## IMPORTANT NOTICE

**Regardless of how much you do or do not know about Radio Receiving Sets, do not attempt to connect up this Crosley Receiver without first carefully reading our instructions. A half hour's study of these instructions may save you the price of a few tubes, which you can easily destroy if you connect the wires wrong. We want you to enjoy this set and you will if you connect it up properly. If you are in doubt on any point, talk to your dealer before you go ahead.**

# Instructions for Operating

# CROSLEY

# 52

# Radio Receiver

**THE CROSLEY RADIO CORPORATION**

**POWEL CROSLEY, Jr., President**

**CINCINNATI, OHIO**

# CAUTION

**READ THESE INSTRUCTIONS CAREFULLY BEFORE CONNECTING UP THE RECEIVER DO NOT PLACE TUBES IN SOCKETS UNTIL BATTERIES ARE CONNECTED TO THE SET**

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## INSTRUCTIONS FOR OPERATING THE

# CROSLEY 52

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## NOTE

This Crosley 52 may be used in three different ways:

1. With a storage (wet) "A" battery and vacuum tubes of the 200, 201A and 300, 301A type.

2. With dry cells as an "A" battery and vacuum tubes of the WD12, C12 type.

3. With dry cells as an "A" battery and vacuum tubes of the UV199, or C299 type.

"B" Batteries (dry) are the same in all three methods.

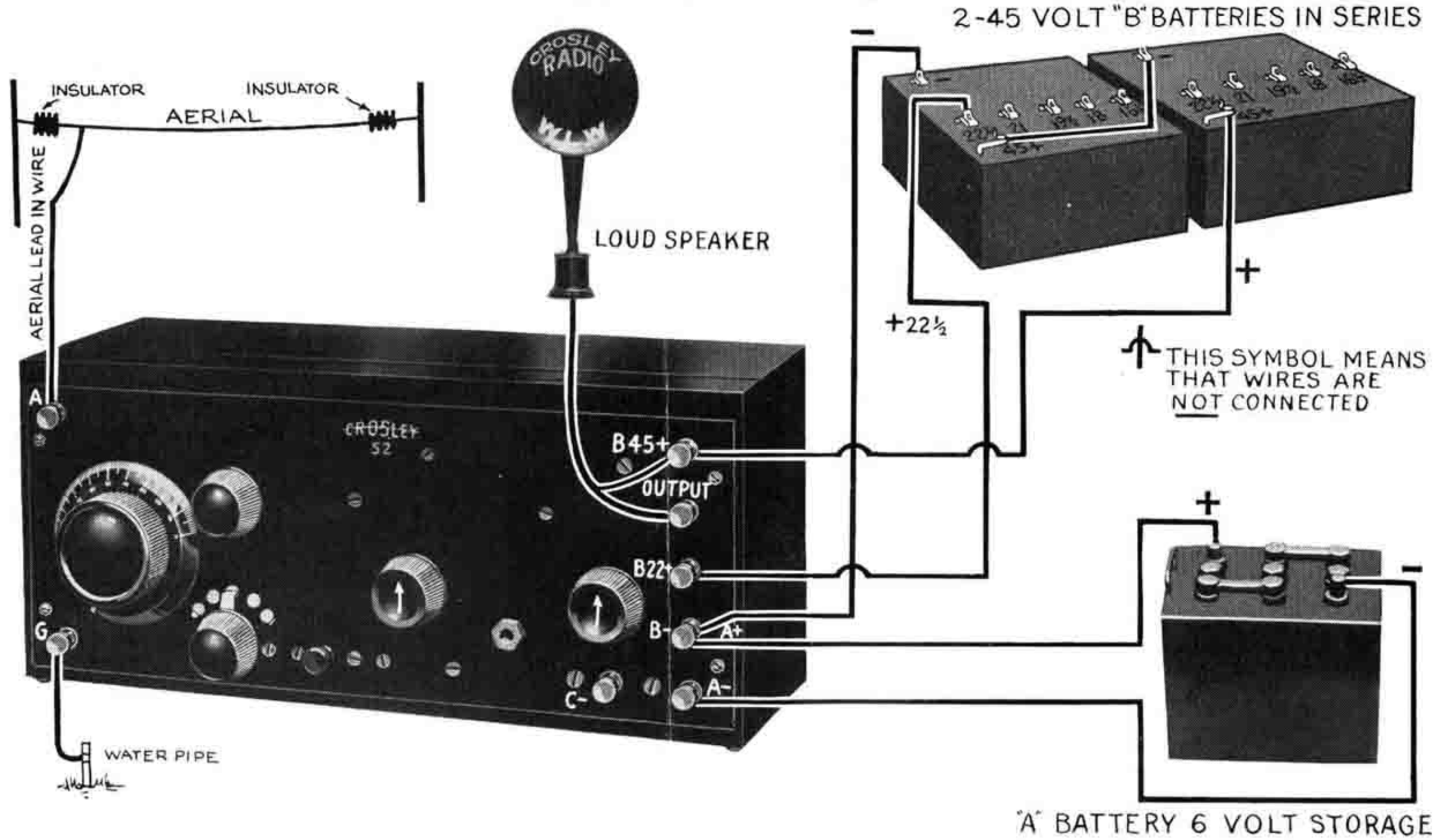
Anyone of the three methods can be used effectively. Choose the one you prefer. With dry cells as an "A" battery your initial cost will be less than using a storage (wet) battery as an "A" battery. In the long run they will cost about the same. If you live in the country where it is not convenient to get a storage (wet) battery easily recharged you will probably prefer dry cells.

