## **Television As You Like It**

This safe and simple gadget lowers the boom on commercials, while earphones keep the kids happy watching their own shows.

## By Phil Hiner

TO FIND out how you stand in this television era, put a yes or no after each question:

 Is it hard to balance your checkbook or read while the kids are watching TV?

 Ever want to see the fights when your wife is chatting with a friend?

 Feel guilty about looking at late shows because others are asleep?

 Annoyed by the boost in volume that goes with commercials?

 Want to solve all these problems with one master stroke?

For about five bucks' worth of parts and two hours of spare time you can build this remote-volume-control-and-earphone unit. It will let you kill commercials or tone them down, listen with one or more sets of earphones, and adjust the volume on phones or speaker—all without budging from your chair.

With it, children can hear the noisiest horse operas in (to you) complete silence. Stay-ups can enjoy television far into the night without disturbing anyone else in the house.

It's safe and simple. This whole deal is almost as easy to wire as a bridge lamp. The only connections to your TV set are to the voice-coil leads, which are as harmless as a baby chick. The remote-control cable can be run anywhere with perfect safety, and can be room-length if you like.

You will have to buy as many earphones as you have youngsters. (Smartest money you ever spent!) They run from \$1.50 on surplus bargain counters up to several times that, but the cheaper kind will do.

Find voice-coil leads. If yours is a console set, you may not even have to take off the rear panel—the speaker is usually below the chassis, and may be unenclosed. If you have a table set, you will have to take off the rear panel. This will disconnect the

power, but to play safe yank out the plug.

On the loudspeaker frame you will find two terminal lugs with wires to them. The wires may disappear into the chassis, or run to a boxlike gadget mounted on the speaker or close to it. From this unit (the output transformer) a different set of wires will run to the chassis. Leave these and all chassis wiring alone. You want only the speaker leads, the ones to the voice coil.

How to hook them up. Connect a two-foot length of three-wire cable to the socket part of a three-contact connector. Each socket terminal is numbered, and the



216 POPULAR SCIENCE

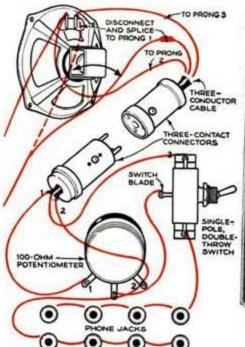


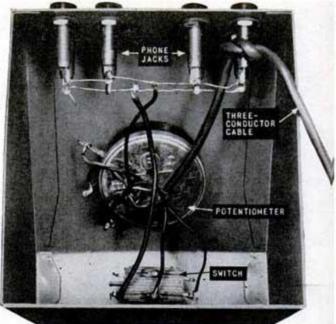


NOBODY 15 BOTHERED if the children want to see a rootin'-tootin' Western when Dad and Mother want to read, write or talk. Earphones let the youngsters hear every shot, but the silence is wonderful. For family or company viewing, the unit provides armchair control of loudspeaker volume, letting you tame noisy commercials or cut them out entirely if you wish. Carrying only a harmless current, the connecting cable can be run under rugs or around furniture in complete safety. Although shown here in a small metal cabinet, the unit could just as readily be built into an end table, bookcase or record cabinet, or even into the arm of your favorite viewing chair.

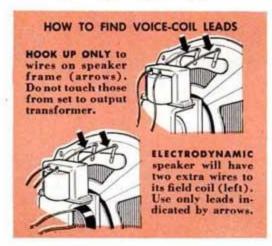
Story continued on page 220.

MAY 1954 217





UNIT 15 SAFE even if left open, but a wooden bottom can be held in with screws through the sides. Switch shown happens to be a double-pole type, so only one side is connected.



wires in the cable are of different colors for easy identification.

Now unsolder one voice-coil lead from its terminal on the speaker. Solder it instead to the cable conductor that goes to socket terminal 1, and tape the splice. To the nowbare speaker terminal, connect the cable wire from terminal 3. To the other speaker lug, solder the wire from terminal 2, leaving on the wire already attached to this terminal.

Building the control box. The remote unit can be put in a small cabinet or even a wooden box, end table or bookshelf. The sloping-panel metal cabinet shown, 4½" on

a side, makes a rugged carry-about unit.

You can use tip jacks, banana jacks or the larger two-contact type, and install as many as you need, fitting the earphone tips with matching plugs.

Solder the three wires of whatever length cable you need to the prongs of the connector plug. Connect the far end of the wire from prong 1 to the left-hand lug of the 100-ohm potentiometer (as seen from the back). Hook the wire from prong 2 to the right-hand lug, to which one row of phone jacks goes. Run wire 3 to an outside lug of the single-pole, double-throw switch.

Connect the other row of phone jacks to the opposite switch lug. Run a short wire from the center or blade terminal of the switch to the middle potentiometer lug.

You've done it. Plug the connector together and turn the TV set to high volume. Throwing the switch on the unit one way should now work the speaker, the other way, the earphones. The potentiometer should control volume either way.

If for any reason you unplug the remote unit, you will have to short connector sockets 1 and 3 to make the speaker work. Buy another connector plug, solder a wire across prongs 1 and 3, and plug it in.

END

220 POPULAR SCIENCE