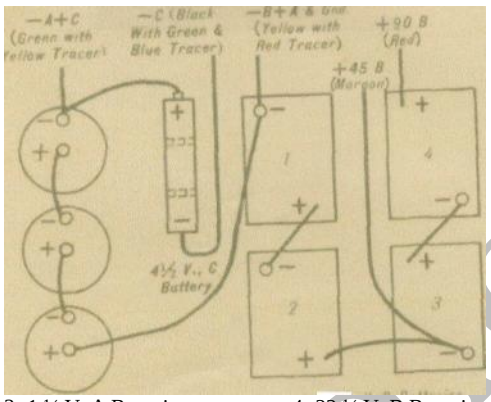


Fig. 4 – Battery connections for Portable Unit



3- 1 ½ V. A Batteries 4- 22 ½ V. B Batteries

Fig. 5- Diagram of Battery Connections for Portable Unit

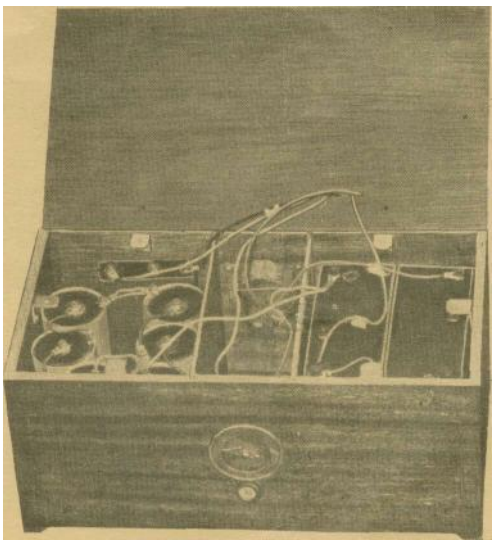


FIG. 6—Battery Connections When Using Home Battery Box

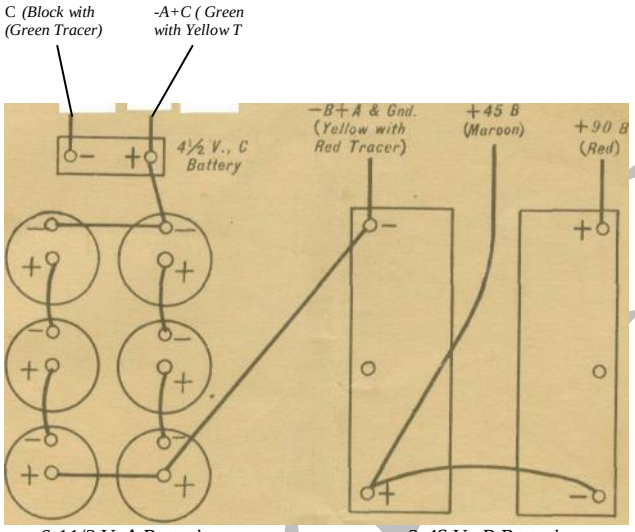


FIG. 7—Diagram of Battery Connections When Using Home Battery Box

To install the "C" battery, insert the three unit "C" cells in the insulating tube, making sure that the little brass caps in the center of the end of each cell, all point in the same direction. Then place this "C" battery assembly in the upper left corner of the battery compartment as shown in Figure 4. It is absolutely necessary that the end of the "C" battery assembly having a little brass cap (positive) be placed against the contact at the side of the cabinet. It will be necessary to loosen the "A" battery clamp in order to insert the "C" battery and its holder. Then tighten the battery clamp by means of thumb screws.

When connecting the batteries, do not permit the metal terminals on any lead to come into contact with other battery terminals, or with terminals of leads connected to them, even for a short time. Such connection causes rapid reduction in the useful life of the batteries. Make and keep all connections to the batteries as tight as possible, otherwise objectionable noises or complete in operation of the receiver may result. This completes the battery installation. Now insert the Radiotrons in their sockets and the set is ready to use.

CONTROLS

Battery. This control serves to turn on and regulate the current to the filaments of all six of the Radiotrons. Loss of "A" battery voltage through use or
age is compensated for by this control. When Radiola 26 is not in use, this control *should always be turned as far as possible to the left so that the pointer rests on "Off"* This will conserve the "A" battery and increase the life of the Radiotrons.

