

Super Selectivity, at a Super Price, the Q-5er! Way back when it wasn't the thing to buy a receiver down at the local store, because most just didn't have the money, and they were making rather crummy ones anyhow, some ham (probably) invented the surplus store.

Since there weren't too many surplus mechanical filters around just after the war, and the bands were beginning to become crowded, something had to be done with the selectivity problem.

After considerable thought, the crafty and sly amateur operator discovered that the surplus BC-453 Command Set with its 85KC IF strip could be turned into an extremely sharp IF channel that could be used on any receiver having an IF of from 190 to 550 KC. The best part was the price; since the market was more or less flooded with components of the SCR274N unit, the price was generally cheap, say from \$5 - \$7.50. (Hammarlund got well over \$100 for their version a few years ago). Today, the BC453 is still well within reach, and new sets can be bought for around \$15.

It works by coupling some of the signal from the first IF amplifier in your present receiver; then in the conventional superheterodyne method, it is again mixed, amplified, and detected, giving what is called "double-conversion" and its selectivity.

The main problem of conversion for the average DXer is that he needs an external power supply as they were originally designed to be run off a plane's 24VDC system. These are fairly easily constructed and in many cases are offered as optional accessories by the surplus house. They can cost as little as \$3, with a top of around \$20, that will plug into the set. So, for maybe \$35-\$40, you have a double conversion receiver which makes quite a difference on the "splits" if you have a fairly inexpensive set to start out with. Plus you have additional gain of three stages of IF. It is hoped that the internal level of noise of the first receiver is low enough for this to be an advantage. Amplifying noise we can do without!

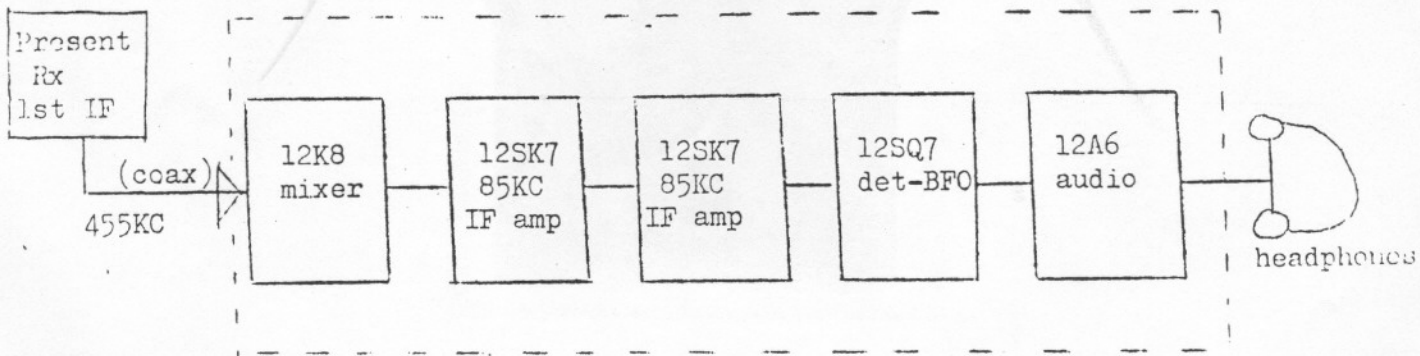
There is tons of information available about conversion of these receivers. Consult any ham store, book section, or Fair Radio Sales, Box 1105, Lima, Ohio 45802, among others. There is some information in the Radio Amateurs Handbook.

I have had stations on 834, 840, 850, 854, and 860, with no problem, with mine. With the generator, it will tune the 1KC markers, although if there was a station every 1KC, I'd be in trouble! I think these are a better, cheaper idea than going the mechanical filter route, since it seems dumb to buy cheapie filters to put in a set, as the improvement isn't worth the work; and again, expensive filters in a cheap set doesn't make too much sense either. Along with stability problems, there is high cost (\$60 for a good Collins mechanical filter). While the BC453 is cheap, it does

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quite well for itself, and does have a presentable shape factor if you have the equipment to measure it! Plus it is already built, and actually takes no direct connection to the parent receiver. Just hang the antenna lead near the plate lead of the first IF amplifier and you are in business. (Use shielded wire..). For more info, write me. (1-29-72)

BC-453



Block Diagram