***The Crosley 52 is a regenerative receiver of the plate to grid feed back type, and is licensed under Armstrong patent No. 1,113,149. This receiver is composed of a single circuit tuner, detector and two stages of transformer coupled audio frequency amplification.***

## Vacuum Tubes

***The Crosley 52 is equipped with universal rheostats known as Multistats. This type of rheostat makes it possible to use any of the vacuum tubes now available.***

## CROSLEY 52 FIGURE #1
## BATTERY CONNECTIONS FOR
## 6 VOLT TUBES



# HOW TO CONNECT UP THIS CROSLEY 52 RECEIVER USING A STORAGE (WET) BATTERY AND 201A, 301A VACUUM TUBES

## The Equipment You Need

1. Aerial and Ground equipment.
2. Three Vacuum Tubes as follows:
   One 200 or 300 and two 201A or 301A.
   Three 201A or 301A.
3. One Storage "A" battery (wet) 6 volts—60 to 80 amperes hours capacity.
4. Two "B" Batteries (dry) 45 volts each.
5. One pair of Headphones.
6. One Grid Leak.
7. One Loud Speaker, if desired.
8. Twenty feet of No. 18 Insulated Copper Wire to make connections between batteries and your set. Be sure it is insulatd (COVERED).

## Caution

**There are many inferior vacuum tubes offered for sale. Purchase only those manufactured by responsible concerns and guaranteed by the dealer to give satisfactory service.**

## Note

**In making connections between your batteries and receiver always use insulated (covered) wire, No. 18 insulated copper is satisfactory. Scrape the insulation off the ends of the wires where they are connected to binding posts in the set and clips on the batteries.**

## Detailed Explanation of This Equipment

**Aerial and Ground Equipment.** Complete instructions for putting up your aerial and ground will be found in the accompanying booklet, "Simplicity of Radio." A good ground and aerial are two of the most important things about your set. Read the instructions carefully. The actual material you need is as follows:

200 feet of bare No. 18 copper wire to be used for aerial and ground.

2 Insulators—one for each end of the aerial wire.

1 Porcelain tube 6 inches long.

1 Protective device (lightning arrestor).

1 Ground Clamp.

This equipment is generally sold complete in one box and may be purchased from any good radio dealer.

## "A" Battery

For your "A" Battery use a 6 volt storage (wet) battery of from 60 to 80 ampere hours capacity, 80 amperes would be preferable because it would not have to be recharged so often. The "A" Battery is used to light up the filament in the tubes. If you don't understand "Amperes and volts" just tell your battery or radio dealer you want a "6 volt—80 ampere radio 'A' Battery." He will know just what you want. Like all other storage batteries this must be recharged when run down. The "Simplicity of Radio" explains thoroughly how to recharge and take care of storage batteries.

