



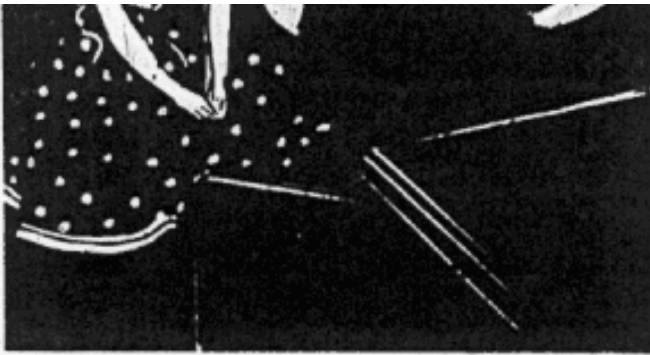
From room-to-room or house-to-house you can broadcast your voice or recording with this miniature transmitter.

By LOUIS E. GARNER, JR.



YOU can have a lot of fun conducting your own "radio programs" with this compact home broadcaster. It is inexpensive and easy to build. Since it is battery-operated, you can use it anywhere there is a broadcast receiver to pick up its signals.

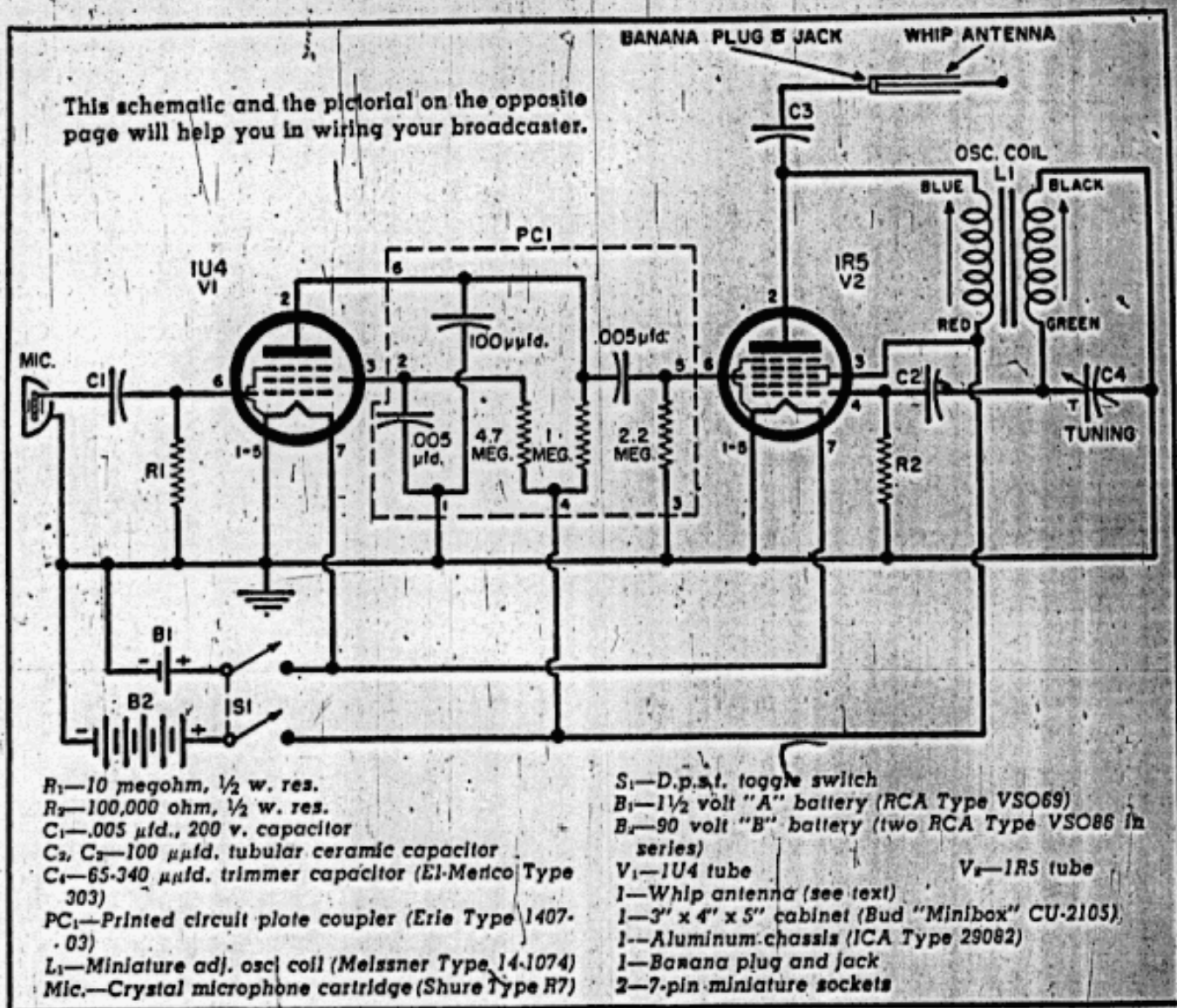
The best way to have fun with your friends in using this broadcaster is not to tell them you have it; let them find it out. Go "on the air" unknown to them and put their names into a gossip program. You know the type: "Who was the young lady who was seen with..."



