

ANTIQUE RADIOS

Restoring antique radios

PREVIOUSLY, WE STEPPED BACKWARD IN time a half century or so, and saw that what was then new technology has today become an intriguing hobby. It's perhaps a new adventure for the modern computer genius, but it's a return of old memories for the more mature radio and TV servicemen, or hobbyist. No matter what category you fall into, the objective remains the same—to make that old radio look and work like new.

Once you've discovered that old treasure and taken it home, you'll want to set it up in the living room for all to see. That's when the temptation to plug it in and see if it works sets in. But there are a few things that should be taken care of first!

Preparation for restoration

The first you should do is set the unit outside your house or shop, so that it can be cleaned and fumigated—yes, fumigated. Any item that has been just lying around dormant—who knows where—for over 30 years should be cleaned before being brought into your home or shop.

During that preliminary cleaning, take care not to destroy any valuable information. Things like tube diagrams, schematics, and model numbers can be lost forever because of carelessness. It's a good idea to cover anything that you may want to keep.

The unit should be treated with insecticide inside and under the cabinet, but try not to spray the speaker cone. After that, it should be covered for a few days to protect it from the weather and left outside to ventilate. (Have you ever smelled one of those old



FIG. 1



FIG. 2

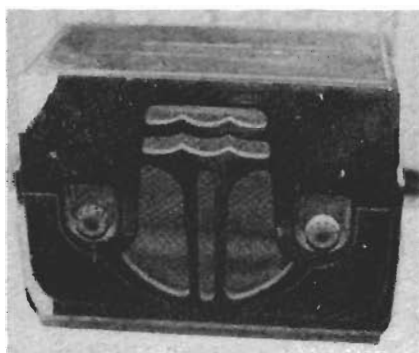


FIG. 3

units after it has been sitting in a damp basement for a while?) Once done, you can brush out the loose dirt and "anything else" you might find. Your radio should now be presentable enough to go into the house.



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Once the set is reasonably clean, you should be able to see any obvious defects; for instance, there may be cracks or scratches in the wood. Also, make sure that there aren't any tube sockets without tubes or tubes in the wrong sockets.

Any wires sticking out of a hole in the chassis should be suspect to you. Also make sure that the big dynamic speaker is in place, though that's something that should have checked out before buying the set.

As when working with any other electrical or electronic device, your own safety should be of primary concern. Many 40 to 50 year-old radios may not have their original circuitry. Modifications in the set can be extremely hazardous, as can missing knobs, or frayed wires.

If the set is missing a knob and you don't have a spare, at least wrap some tape around the shaft before plugging the set in. Frayed power cords are also potentially dangerous.

Until a few simple tests are made, it's best not to touch any conductive part of the unit once it's plugged in. That includes chassis bolts (see Fig. 1), which will probably be sticking out from the bottom of the cabinet.

Besides the shock hazards, the early radio serviceman often suffered painful burns from hot (temperaturewise) components. Many old radios had large wire-wound tapped resistors sticking straight up on the chassis, as shown in Fig. 2, which were so placed to dissipate heat through the back of the cabinet.

Those resistors were about

the-way as they could be, and there was no way to stick your hand into the cabinet without being burned. The old rectifier tubes were also favorite "get-burned-on" components. Most other components in radios, including the power transformer, shouldn't get hot enough to cause injury. If they are excessively hot, the parts are either shorted or in a faulty circuit.

Turning it on

Before plugging in a strange old radio, it's usually best to turn the power switch on. Then you can plug the line cord into a receptacle momentarily and not have to physically touch the set. If the panel light comes on when the set is plugged in, approach it cautiously, making sure the set is positioned so that you can look into the back of the cabinet to see the chassis.

If there is any smoke or a strange smell coming from the unit, unplug it immediately. All those who are experienced in electronics are familiar with the different odors emitted by various smoldering components. Find out where the smoke or smell is coming from and don't plug the radio back in before you've corrected the problem. If you do, you may burn up a component that's difficult to replace.

Further, if when the set is turned on you get no audio, there should at least be a slight audible hum coming from the speaker. If the hum is objectionable (excessively loud) or non-existent, you have a problem. (The individual problems will be discussed in a future article.) No hum at all may not be as serious as an objectionable hum.

If the power supply seems to be working and there is no hum, check the speaker wires. Also check to make sure that the speaker is not unplugged. Even a damaged speaker with a torn cone and an off-center voice coil should emit some kind of sound. Check all wires going to the speaker array. That could be anywhere from two wires on up, depending on how many other components are mounted to or near the speaker.

With all the tubes and panel lamps lighted, you should—provided there is also a slight

hum—hear some music (or *something*) through that old electro-dynamic loudspeaker. If not, try feeding a quick signal to the unit through a grid capacitor or the antenna terminal. For the best signals, check that the band switch isn't tuned to one of the shortwave frequencies.

Also, some old radios have separate volume controls and power switches. Make sure power is turned on and the volume control is turned all the way up. Despite the massive size and tube complement, many radios won't play without an external antenna (one that's outside the set, not necessarily outside the house). Any short piece of wire, makes a fine temporary antenna. You don't have to be authentic and go out the window and across the roof (as was necessary in times past).

In the 1930's, some manufacturers went all out to include special features in their radios. Multibands, treble and bass controls, and tuning eyes can be found on many old radios. Any of those con-

trols can contribute to a no-signal condition or excessive hum. Some of the smaller "budget-priced" sets produced during that era may not include extra features.

Those budget sets, like the one shown in Fig. 3, were designed to make it possible for almost everyone to own a radio during the depression era (1930's). While the chassis in those sets were adequate, the cabinets that the units were housed in didn't seem to hold up as well as their console counterparts. That might be the reason why old console-model radios seem easier to come by today than the smaller types. If you do find one of the smaller units, you'll need to have a little more patience when restoring the cabinet.

Before closing, we have an announcement to make. If you have old radio parts and/or information that you'd like to share, or perhaps are in need of the same, write to this column and let us know. We'll do our best to match up those that need with those that have something to share.

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