Volume. This control serves to regulate the volume and does so by controlling the filament current of the third Radiotron from the left. Loudest volume is obtained by turning this knob **to** the rig-lit as far as it will go.

Station Selector 1. This control serves to tune **the loop** circuit so that it will respond to the desired broadcast station. *Station Selector 2.* This control serves to adjust the frequency of the super-heterodyne oscillator. .

MANIPULATION

Turn the "Volume" control as far as possible to the right. Then turn the "Battery" control to 2.5. Remove the cover plate and note that the filaments of all the Radiotrons are glowing.

With Fresh Batteries do not Turn the "Battery" setting Pointer Past 2.5.
This is Extremely Important as otherwise the useful life

of the Radiotrons and batteries will he shortened and little will be gained in ease of tuning, signal strength or otherwise. As the batteries grow older with use, this setting should lie *gradually* advanced, say week to week, toward "10".

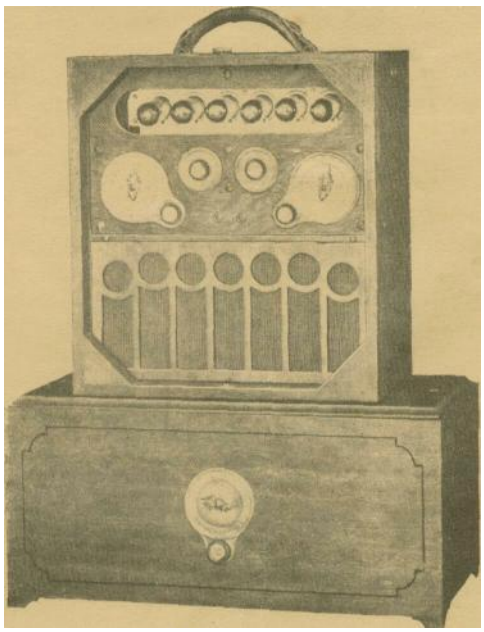


FIG. 8—Radiola 26 with Radiotrons in Place

The selection of stations is done entirely by manipulating the two "Station Selectors" and by turning the loop. For a first trial, the position of the loop is not likely to matter much. Leave it wherever it happens to lie.

The two pointers of the "Station Selectors" should be in nearly the same relative position on their respective dials for maximum signals from any given station. By this it is meant that if "Station Selector 1" is at "40" that "Station
Selector 2" should be somewhere near "40". There will always be two positions of "Station Selector 2" for each position of the "Station Selector 1" and both positions should give the same signal intensity. If interference is obtained on one
position try the other.

When searching for stations, the settings of which are not " known, proceed as follows: Set "Station Selector 1" at say, 10.

Move "Station Selector 2" slowly over the scale near "10", say from 5 to 15. If no signals are heard, there is no station working on that wavelength. Then set "Station Selector 1" pointer at say 12, and slowly move "Station Selector 2" from about 7 to 17. If again no signals are heard, set "Station Selector 1" at say 14, and move "Station Selector 2", slowly from about 9 to 19. Repeat this process, increasing the setting of "Station Selector 1" in small steps until the whole scale has been covered. It will be noted after the first few trials that when "Station Selectors 1 and 2" are in resonance, a slight "breathing sound" is heard indicating that the set is working properly.

After hearing a signal, carefully adjust both "Station Selectors 1 and 2" for the clearest reproduction. To decrease the volume of signal, turn the "Volume" control toward the left.

If no stations are heard the loop of the Radiola 26 should be turned 90 degrees from where it was during the preceding adjustments, and the tuning process just described should be repeated.

After a little practice, it will be found possible to cover the whole wavelength range by slowly moving "Station Selector 1" from one end of the scale to the other while keeping "Station Selector 2" in its proper relation. Always remember to keep the "Station Selectors" at approximately the same settings. This is the easiest and quickest way in which to find stations.

Control of Volume. The proper way to control the volume is to adjust the "Volume" control knob. If turned to the left, the volume is decreased. If turned to the right it is increased. If, however, the "Volume" control is turned too far toward the right (in a clockwise direction) when receiving from a powerful local broadcast station, the signals may become mushy or distorted. The "Volume" control should then be turned to the left until the best tone quality is obtained.

Use of a Telephone Headset. A telephone headset may be used if desired. The two holes near the bottom of the control panel are openings to pin jacks. Push the pin terminals of the headset cord into these holes.

