The Radio Repairman

. . . won't be so likely to gyp you if you know what you can fix yourself, what you have to let him fix, and how to check up on him. CU makes a few suggestions.

THE RADIO repair man will gyp you if you don't watch out. That's the title and that's the essence of an article in the August issue of *Reader's Digest*, wherein the experiences of two roaming investigators in 304 of the nation's radio shops were described.

Into each shop the investigators took a radio which "a few minutes before . . . had been playing perfectly, but which was deliberately put out of order by the investigators, sometimes by disconnecting a snap-on wire, usually by loosening a tube."

61% of all the shops visited, and 90% of the shops in large cities, tried to take advantage of the investigators' supposed ignorance, either by charging for unneeded or unperformed services or by replacing undamaged parts. "The first 36 shops visited . . . sold the investigators 32 new tubes. Not one was needed."

In one case, after the investigators had been sold a new tube and had demanded their old tube back, the service man "went to the shelves stocked with cartons of new tubes, and . . . took . . . our tube [which] . . . *he had simply added . . . to his own stock.*"

Persons familiar with the operation and servicing of radios have been aware of the frauds involved in radio repairing for some time; the general public has only suspected them. Now that the facts are out, various radio service magazines are busily offering apologies, on one hand, and inventing flaws in the investigators' methods, on the other.

Consumers need have no doubts, however, that the facts and implications of the *Reader's Digest* article are substantially correct. The investigators seem justified in concluding that you run most chance of getting gypped in large cities, and are most likely to get a fair deal in small towns where the service man must be more careful of his reputation.

The answer to the question: "Why is there so much deception and gypping in radio repairing?" is certainly, in part, that there are many too many service men for the market to support. Requirements for going into the business are simple: more or less knowledge of radios and a table to work on. The results: a terrific surplus of service men—both bona fide and tinkerers—and almost an economic compulsion for repair men to overcharge on each job. Moreover, a customer will often consider that after having his set fixed once, he is entitled to free repairs if anything else goes wrong. Thus the repairman overcharges partly to cover such nuisance service calls.

CHECK IT YOURSELF

WHAT can the consumer do about this state of affairs? CU in this report takes up where *Reader's Digest* leaves off, with some advice to help the consumer keep his radio repair costs down.

Although people can't become radio repair experts by reading an article, they *can* learn to look for and recognize a few basic disorders, which are responsible for much faulty radio performance. They then may be able to avoid taking their radio to a service man who may charge for repairs that weren't necessary.

Defective aerials are common causes of radio trouble. If your radio has a bad, irregular crackle, disconnect the antenna and ground from the radio; then, with a short piece of wire, connect together the aerial and ground posts (or connect the aerial connection to the chassis if there is no ground post) and turn up the volume control. If the crackle has disappeared, the fault probably lies in the aerial. Inspect your aerial to make sure that it is not touching metal objects or other aerials. If your aerial is not all one piece of wire, make sure that the joints aren't loose. (And if you are installing a new aerial, make it all one piece from the radio to the extreme far end.) If your aerial is all right, look at other aerials, or hanging pieces of wire, and make sure they are not rubbing against each other or against metal objects. They can affect your radio even if they are in no way connected with it. Look also for loose connections on nearby appliances or lamps.

If your radio becomes generally insensitive, so that only strong stations can be heard, connect a piece of wire at least five feet long to the aerial post of the radio. If the reception becomes louder, the aerial wire is improperly connected or broken somewhere near the radio. In cities satisfactory reception can often be obtained without any aerial at all (not even a loop antenna), if a wire is connected from the *aerial* post of the radio to the steam or water pipe.

In some, though very few, cases of noisy radios, you may be able to eliminate the noise by connecting a wire from a water or steam pipe to the *ground* post of the radio. The ground post as often as not will be a black wire some six inches long sticking out at the back of the radio. It's a good idea to have a ground connection anyway—if a ground post or wire is provided—because it will reduce the shock hazard in some radios.