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then name into a group program. You know the type: "Who was the young lady who was seen with Humphrey Gable at which night club doing you know what at 2:57 this ayem?" The results should be particularly interesting if Humphrey Gable (or your friend, whatever his name is) happened to tell his wife he was out of town on business and she hears your "item." After a little of this, the riot squad and the ambulance should arrive.

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This would be a good time for you to be out for another case.

When you get back, if you have any friends left (those who were not mentioned by you and who were not battle casualties), try the next step. Put yourself on a regular program: sing with a band, heckle a political commentator, add your own sound effects. Make your contributions short and time them to fit into natural gaps in the program, as when a speaker stops for breath or dramatic effect. You can keep this up until someone says, "It sounds just like that, so-and-so," meaning you. Soon after that everyone will catch on to what has been happening.

You can now appear and show just how the thing works. Then some brave character will step forward and say, "Let's you and him try it," pointing to two other people. If no one volunteers, you can use

the radio unknown to themselves, that can be arranged too. Put the broadcaster behind a sofa or some other piece of furniture where interesting events are likely to occur, wait until a couple of promising but unsuspecting "actors" approach it, then gather the "audience" before the radio in another room to listen in on the "drama."

You can even have professional singers and orchestras broadcast for you if you substitute a phonograph for the microphone. With a tape recorder you can rebroadcast regular radio programs, complete with authentic station announcements. This might win you a bet or two on when a certain program is aired, provided you leave out the original time signals.

There are just two small obstacles to your fun: First, using this gadget could get you arrested, even if you confine your transmissions to such unslanderous re-

you and him try it," pointing to two other people. If no one volunteers, you can use a little psychology. Say, "I don't think Witherspoon would like to do it; Bumstead would probably be better." They'll both want the first turn, although for different reasons. That will get everyone started and all you'll have to do is emcee—or referee.