If it is desired to operate the head telephone receivers without operating the loud speaker, remove the last Radiotron at the extreme right, and turn the "Battery" control back so that the brilliancy of the filaments is the same as when all six of the Radiotrons are in use.

INTERFERENCE

Signals from an interfering radio station may be eliminated or at least minimized by either of the following methods;

(1) Turn "Station Selector 2" either to the right or left, by approximately ¾ inch to 1 inch if the selector is at upper part of scale, or ¼ to ½ inch if at lower part, to find another position of this control where the desired station will be again heard. The setting of "Station Selector 2" nearer the left end of the scale is technically called the "lower wavelength peak" and the other the "upper wavelength peak". Two settings of this nature will be found for all broadcast stations, and the separation between them becomes greater and greater for the higher end of the scale, *i. e.*, nearer the right hand end. It is recommended that "Station Selector 2" be consistently set on the "upper peak" in the usual manipulation of the set. When interference is encountered, shift to the "lower peak" and use whichever one at which minimum interference occurs.

(2) Rotate the loop of the Radiola 26. For every transmitting station, there are two positions at which the signal strength will rise to a maximum, and two others at right angles where it is at a minimum. Rotate the loop until best results are secured, trying to locate the position of the loop where the interference does not come in, but the desired signals do.

CALIBRATION

To enable the most satisfactory service to be obtained from tlie Radiola 26, it is desirable to be able to turn to any broadcasting station at will. This can be done if the station is operating and if transmission conditions are such that the signal intensity is enough to be received and if the proper adjustments are known. The first two conditions are ones over which the listener has no control. To facilitate the proper adjustment, Radiola 26 is furnished with a "Radiola Calibration" card, ruled with vertical columns with spaces for Wavelength, Frequency, Call-Letters and Settings of "Station Selectors". Whenever a station is heard, write down the call-letters and the settings of the "Station Selectors" in the proper columns. Then the settings can be duplicated when desired. Since there are two settings of "Station Selector 2" for every one of "Station Selector
1", it is suggested that only the

upper one be recorded. The wavelength in meters and the frequency in kilocycles at which the various stations operate are published frequently in the daily papers and the Radio magazines.

NOTE:—*These records must be made in pencil as they are subject to change, and ink cannot be erased from the card.*

MAINTENANCE

Should any trouble develop in the use of Radiola 26, it will in all probability be due to loss of life or misuse of the Radiotrons or to the exhaustion of the batteries. As the batteries grow old, they decrease in voltage and increase in resistance.

Radiotrons. When not mistreated the six Radiotrons last tor many months. They may be seriously damaged or their normally long useful life terminated as follows:

A—By mechanical injury such as dropping or severely jarring the Radiotron causing a displacement of the internal elements, or breakage of the filament.

B—By electrical injury caused either by advancing the "Battery" setting control further in a clockwise direction than is necessitated by the condition of the "A" battery, or by accidental contact of the filament with the "B" battery voltage.

With the filaments burning too brightly ("Battery" setting-knob too close to 10), the active material in the filaments is rapidly driven off, and the useful life of the Radiotrons and batteries is shortened. Should this occur, the Radiotrons may be restored, provided they have not been too seriously abused.

This process of "reactivation" as it is called, may be accomplished by turning the "Volume" control knob to 10, and the "Battery" setting knob to 6.5 with fresh "A" batteries, and by removing the,"+45B" and "+90B" plate or "B" battery leads in the battery compartment used. Keep the Radiotrons lighted for about thirty minutes, replace the connectors, and then try tuning.

Filament or "A" Battery. When the "A" battery dry cells become discharged to the point where they will no longer heat the filaments of the six Radiotrons to the proper temperature, they should be replaced by new ones. The old ones are of no value and should be discarded. The three dry cells provided in Radiola 26 for portable use will give about one-half the operating

life of the larger cells in the Home Battery **Box.** The longer life batteries should invariably be used for continuous service.

There are several indications by which the user may determine that the filament or "A" batteries are becoming exhausted. These are low filament brilliancy, weak signals, and distortion, the signals becoming less and less recognizable. When it is found necessary to turn the "Battery" setting knob up to "10", and the operation of the set is still unsatisfactory, it is an indication that the filament batteries are exhausted.

