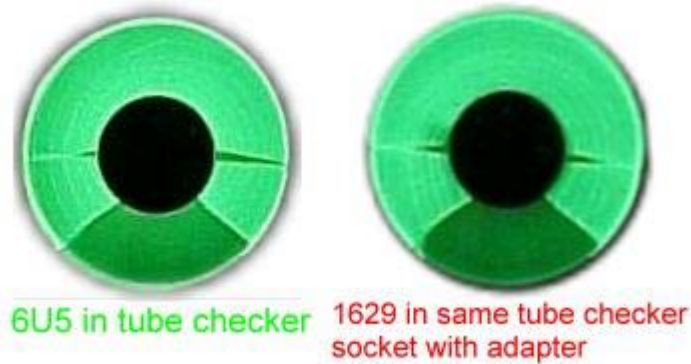


New Life for Tired “Eyes”



The mid-1930's brought many new innovations to the world of radio listening. Superhetrodyne was the buzzword in America since our own genius Edwin Armstrong perfected it about fifteen years before. The depression slowed the economy down somewhat which spawned smaller, more economical sets as well as kits that you could build yourself. Many of the bigger metropolitan areas were now fully electrified and AC sets were quite common. Around about mid-decade, RCA came up with many little innovations to entice the American public to dig into their pocketbooks and replace that old radio.

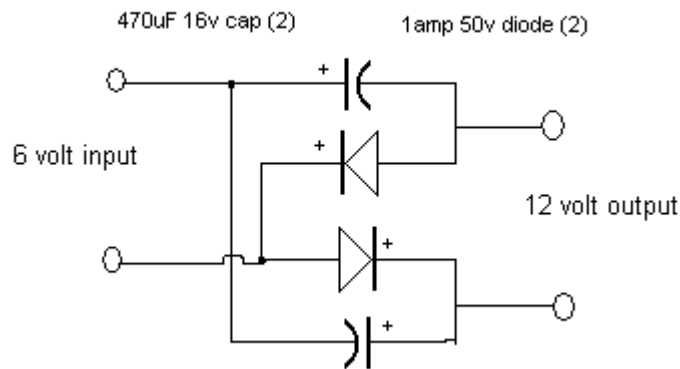
Although performance and single-knob tuning were certainly good reasons to buy a new set, there was also the element of “gimmicks” that Americans just can't resist. The tuning eye tube was certainly no exception. Although it really did serve a valid function, it was not really a new way to tune a radio. The older Philco and higher end Radiolas had “shadow” tuning indicators which were nothing more than the works of an “s” meter movement where the shadow of the pointer was projected onto a translucent dial via the pilot lamp. They functioned perfectly, but they didn't reach out and grab you as the “Magic Eye” (as they were called) did.

Officially dubbed as the “electron-ray indicator” it was invented in 1930 by Dr. Allen DuMont. After buying the patent from DuMont, RCA released the first of these, the 6E5, in 1935. There is a two-part article in an earlier *Gazette* about these so I won't bore you with the details again. The most popular of the American electron-ray tubes were the 6U5/6G5, and equivalents 6AB5/6N5.

These indicators are getting scarce as hen's teeth these days and if you can find one it will

cost you 40 or 50 dollars. In a few years they will most likely be extinct. Here is a great solution. Use this adapter and the WWII vintage 1629, the military equal (functionally) to the "consumer" eye tubes. When you need to replace it they are readily available and most likely will be for some time to come. The adapter plugs into the radio's 6-pin socket and the 1629 (octal) plugs right into the adapter. The 1629 tube has a 12-volt filament so the adapter needs to have a "voltage doubler" circuit built into it. You could do this in your radio, but it spoils the integrity of it and makes it more difficult for future service people or anyone who you may sell it to. Here is a circuit of the doubler:

Note: This adapter will only work on parallel AC filament circuits (radios with transformers). You can make these yourself, but if you don't want to bother, you can buy them from Antique Electronics in Tempe, AZ, or you can get them from me via the classifieds on the SCARS web



site. I really don't make much money on them, it is just a labor of love. I bought a bunch of 1629 tubes from a single lot sale, so I sell an adapter and a NOS 1629 to go with it. Check it out at <http://www.antiqueradios.org/scarsclassified.html>

Here are a couple items that are available through the web page above, but not AES. Some smaller radios are a little tight in the back and don't have room for these adapters, hence the need for a "pigtail" model.



European radios from this era use a similar tube with the exception that it has a dual tuning pattern (EM-34). I am not too familiar with the functions of all these sets, but I am told that in many of them only one of these shadows is really used. The 1629 can be used to replace these with the correct adapter, an octal plug instead of 6-pin, and still with a voltage doubler. Obviously only one shadow is selected to function, the grid on pin 5 seems to be the most popular, so that is the one I use in my adapters.



It's all about preservation, and that is the purpose of this article. When the 6U5's and EM-34's are finally extinct it would be a shame not to be able to show your green-eyed "Cyclops" radio to your friends. Hopefully this info will keep them glowing. Happy collecting!!

Bob Atchison

EH Armstrong: <http://users.erols.com/oldradio/>
Electron Ray tube beginnings: http://home.pacbell.net/philbert/tuning_eye/begin.htm