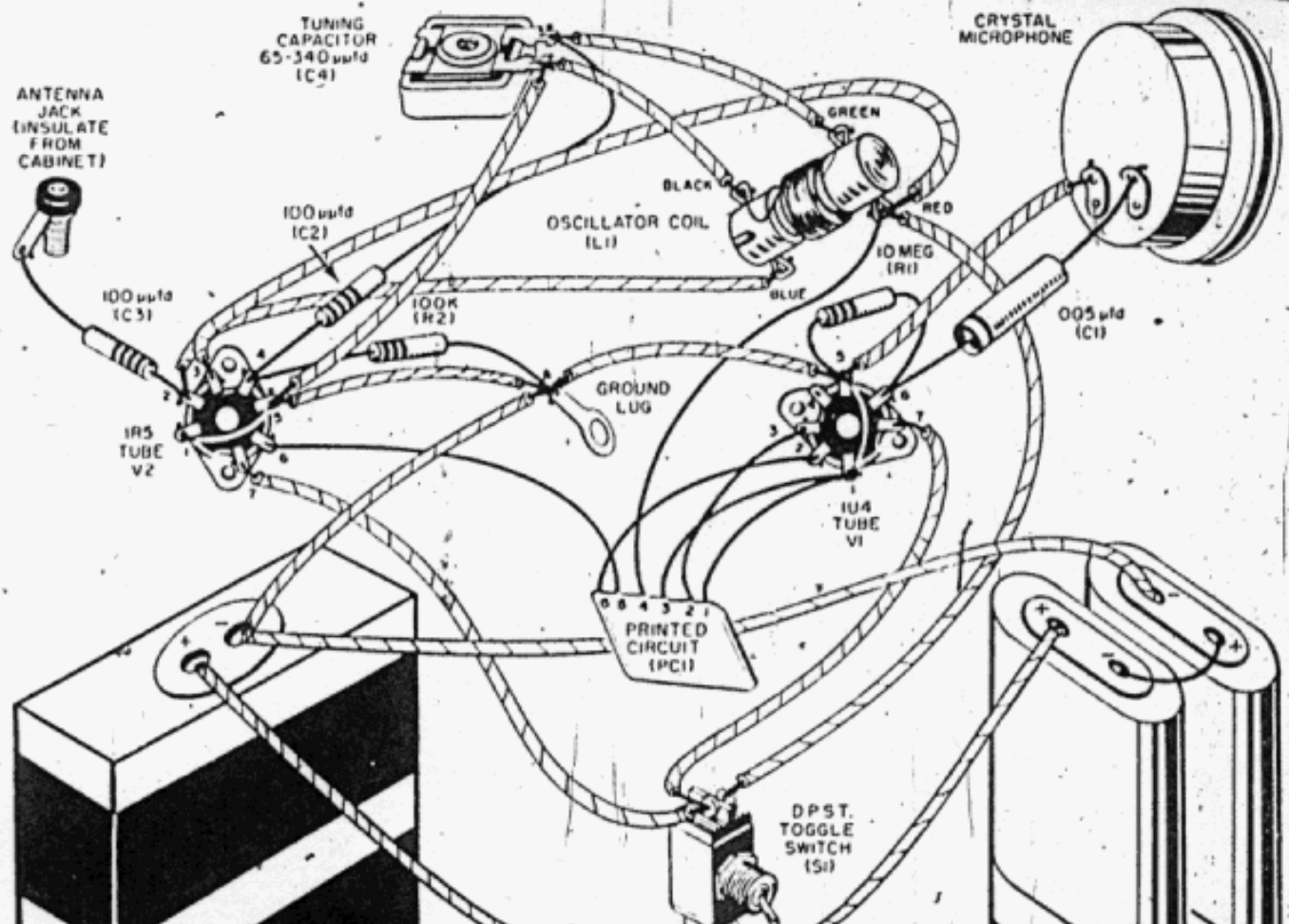
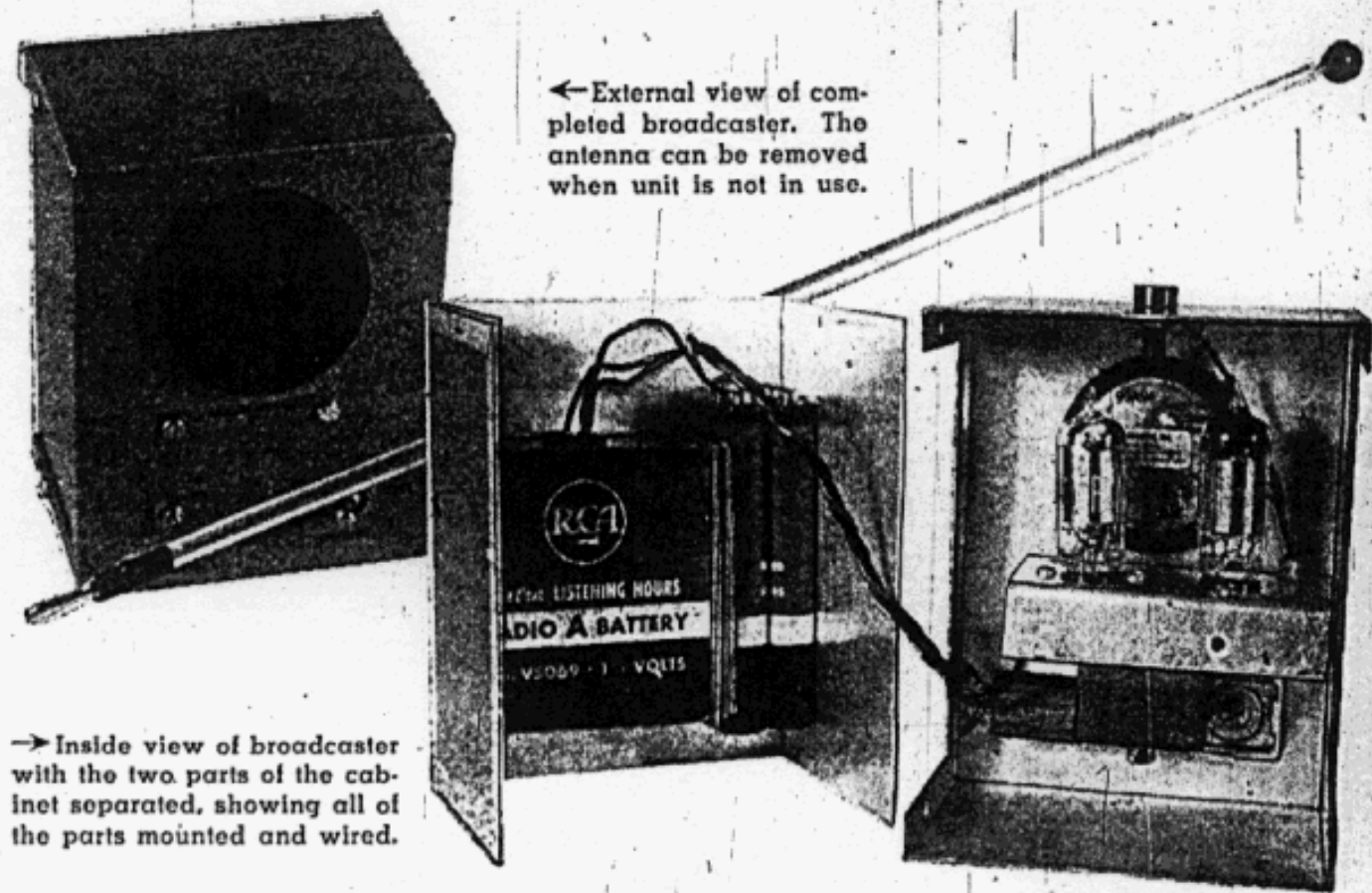
If you would rather put your friends on