## "B" Battery

"B" Batteries (dry) may be purchased in units of 22½ or 45 volts. They also come in different shapes. Two blocks of 45 volts each as shown in Figure 1 will give efficient service with vacuum tubes such as you will use. The two units of 45 volts each are connected together to make 90 volts. You could use only one unit of 45 volts but that would cut down slightly the volume of sound you would hear.

## Headphones

A good pair of headphones must be used. The better the phones the better the results to be expected. The Crosley Radio Corporation makes excellent headphones which retail for $3.75. They can be purchased from good radio dealers everywhere.

## Grid Leak

Some manufacturers of vacuum tubes recommend the use of a grid leak. In some cases, better results are obtained with a grid leak, but its use is not essential and at times is even detrimental. Spring clips on the grid condenser are provided to hold a tubular or cartridge leak. We recommend the R C A or De Forest grid leaks. We do not make or sell grid leaks. When a grid leak is required with these tubes a leak of about one or two megohms value will usually give best results. You can purchase one from any good radio dealer.

## Connecting Up Your Set

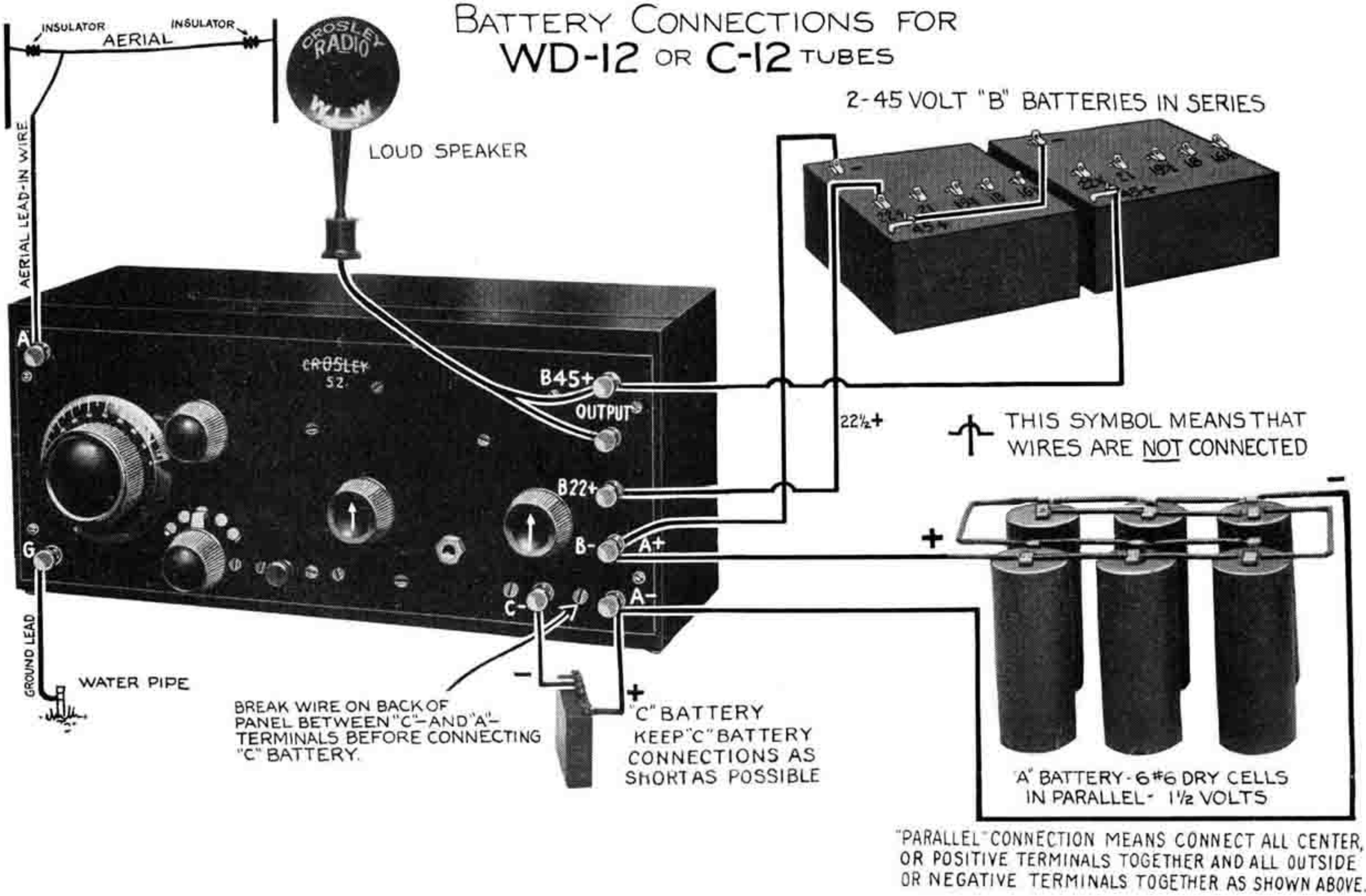
Having assembled all your necessary equipment, your aerial is erected and your ground connected, you are now ready to wire your aerial, ground and batteries to your Receiver.