Plate or "B" Battery. When signals become weak with the filaments burning properly and other conditions normal, or if operation becomes noisy, the "B" battery should he replaced. If a high resistance type of voltmeter is available, the batteries may be tested. They should be discarded when the voltage has fallen to 17 volts per 22 ½-volt block, or 34 volts per 45-volt block.

Grid or "C" *Battery.* It is difficult to tell when this battery is exhausted except by measurement of its voltage with a voltmeter. The safe plan is to renew it whenever the "B" battery is replaced. Indications of an exhausted "C" battery are distorted signals and a tendency to howl.

If the difficulty appears to be elsewhere, it is recommended that the services of the dealer from whom the set was purchased, be enlisted.

If the set becomes inoperative, try interchanging the Radiotrons. The second tube from the left (when facing the front of the set) is the important one. Try interchanging this Radiotron with either the third, fourth, or fifth Radiotrons from the left. Use for the second Radiotron from the left (when facing the front of the set), the one which gives the maximum response in the loud speaker or head telephone receivers when listening to a distant station. "Station Selector 2" should be slightly readjusted whenever the first or second Radiotrons are changed.

If no improvement is noted an examination of the batteries and their connections should be made. It is of advantage to keep a spare Radiotron UV-199 on hand to meet emergencies.

Polishing the Exterior. If finger marks result from handling the cabinet, a little rubbing or polishing with furniture polish will restore the finish. The polish chosen should be of a grade which will leave the cabinet free from an oily appearance. Use a soft piece of cotton cloth or cheesecloth free from lint. Moisten the rag with a small quantity of the polish and rub it on the

surface to be restored. Wipe thoroughly with clean dry cheesecloth, making sure that all crevices are dry and clean. The surface should be rubbed until the finish is restored to a dull gloss.

HOME BATTERY BOX

The Home Battery Box for use with the Radiola 26 has two distinct and separate functions. It is designed primarily as a means of holding in a neat and attractive manner a set of larger batteries which will give long and economical service. It is also equipped with a tuning circuit for use with an antenna.

To install the batteries in the Home Battery Box it is necessary to remove the top which is held in place by six screws located near the ends and sides. When these screws have been taken out, the top can be removed. Three compartments will be found in the Home Battery **Box.** The center compartment is reserved for the "Antenna Tuner" and nothing should be placed in it. The compartment at the left should be used for the "A" and "C" batteries while the compartment at the right is to be used for the "B" batteries.

The batteries are to be located as in Figs. 6 and 7. The six dry cells forming the "A" battery are to be connected in two parallel groups of three cells each in series. The exact method of making connections may be best understood by reference to the diagram Fig. 10. Connections between cells are to be made by the short jumpers furnished with the Home Battery Box. Find the lead with yellow braid and red tracer having a metal tag marked "+A", "—B", "Ground", and connect its terminals to the two free positive (center) terminals of the dry cells. Next find the lead having the green braid with yellow tracer and having a metal tag marked "—A", "+C", and connect its two end terminals to the free negative (edge) terminals of the dry cells. The third terminal on this same lead is to be connected to the positive terminal of the "C" battery. Complete the "C" battery connection by finding the lead with a black braid and green tracer having a metal tag marked "—C", and connecting its terminal to the negative terminal of the "C" battery.

The "B" battery for use in the Home Battery **Box** may consist of either four blocks of 22 ½-*volt* "B" battery (large size) or it may consist of two blocks of 45-volt "B" battery (large size.) In case 22 ½-volt blocks are used, they should be connected in series, *i. e.*, the positive binding post on No. 1 should be connected to the negative of No. 2, etc. In case two 45-volt blocks are employed, the positive binding post or terminal of No. 1 is con-

nected to the negative of No. 2 block. This will leave the negative of the first block and the positive of the last block without connections. The batteries should be placed in the right compartment

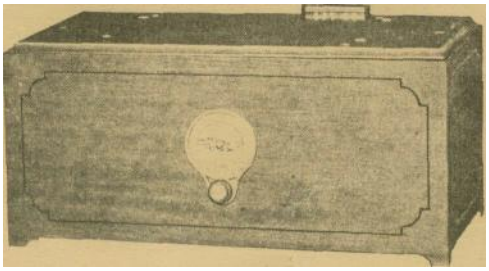


Fig. fl— Home Battery Box

as shown in Fig's. 6 and 7 and if four 22 ½-volt blocks are used, the first and second blocks of "B" battery should he placed at the bottom of the right hand compartment, the others being placed on top. The extra lead with yellow braid and red tracer having a metal tag marked "+A","—B"," Ground", is to have its terminal connected to the negative terminal of battery No. 1. The maroon lead having a metal tag marked "+45B" is to be connected to the positive (+) terminal of the second 22 ½-volt "B" battery (in case four 22 ½-volt blocks are used), or to the positive (+) terminal of the first 45-volt block (in case two 45-volt blocks are used). The red lead having a metal tag marked "+90B" is to be connected to the positive (+) terminal of the last battery block.