Hum in a radio operating on a-c can often be eliminated or reduced by reversing the electric plug in the wall socket, or by moving away any appliance or lamp that is standing too close to the radio.

Don't patronize street vendors selling filters or "static eliminators." (The equipment they use for demonstration is a fake.) Usually, though not always, the only effective static filters are those applied at the source of the static—on the motors, lights or electrical appliances which cause "man-made" static.

Many radios operating erratically—with minor evidence of intermittent reception—will often respond to a hard whack on the cabinet and come back to life temporarily. In many instances a service man is *not* required to effect a permanent repair. All tubes should be wiggled in their sockets, grid caps twisted, shield tops twisted back and forth, and finally shield cans rotated a bit.

This same procedure will, more often than not, cure a radio set of its squeals.

If your radio shows absolutely no signs of life—no light, no sound, no heat—there still may be nothing wrong that a little attention won't correct.

Check the electric plug; see whether the "legs" and the wires leading to the legs are intact and make sure that it's inserted completely and firmly into the socket. If it is, test the socket—see whether a lamp that is plugged into it will light.

You may find that an ac-dc radio operating on d-c will heat up but won't play because the plug is inserted into the socket the wrong way. Just reverse the plug.

If you have an a-c radio and have moved to a d-c location, don't have it converted into a d-c radio. The job is very apt to be unsatisfactory, and if you move again you will probably have to have it done all over (there are relatively few d-c areas in U. S. cities). Either buy an ac-dc midget for temporary use while at the d-c location or else buy a d-c to a-c inverter, costing about $18 at Lafayette and Allied.

TRY THE TUBES

If you still get no sound from your radio, then you may begin to suspect a burnt-out tube. And the chances are pretty good that the trouble is just that, for defective tubes are responsible for much radio trouble. Again, don't throw up your hands and send for the service man. If he replaces any tubes, he's likely to charge you the full list price, plus a service fee.

You can do the job much more cheaply if you'll remove the tubes yourself and take them to a radio store to be tested. Pick out a store which gives *at least* a 40% discount on standard brands of tubes. Your best bet will probably be either a local store of a mail order house or a large chain radio supply store. They may sell their own private brands (*Knight, Lafayette, Sears'; Ward's*) at even lower prices.

This way you'll not only save money on the tubes, but avoid the possibility of paying the service man for non-existent defects in your radio.

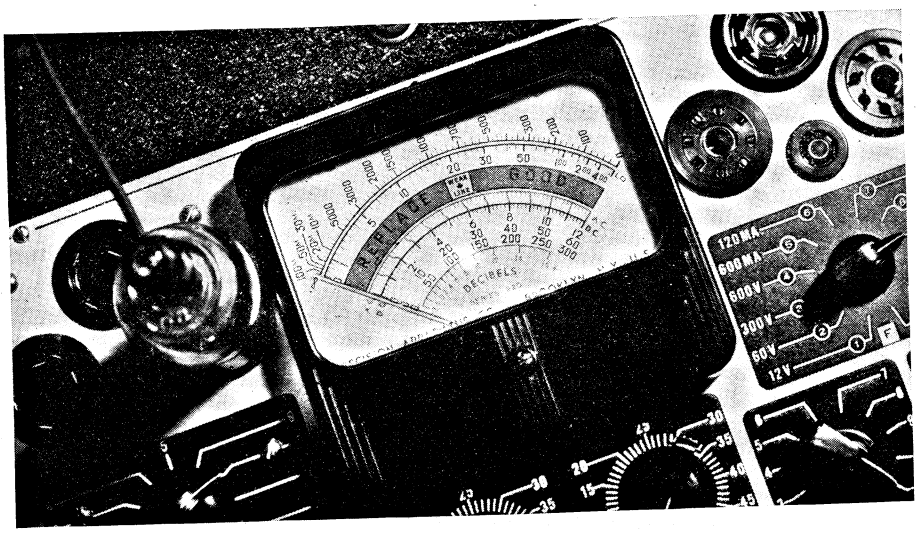
Removing tubes is a comparatively simple operation anyway. But remember one thing: *always pull out the electric plug from the wall socket before touching the tubes—or, in fact, before venturing inside the cabinet of the radio for any reason.* The inner mechanism of some radios is a potent source of shock.