**Lead-in Wire.** This wire should be connected to the Binding Post marked "A" in the upper left hand corner of your set, shown as No. 7 in Figure 4. Scrape the wire clean and bright at the end and screw down the Binding Post tightly.

**Ground Lead Wire.** This wire is connected to the set at the Binding Post marked "G" in the lower left hand corner of the set shown as No. 8 in Figure 4. Scrape and clean as mentioned before.

**Battery Connections to Set.** Take Figure 1 and study carefully, then make wire connections between your batteries and set just exactly as shown in the illustration. Be sure to use insulated (covered) wire in making all these connections. Scrape the insulation off the ends where the wires are connected to Binding Posts on the set and clips on the batteries. After wiring up check over each connection to be sure you have made no mistake. Note carefully where the loud speaker or headphones are connected and that the "B—" (minus) wire and the "A+" (plus) wire are connected to the same binding post.

**You are ready to listen in.** Read instructions under this heading on the last page.




# HOW TO CONNECT UP THIS CROSLEY 52 RECEIVER USING DRY CELLS AND WD12 OR C12 VACUUM TUBES

Tubes of the WD12 or C12 type require dry cells as an "A" battery and the "B" batteries as mentioned before. You will need the same aerial and ground equipment, the same additional equipment, and you operate the set in the same way as will be described for all tubes under the heading, "You are ready to listen in." The actual changes to be made are as follows:

Vacuum Tubes—3 WD12 or C12 or their equivalent.

"A" Battery—use 4, 6-inch No. 6, 1½ volt dry cells.

"B" Battery—use two 45 volt batteries. (With 90 volts you may need a "C" battery. See Figure 2.)

Any Radio dealer carries these batteries.

Never use a 6 volt storage battery with these tubes. If you do you will blow out the tubes.