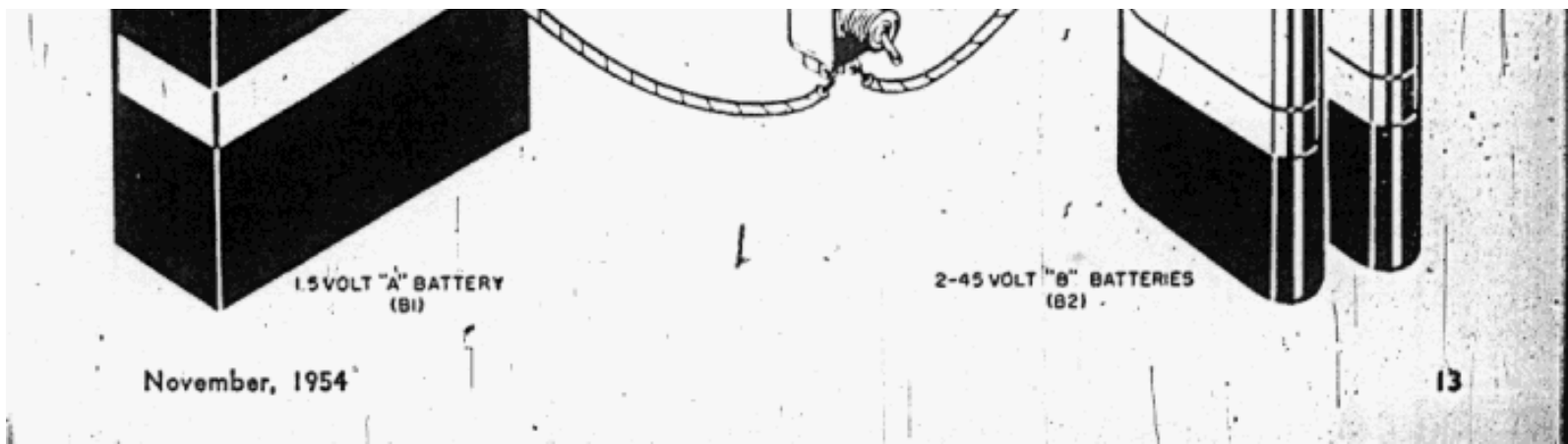
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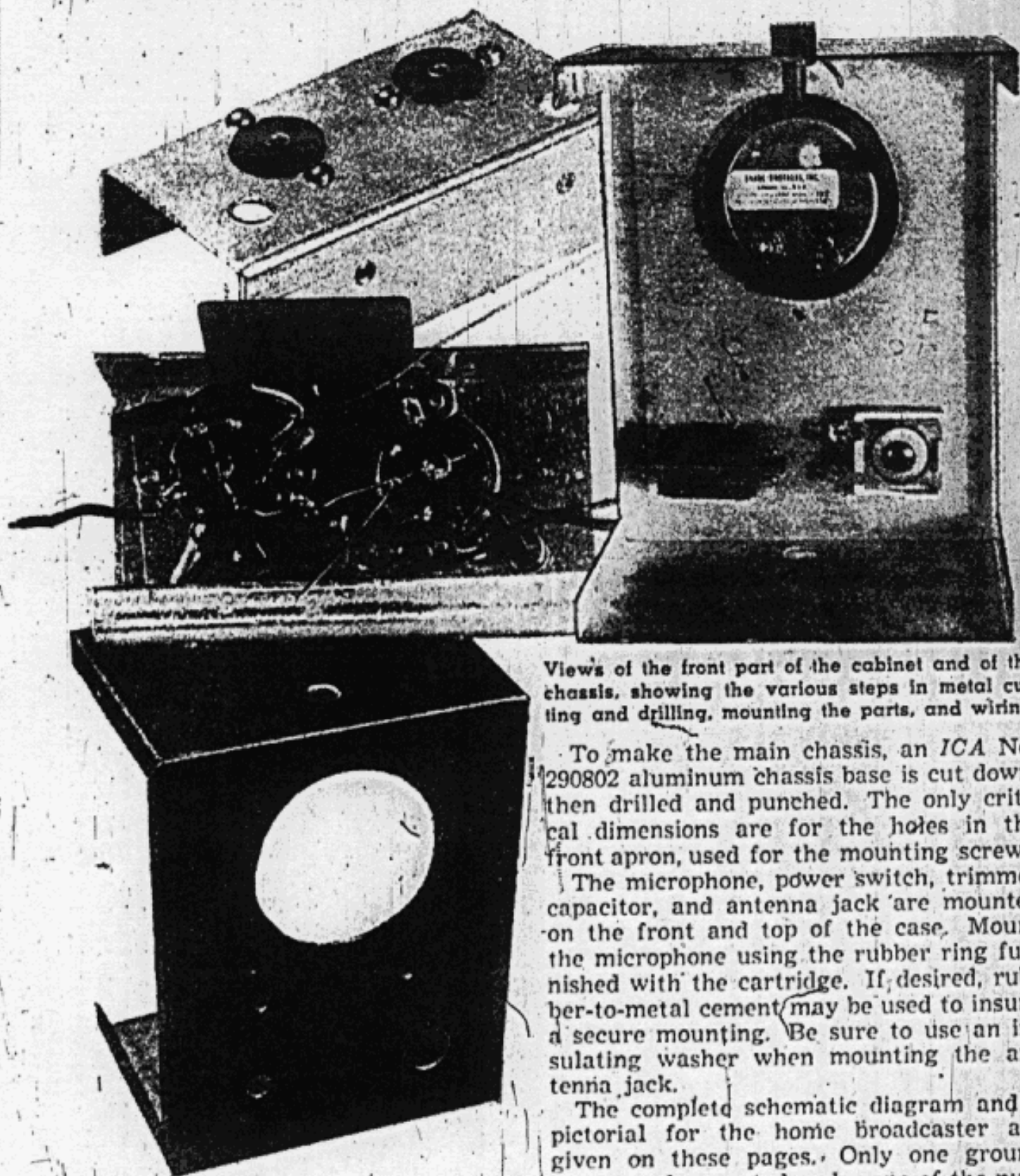
get you arrested, even if you confine your transmissions to such unslanderous remarks as "testing, one, two, three, four." It can radiate a signal healthy enough to travel to radios several blocks or miles away. There ought to be a law against that—and there is. Be sure to adjust your antenna length so that you can reach your own radio and no more.