If there is a wire running to the top of some of the tubes in your radio, pull off the cap to which the wire is soldered, using a pencil to pry it up if necessary. Tubes with form-fitting metal shields around them can be removed in entirety, and the shields slipped off afterwards. Shields like round cans must be removed before the tube is taken out. To remove a tube easily, grasp it firmly and use a straight, upward pull combined with a rocking motion.

Notice whether the tube's type number (such as 6SK7 or 6V6G) is printed near the socket. If it isn't, write in the number as you remove the tube, so that you'll have no difficulty in returning the right tube to each socket. If there are duplicates, mark each tube and socket.

When a salesman tests your tubes and tells you that you need a certain number of replacements, you may as well just take his word for it, and buy the tubes. What the tube testing machine shows is neither here nor there, because it can be made to register anything a dishonest salesman wants it to register. *Be sure to keep your old tubes.* A tube that tests "bad" in a tube tester may work in your own particular radio.

When you get home, put your old tubes back in the set, note the radio's performance and then substitute the tubes you've bought *one by one.* If the new tube makes the radio work better, use it, and throw its old counterpart away. But where there's no noticeable improvement, leave the old tube in.



"REPLACE" OR "GOOD"?

The tube testing machine tells—if the salesman lets it

Thus you may end up with some extra tubes on your hands, which might come in handy for a future emergency. If you're not interested in that, you can order a complete set of tubes from Sears-Roebuck or Montgomery Ward and within 15 days return any or all tubes that don't improve your radio. This offer is made by both Sears and Ward's in their catalogs.

Finally, remember that whether your tubes were bought or tested within a year or a week, they can go bad at any time. Tubes don't need to be replaced regularly, but only when they stop functioning normally.

With some types of ac-dc radios, you must be careful to replace the pilot light as soon as it burns out, to prevent tubes from burning out, too.

NOW CALL IN THE SERVICE MAN

If you've checked all the points mentioned here, from the aerial to the tubes, and nothing seems to help the performance of your radio, then you'll have to enlist the aid of a radio repair man. If your radio is small, take it to his shop and try to get him to fix it while you wait. If you leave it with him so that he can go over it later to estimate the charge, he may not only overestimate, but also put other parts out of order so that they will require fixing. If the radio man will fix your set while you wait, you are much more likely to get a correct charge for the time he spent on it and for the parts which you saw him replace—*if any.*

If your radio is too large to take to a shop, you'll have to call a service man to your home and expect to pay him for his time. But warn him in advance that you want the work done in your home. Most service men will claim that it's necessary to take it to the shop, and it may be, if the trouble is intermittent. However, radio troubles that can't be both diagnosed and fixed on the spot are rare indeed.

But if the radio is fixed in your home, in your presence, the repairman isn't so apt to charge for servicing which he never performed. He can expect his $2 hourly fee, but no more.

Before the radio is fixed—at home or in the shop—let the service man know you will want the old parts, if you are to be billed for replacements. You may thus avoid being charged for fictitious replacements. And you keep the service man from using old parts from your radio in repair jobs that he does for others.

RECORD CHANGERS

When it comes to repairing record changers, the situation is most hopeless of all. There are very few bona fide specialists, and many radio repairmen are not interested in servicing a mechanical mechanism like a record changer. If you are mechanically inclined or have a friend who is, you may be better off inspecting and adjusting it yourself.

Frequently, record changers operate poorly because the mechanism is not properly leveled. Try propping up one side of the radio (usually the right side facing you). In any case when you buy the radio you should write to the manufacturers of both the radio and the record changer for "service notes" on the record changer.