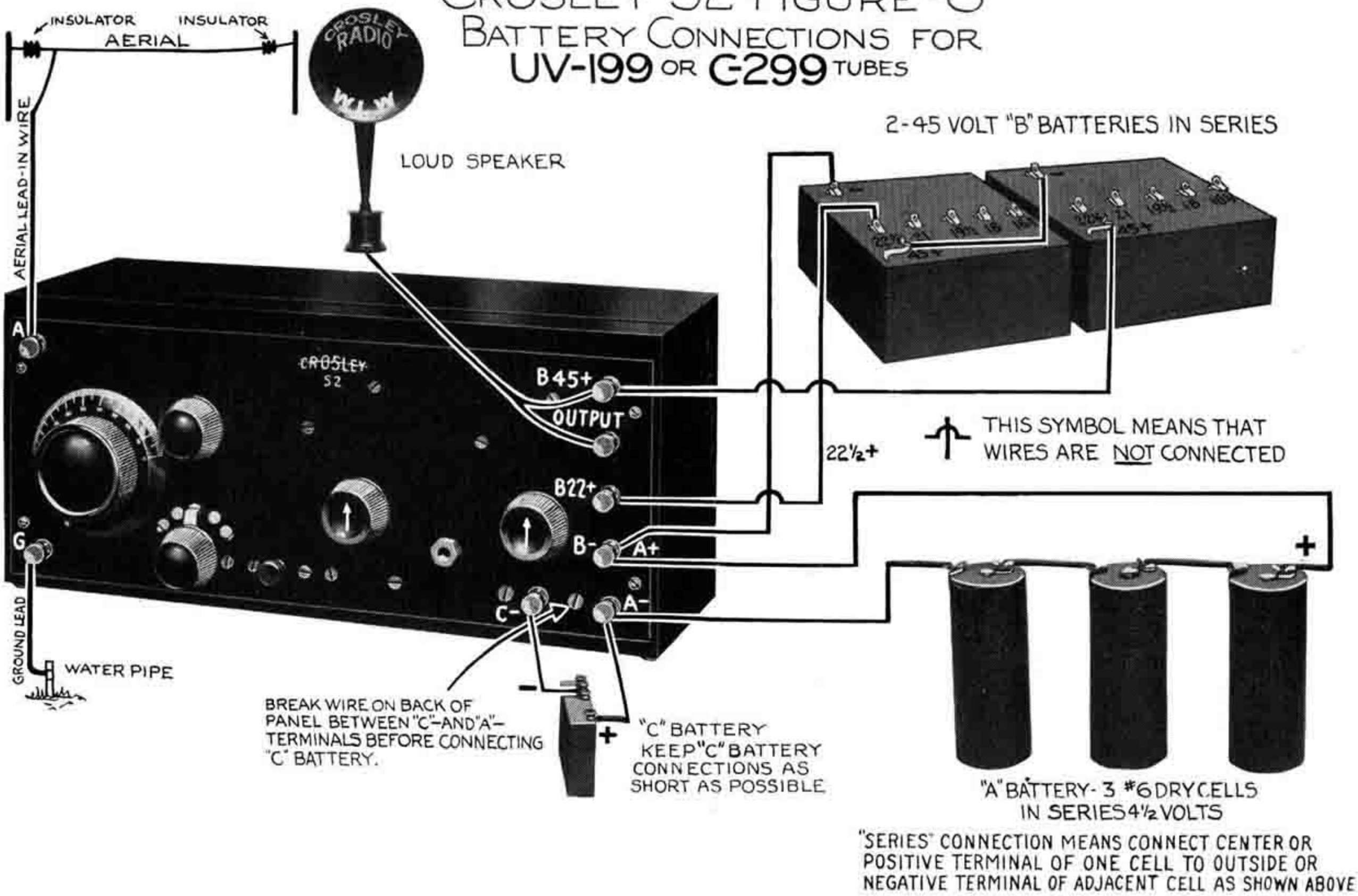
## Wiring Instructions

Carefully follow Figure 2. "A" batteries are connected "in parallel" (See Figure 2). After wiring check over each wire carefully to see that you have made no mistake.

## The Use of a "C" Battery

The manufacturers of vacuum tubes state that the efficiency of a tube as an amplifier may be increased by the introduction of a "C" or grid bias battery, particularly when plate or "B" battery voltages of 67 or 90 volts are used. To take advantage of this an extra binding post marked "C Minus" is provided on the panel. As a "C" battery is not often necessary, this binding post is connected to the "A Minus" binding post when the receiver is shipped from the factory. **Before a "C" battery can be connected, this wire MUST be broken.** This wire is located behind the panel and is covered with a black material. Connect the "C" battery as shown in Figures 2 and 3, using about three volts for 45 volt "B" battery and higher "C" battery voltages for higher "B" battery voltages.

Always test out "C" battery voltages for best operation by changing the C— wire to the various clips on the "C" battery. A "C" battery of 4½ or 7½ volts may be used. Any good radio dealer carries them.




# HOW TO CONNECT UP THIS CROSLEY 52 RECEIVER USING DRY CELLS AND UV199 OR C299 VACUUM TUBES

Here again everything is done just the same as the two previously mentioned methods only you connect the batteries up differently and use three UV199 or C299 Vacuum Tubes. (See diagram above, Figure 3.)

**Important Note:**—The UV199 or C299 Tubes have a different base and require an adapter to put into the standard sockets used in this set. You can purchase three adapters from any Radio Dealer.

"A" Batteries—use three 6 inch No. 6, 1½ volt dry cells.

"B" Batteries—use two 45 volt batteries. (With 90 volts you may need a "C" Battery. See Figure 3.)

## Wiring Instructions

Carefully follow Figure 3, "A" Batteries are connected "in series" (See Figure 3). After wiring check over each wire carefully to see that you have made no mistake.

## "C" Battery

When using a "C" Battery follow the same instruct:. given on the preceding page under Figure 2.