This completes the installation of the batteries in the Home 'Battery Box. The cover should then be replaced and fastened down by its screws. Radiola 26 can then be placed in position with the button feet fitting into recesses on the cover of the box and the slot in the bottom of Radiola 26 fitting down over the battery terminal block. To use the batteries in the Home Battery Box, open the back of Radiola 26 and pull apart the battery connector, pushing the plug part attached to the cable into the socket part attached to the top of the Home Battery Box.

Antenna Coupling and Tuning System. The loop of the Radiola 26 has been made of such a size as to permit of both convenience of operation and portability. In certain shielded locations the use of either an indoor or outdoor antenna will frequently improve the operation of the Radiola 26 when very weak signals are received.

Included in the Home Battery Box is an antenna coupling and tuning system consisting of an antenna inductance coil and a variable condenser which is to be connected between the antenna and the ground (water or steam pipe) in the same manner as employed in the usual antenna type of receiver, and tuned in the same way. It is not necessary that there be any direct connection between the antenna circuit and the Radiola 26, as the signal is inductively transferred from the antenna coupling or tuning system to the loop of the Radiola 26.

To use the antenna coupling or tuning system, proceed as follows: Remove the loop from its usual place in the frame of the door, releasing it by unscrewing the knurled knob at the top of the frame. Then hang the loop on the back of the Radiola 26 cabinet, using the little brass knobs at the top and bottom of the loop which slide into catches recessed into the back of the cabinet. Now connect the lead from the antenna to the binding post marked "ANT" on the back of the Home Battery Box. Also connect the binding post Marked "GND" to a good ground connection.

The type of antenna to be employed will depend upon the local surroundings in the home of the user. If an indoor type of antenna is used it may consist of a short wire from 20 to 30 feet in length and may be insulated copper wire between No. 18 and No. 24 B & S Gauge, run conveniently around the picture molding. Care should be taken to keep this wire several feet or more away from any adjacent telephone, electric light, or power wires. If an outdoor antenna is employed, it may be from 15 to 35 feet in height and should not be over 75 feet long including the lead-in. The antenna should be supported at both ends by good porcelain insulators and should also be carried on insulators where the lead-in wire comes down along the side or through the wall of the house.

The antenna should be run (as nearly as practicable) at right angles to all electric light and power wires, and should be separated from these wires as much as possible. Further, it should be protected from lightning by means of an approved lightning arrester. The use of a flat "window strip" type of lead-in is not recommended. The best method to employ for bringing the lead-in wire into the house is to use the standard form of porcelain tube or bushing. The ground wire from the "GND" binding post should be as short as possible and should be connected to either a waterpipe or a steampipe by means of a copper ground clamp. The water or steam pipe should be thoroughly scraped, cleaned, and polished before attaching the ground clamp, which

should be very tightly bolted to the pipe. The ground wire should be soldered to the copper ground clamp.

Radiola 26 will be operated in the manner previously described and in addition, it will be necessary to regulate the "Station Selector 3". It will be found that signals will come in as usual no matter what the setting of "Station Selector
3" may be, but that the signal intensity can be increased by the proper manipulation of "Station Selector 3". It is suggested that the following method be employed for tuning in a station: Operate "Station Selectors 1 and 2" and tune in a distant broadcast station. Then manipulate "Station Selector 3" until the signal has been increased several times. Unless the antenna is changed, it will be noted that a definite relation exists between the settings of "Station Selectors 1 and 3".

PATENT NOTICE

"The apparatus and devices which, or the use of which, are covered by patents, are sold only under certain specified licenses set forth in a notice attached permanently to the said apparatus and devices, or if this is impracticable on account of size, then on tags or wrappers attached to the said apparatus and devices or on cartons containing the same. This license notice is as follows:

'In connection with devices it sells, Radio Corporation of America has rights under patents having claims: (a) on the devices themselves and, (b) on combinations of the devices with other devices or elements, as for example in various circuits and hook-ups.

