

# SERVICE CLINIC

## Opening your own shop

JACK DARR, SERVICE EDITOR

WE'VE BEEN GETTING QUITE A FEW LETTERS from young men who are learning electronics in the Armed Services and want to open their own shops when they get out. So, we decided to run a column dealing with it. I'm the staff expert on one-man shops (I've been running one for the last 50 years!), so I get to write it. There are a lot of things, all of them important, about opening your shop, and a lot of mistakes you can make. (I know, I've made them.) So, I may sound like the Dutch Uncle at times, but it's all based on actual experience! Let's start out with the shop itself

### Location

Whether you settle in a small town or city, you should follow the same rules when trying to find a suitable location. Don't try to find one on the main street; rents are much higher there, and you really don't need "store traffic." Look for the secondary streets; a block or so off the main one. Rents are lower, and you are a service industry—people will look you up when they need you.

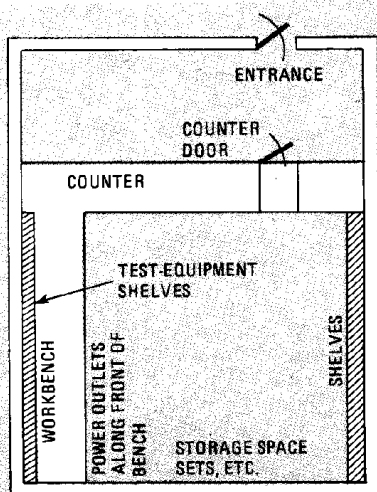


FIG. 1

Look for a fairly large room, with parking space in front or back. That will give you room to make a workbench, and a small place with a counter or railing to keep the customers off your neck while you're working (see Fig. 1). A back door on an alley is very handy; you can drive up there and unload sets quickly. Check

the roof of the building, too; nothing's worse than a leaky roof!

### The bench

Your bench is important. It should be big enough to hold the largest TV set you plan to service. Mine is four feet wide, with a shelf along the back to hold test equipment. Wire a string of outlets along the front of your bench, *not* the back. On the other side of the shop, build shelves for parts storage. That gives you the fastest way to operate; when you need a part, just turn around and get it. Parts should not be on the bench itself; they'll just get covered up. Make a small set of drawers under the middle of the bench for hand tools and other things. (I keep the most-used hand tools, long-nose, screwdriver, soldering iron, nut driver etc., at the right end of my bench. I'm right handed—they're right there when I need them.)

### Test equipment

Now we come to the subject of the most-asked question: what test equipment you'll need. To me, the essential instruments are a good VOM (digital or analog), a scope (which doesn't have to be a triggered-sweep type—a good recurrent-sweep scope can do a good job). Next is a color-bar generator, with both RF and IF outputs. With the IF output, it becomes a tuner subber. With those, you can read any voltage or current, feed test signals into the set, and trace them through it with the scope. A transistor tester, preferably one with a good leakage test, can be very handy. Leaky transistors are responsible for a lot of problems. Other instruments can be added later as the need arises, but I think these are the essential ones, and will be the most-used.

### Service data

Now we come to one really essential thing: service data on the TV sets. You've got to have that; modern TV sets simply can't be fixed without it. For one thing, you can't even find the parts! The two major sources for data are Sams *Photo-facts* (Howard W. Sams & Co., Inc., Indianapolis, IN 46206), and the factory data from the maker. Personally, I like to have both. With the factory data, you usually get a newsletter, etc. which often has valuable hints on certain models.

The Sams folders come in small boxes each month; these can be stacked on shelves with the edge out, and you can locate any folder quickly; the numbers of the folders are printed on the edge. Filing cabinets can be added later. The Sams Index is an invaluable source of data. Keep it handy.

Parts data, on transistors, IC's, etc is another handy thing. All of the replacement-transistor makers put out big guides, with many, many types listed with their substitutes. Companies like RCA, GE, Sylvania, and many others have them; get all you can. I've had no problems at all in using such parts in place of originals, and in some cases they're better. You can get a starter stock of the most popular types and fix quite a number of sets out of it.

### Getting the parts

I hate to tell you how easy it used to be to get parts! Many sets used standard parts, and you could stock them. Nowadays, it isn't easy at all. There are so many specialized parts that it gets rough at times. There are two major sources; the radio-TV supply houses, and the factory distributor for the make. Universal replacement parts come from the supply houses, and in many cases they stock factory parts for popular makes, as well. The distributor will have parts on hand; call him and introduce yourself, and make arrangements to get parts at discounts. They often have catalogues, etc. that are useful.

Several makers have hotlines, with a toll-free number, if you have problems getting parts. GE's number is 1-800-241-6696; Admiral's is 1-800-447-8361; Thordarson's (for flybacks and transformers) is 1-800-851-3583. Those numbers can be useful in emergencies.

If you're in a small town, there will be a radio-TV supply house in the nearest small city. They often have a salesman who calls on you once a week. If you need a part fast, you can call them and have them put it on the bus—you'll get it in a few hours. (Be sure to charge the customer for the long distance call and the freight!)

Here's a useful hint: Try to do most of your parts buying from only one firm. That will make your account much bigger, and they'll be very polite to you!