# YOU ARE READY TO LISTEN IN

All proper wire connections having been made, look at the Rheostat Knobs Nos. 4 and 5 in Figure 4. Turn the Rheostats as far to the left as they will go and push in the switch marked 15 in Figure 4. This operation turns off the current completely. Next take the three tubes and place them gently in their sockets in the set. (If you use one 200 and two 201A tubes place the 200 tube in the **FIRST** socket on the left.) NOW BE VERY CAREFUL—To make sure you have made no mistakes in connecting up the set, pull out the switch and turn the Rheostats very slowly to the right for about a quarter of an inch. The current is now passing thru the set. Now gradually turn up the Rheostats. If no mistakes have been made the tubes will light up slowly.

## To Hear Broadcasting Stations

1. To start, place the tap switch marked 3 in Figure 4 on the fourth tap from the left.

2. Pull out the switch. Now turn the Rheostats to the right until you hear a slight hissing noise. Turn the condenser dial marked 1 in Figure 4 very slowly from 0 to 100 and with the Varind Knob marked 2 pulled forward about three-quarters of an inch away from the Panel.

3. A broadcasting station signal will be indicated by a squealing or whistling sound. You can clear this squeal up by adjusting the Varind Knob slightly and turning the Rheostat Knobs slightly. After doing this you may have to adjust your condenser dial a very little.

4. As you become more proficient in using this set you will not have to tune to the squeal; you will keep the set at all times just below the squealing point. This is very desirable to learn to do.

5. Adjust the Rheostats. A very slight adjustment often helps greatly to clear up a signal.

6. The tap switch marked 3 in Figure 4 has 5 taps on it. You should move the switch to different taps from time to time. You will probably locate broadcasting stations on all taps. Wave lengths are increased as you move from left to right.

7. **When you are thru using the set turn the Rheostats as far to the left as they will go and push in the filament switch. Your current will then be turned off.**

8. Remember that it requires some skill to tune a set which you are not familiar with. However, with a little practice it will soon be very simple to operate.

## Results to Be Expected

This receiver should pick up signals from first-class broadcasting stations within a radius of one thousand miles or more providing an efficient antenna is used and receiving conditions are fairly good. In the day time, or when the static is especially bad, you cannot expect to get such efficient results.

## If Your Set Does Not Work At All

In the index of the "Simplicity of Radio" you will find a chapter on "Trouble Hunting," turn to it and read carefully. Everything that could possibly happen to a Radio Set is mentioned and remedies are given for each condition.