'The sale of this device carries a license under the patent claims of (a), but only for amateur, experimental and entertainment radio uses where no business features are involved.

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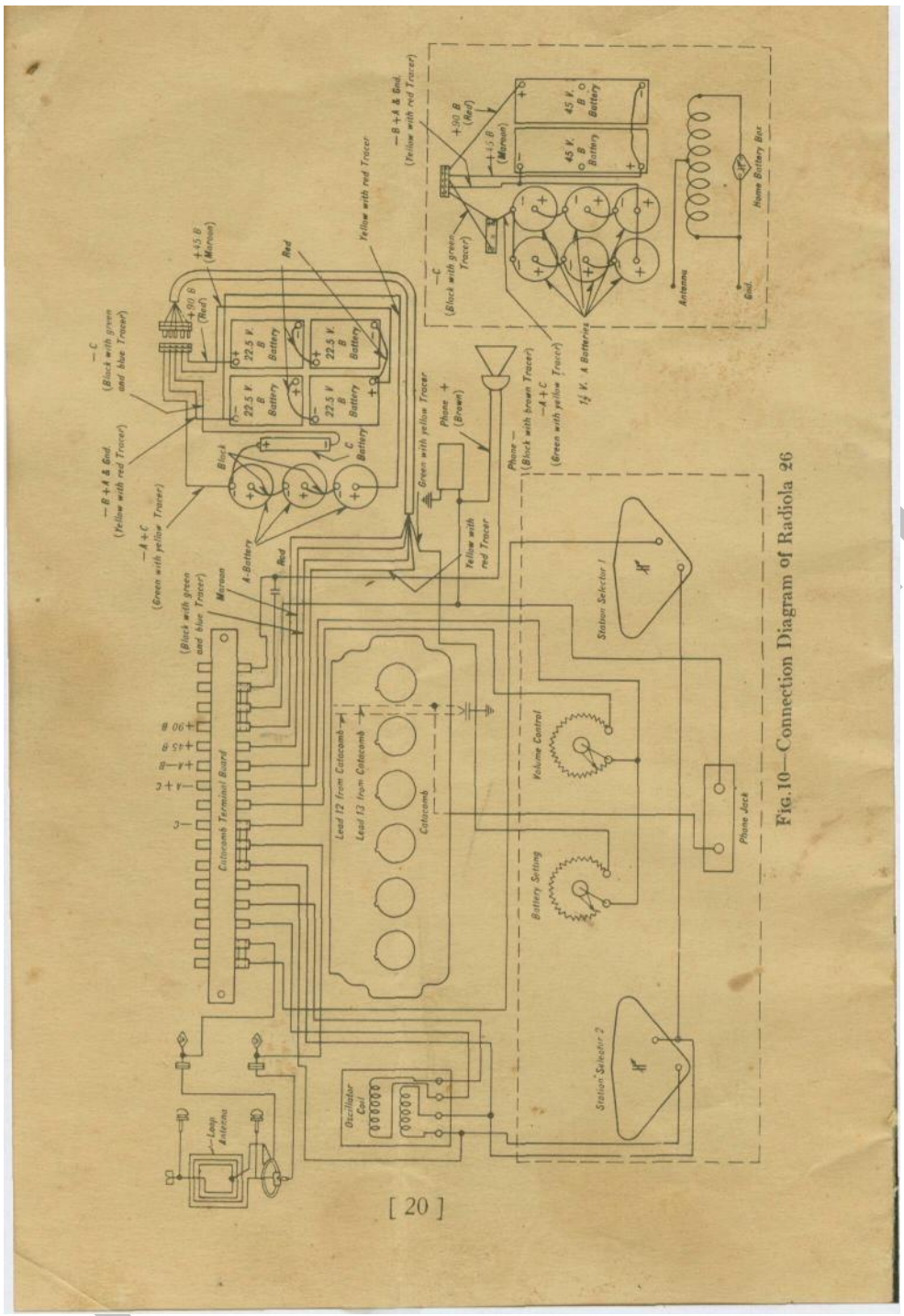

Fig. 10—Connection Diagram of Radiola 26

STATION LOG

Date	Call letters	LOCATION	STATION SELECTORS Left Hand	Right Hand	Frequency in Kilocycles