The second hitch is that, before you can

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Views of the front part of the cabinet and of the chassis, showing the various steps in metal cutting and drilling, mounting the parts, and wiring.

To make the main chassis, an ICA No. 290802 aluminum chassis base is cut down, then drilled and punched. The only critical dimensions are for the holes in the front apron, used for the mounting screws.

The microphone, power switch, trimmer capacitor, and antenna jack are mounted on the front and top of the case. Mount the microphone using the rubber ring furnished with the cartridge. If desired, rubber-to-metal cement may be used to insure a secure mounting. Be sure to use an insulating washer when mounting the antenna jack.

The complete schematic diagram and a pictorial for the home broadcaster are given on these pages. Only one ground lug is used, mounted under one of the nuts used on the 1U4 tube socket. No terminal strips are needed. You'll find it easier to wire as much of the chassis as possible before mounting. Front panel connections and battery leads are left hanging free. Attach the partially wired chassis to the front panel using two $\frac{3}{8}$ " #6 sheet metal screws and make the final connections. The oscillator coil is mounted by soldering

use the broadcaster, somebody has to build it. It isn't hard to do, so you might as well do it yourself.

A standard Bud "Minibox" is used for the case. The large opening for the microphone can be made by cutting a hole slightly smaller than 2" diameter and filing until a snug fit is obtained. The banana jack hole for the antenna on top of

ing until a snug fit is obtained. The banana jack hole for the antenna on top of the case is made with a $\frac{1}{4}$ " drill, then enlarged slightly with a tapered reamer to accommodate the insulating washer. After the front panel is drilled, decals may be used to identify the controls. Follow the manufacturer's instructions for applying the decals and spray on two or three coats of transparent plastic after they are dry.

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screws and make the final connections. The oscillator coil is mounted by soldering it to the trimmer capacitor lugs. Use enough solder to insure a strong joint. A standard, commercially available, printed circuit plate is used for coupling the 1U4 preamplifier tube and the 1R5 oscillator-mixer. However, you can use individual parts here if you wish. These parts values are given on the schematic.

Once the wiring is completed, double

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check each connection for possible errors. Mount the batteries in the back of the case by simply wedging them in position with narrow pieces of cardboard, then connect them to the chassis and switch with at least 6" leads. The two 45-volt batteries are connected in series to deliver 90 volts. The removable "whip" antenna is made up by mounting a banana plug in the end of half of a pair of TV "rabbit ears." An old auto radio antenna may be used instead, if preferred. Finally, place the tubes in their respective sockets and fit the two halves of the case together.

To adjust the broadcaster, place the an-

tenna in its jack, but don't extend it. Turn on a broadcast receiver and tune it to some "dead" spot near the middle of the broadcast band (700 to 1200 kc.). Throw the power switch on and, whistling or counting into the microphone, gradually adjust the tuning control with a screwdriver until you can hear yourself in the receiver. Adjust for best reception. You can now back away from the receiver gradually, extending the antenna slightly and readjusting the tuning if necessary. But remember: don't extend your range too far; the FCC will get you if you don't watch out. Have fun! END