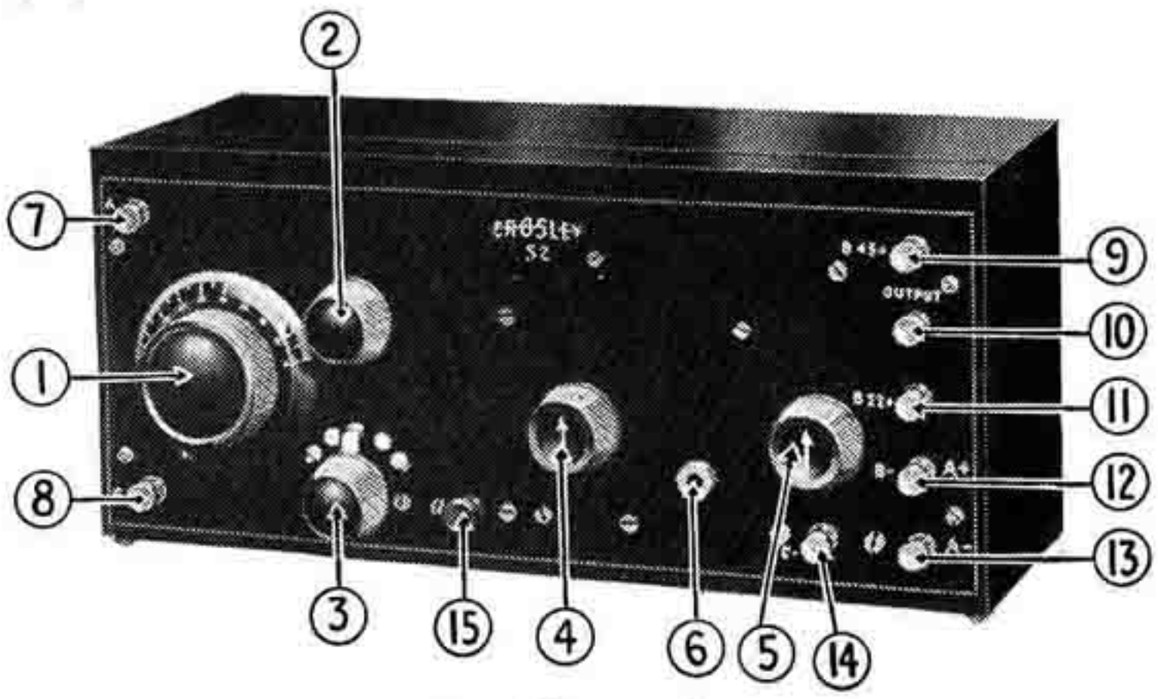



Figure 4

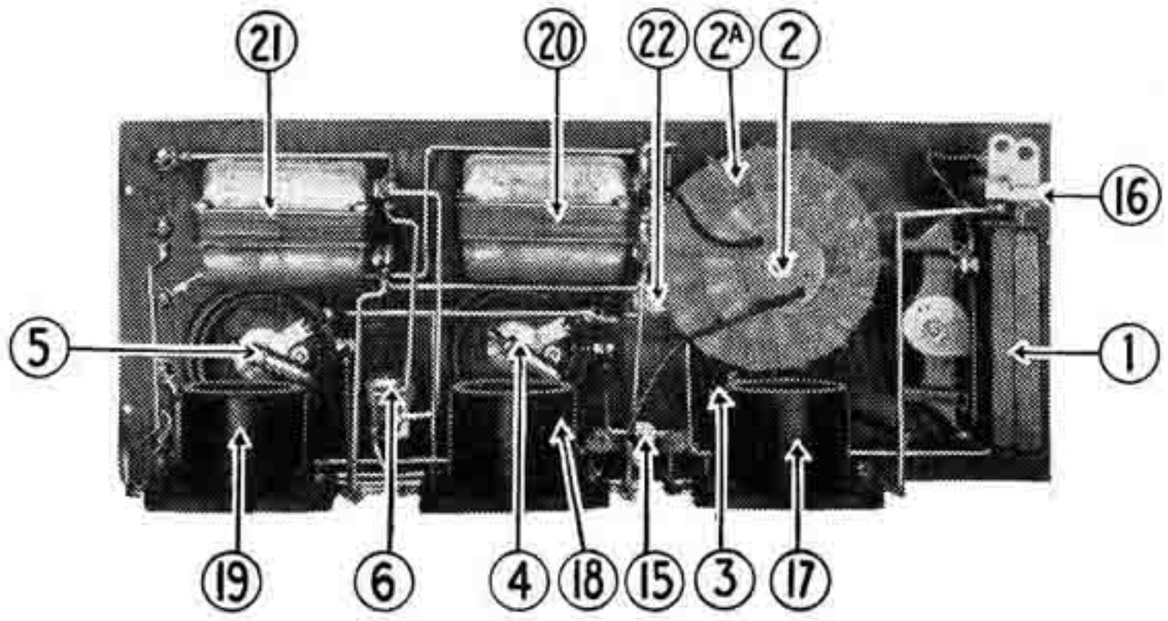



Figure 5

**Front and Rear View of Crosley 52**

## Index of Parts

1. Variable Condenser and Knob.
2. Tickler and Varind Knob.

2A. Varind.

3. Tap Switch.
4. Rheostat and Knob.
5. Rheostat and Knob.
6. Phone Jack.
7. Aerial (Antenna) Binding Post.
8. Ground Binding Post.
9. B45+ Terminal and Red Cord Loud Speaker Terminal.
10. Black Cord of Loud Speaker Terminal (Plate Connection)
11. B22+ Binding Post.
12. B— (minus) and A+ Binding Post.
13. A— (minus) Binding Post.
14. C— (minus) Binding Post.
15. Filament Switch.
16. Grid Condenser and Grid Leak Holder.
17. Vacuum Tube Socket.
18. Vacuum Tube Socket.
19. Vacuum Tube Socket.
20. Transformer.
21. Transformer.
22. Condenser.

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