INFORMATION PLEASE!

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1977-2027, THE NEXT 50 YEARS

As this issue of the Newark News Radio Club Bulletin reaches you, many of our number are gathering in Newark to celebrate the 50th Anniversary of the founding of our organization. Some will remember 1927 and say it seems like only yesterday. Others will find the span of 50 years difficult to comprehend. Regardless of how old you are, this is an occasion to turn your attention to the early days of radio - the pioneer days. Days very different from these days.

It was a very special time, 1927. Radio was young. The decade of the twenties saw the accumulation of knowledge in the field of electronics manifest itself for the first time. Radio and the broadcast industry rose from practically nothing to capture the imagination of almost everyone. To the average American who had lived all his life up to that time without radio, it represented a marked influence on his lifestyle. One day it was life as usual, the next, there was a primitive radio in the house, a strange device which, with some manipulation and coaxing, brought in voices and music from distant places, and set one's imagination spinning with wonder about what was, for many, an unexplored world. Radio could command the attention of a great number of people in those days. It could also command the attention of flourishing newspapers such as the Newark News and draw on a new and widespread facination with the marvel of the age.

One tries to find comparisons in order to understand the early, widespread interest in radio. Perhaps it was a lot like the introduction of commercial television in the late 40's and early 50's. Those who are younger might look at the present phenomenon of CB radio for an analogy. In some respects, the impact of each device on man was quite different. But there are many comparisons which can be made. Everyone suddenly had to have one - this crystal set, this TV, and this CB; to listen, to see, and, finally, to talk back. In each case, the science moved out of the laboratory and became everyman's engineering. Long wires were converted into dipoles, rabbit ears into multi-element beams, and simple verticals into ground planes. The chimneys and rooftops across the landscape became the laboratories where everything from genuine experimentation to just plain diddling took place. There was a total preoccupation with improving on yesterdays results.

With the arrival of radio, and later, CB, came the clubs. Meetings were called, charters written, officers elected, and the business of mutual interest discussed and written about. For some reason, TV never spawned the clubs. Instead, they seem to have produced a plethora of weekly program guides and listings which seem to fill all essential requirements for information.

The arrival of television marked a change for radio. It was now common place. It was local, it was news-weather-sports, it was rock 'n roll. Most of all, it was no longer new. It no longer captured the imagination of everyman. To the average individual, it was no longer DX. Radio listening became a small, portable, battery-operated box for most people. When a new set of batteries failed to 'make it work'. It was more economically expedient to discard it than to have it repaired. Ironically, radio is bigger than ever.

And so, the baton has been passed to a new generation of listeners. Although limited in numbers, they are certainly no less facinated by the posibilities each encounter with the wireless. The crystal sets and regenerative detectors of yesteryear now occupy prominent spaces on the shelf, but are no longer the mainstay in the shack. We now have multi-conversion, direct frequency readout equipment with which to ferret out the ellusive DX.

There are many promising signs pointing to a bright future for radio listening. There are ever increasing number of small, inexpensive, multiband portable radios with which to lure the potential enthusiast. In the old days, you had to uncover an old multiband console in the attic, or go out and invest some considerable amount of money in a genuine communications receiver just to get a taste of shortwave.

Clubs are also flourishing. Founded barely four years ago, for example, one club's membership has suddenly exploded about 10 fold in the last year and numbers in the hundreds. With the clubs come the great wealth of data, usefull information on every conceivable aspect of radio listening. Finally, we are told that the international shortwave broascast community will command considerable attention, and, more than likely, a significantly larger share of the spectrum at the Telecommunications Conference to be held in 1979.

What will the next fifty years bring in terms of receivers? Hopefully, the good health of the shortwave broadcast community will carry over to the production of ultra-precision, quality equipment at moderate cost. It has been this writer's experience that the technology precedes the application by several years, maybe a decade or more. It was for example, nearly a decade after the development of the transistor that the devices became cheap and dependable enough to produce the flood of cheap AM portable radios. It was almost another decade before the first serious attempt at a solid-state communications receiver was made. In fact, only in the last couple of years can we say that the move to solid state is virtually complete.

Large-scale integration (LSI) and advanced circuit design promise another revolution in commumications equipment, particularly in the area of digital electronics. Twenty years ago. there were very expensive, very bulky digital frequency counters which ran on vacuum tubes. Each digit had a decade of lights, one of which indicated the correct number. Integrated circuits, gas-filled tubes with numerical elements, and a host of new applications began to appear in the mid-1960's. Today LSI and light emitting diodes (LED) are in common use, but we have only begun to see their application in consumer-oriented communications gear.

The technology is there. It is only a matter of time for us to apply it. The receiver of the future will have a low-power LED readout instead of gas-filled tubes. This will be driven by a single IC chip instead of a couple PC boards. Instead of turning a knob, you will punch in the frequency on a keyboard. Front-end circuits will be automatically tuned to resonance electronically by such devices as the variable voltage capacitor. We already have some specialized examples of this in FM, Public Service, and 2-meter ham equipment.

The day when a complete computer system enters the home is fast approaching. The digitization of many communications receiver functions make the marriage of these two devices quite natural. The computer will have a data base comparable to the most comprehensive station list.

You will enter the frequency, station, or location you wish to receive in the computer. Depending on your request, the computer will tune the receiver directly to the desired frequency or pick out the frequency most likely to have the station or location you want. When trying to identify an unknown station, the computer will give you a list of most likely possibilities, based on its data base, time of day, etc. When you have identified the station, you merely enter this into the computer and it is automatically logged, including station location, date, time, frequency, relative signal strength, level and source of interference. This information then becomes part of the data base from which the computer makes future decisions. The technology for all of this is available today. Putting it all together is all that is required. No, things aren't the way they were in 1927, 50 years ago. And, no doubt, they will be very different in 2027. We think the future is promising. So have a good time at the Anniversary Celebration, and hoist one for radio listening and the Newark News Radio Club.