

**A pioneer looks back to the early '50s when nearly insurmountable problems plagued U operators. A lot of misunderstanding still exists, he notes**

■ In attempting to write about UHF television, I shall, of necessity, have to approach it from a personal basis, condensing more than a decade of day-to-day living with various tv channels into relatively few paragraphs.

The problems that UHF is overcoming today are in many ways similar to problems faced in the early days of radio and VHF.

For example, radio's pioneers slotted the frequencies they used into low, medium and high categories. They assumed that the bands above three megacycles were impossible to use. Later, this radio space was utilized and the arbitrary line of demarcation was moved up to 30 megacycles (the start of the VHF bands).

The engineering difficulties involved here have, of course, also long been overcome, as was the gap that existed between channels 6 and 7. This gap in the megacycle range was so wide that for a time the best technical brains in the industry believed that channel 7 could not be used.

Today, with the benefit of hindsight, any competent electronic engineer will tell you that the difference in propagation characteristics between channels

found that our NBC network lineup, our first run feature films and our four hours daily of local, live programs are an indispensable part of our local scene. We note that even ARB and Njelsen seem to concur, although congressman Harris hasn't published his audience measurements of our area, yet.

This one handicap — the political or economic problem of lack of receiver circulation — has afflicted UHF stations all over the country.

Perhaps all of us are familiar with the fate of the show that gets a low rating. The same thing can happen to a station. When the FCC opened up channels 14 through 83, there were already some 15 million sets in public hands that could not tune in to these frequencies. Naturally, this placed an operator on these channels at a serious disadvantage, particularly when the operator had to pay the going price in his market for film, power, equipment, wages, etc. In short, he had to have a lot of unusual things going for him before he could hope to turn the corner to profitability. The wonder is not that many UHF stations failed, but that some outlets survived.

So don't let anyone tell you that there are insurmountable *technical* problems with UHF.

Yes, propagation is less effective at the higher frequencies, just as in the VHF band. But the FCC has allowed UHF channels to radiate more power, in order to compensate for this deficiency.

The latest transmitting equipment is as efficient as anything made for the lower channels, and receiver sensitivity is, at long last, getting enough attention from manufacturers so that substantial improvements in front-end tuning are being made.

## **Day-to-day living**

6 and 7 is much more dramatic than the difference between channels 13 and 14.

With the development of better technology, we then crossed another man-made barrier: the line at the top of the very high frequencies — 300 megacycles — which brings us to UHF.

Obviously, the boundaries of radio spectrum usage are only as great and unyielding as are the limitations on human skill and need. When we have really wanted to use more space, we have done it.

There is nothing strange or mysterious about UHF, any more than there was about the so-called high band channels a dozen years ago. The only real difference is that most tv sets made in this country have not been equipped with the tuners necessary to receive our frequencies. It's as simple as that, although this little difference has been the cause of much discussion, heartache and misinformation.

For example, I have witnessed men of integrity parroting the most fantastic and unfounded illusions about UHF; I have seen engineering brains in this field state that my station was not capable of serving our area.

But the people of western New England have

While much had been made of the supposedly dramatic "technical deficiencies" of the higher frequencies; no one has come forth with the story on the many technical *advantages* of using these channels.

The famous TASO report is perhaps the most damaging of all the documented misinformation that has been circulated, but this report contains the admission that it did not attempt to study the advantages of UHF.

These advantages include a complete freedom from the annoyance of 'airplane flutter,' almost complete freedom from 'ignition noise' and no disturbance by diathermy machines. Perhaps most important, the report mentions nothing about the great difference in what is called multipath between the VHF channels and the UHF channels. This is the matter of ghosting caused by reflected signals from buildings or terrain. The UHF signal, being of shorter wave length, tends to bounce more clearly. This happy state actually makes UHF better in 'canyon' cities than the VHF channels that have long been in use in such areas.

These are all advantages from the point of view of the public; but there are some merits that the broadcaster himself can envision. Towers for UHF antennas

can be less expensive than for the massively heavy antennas required for VHF channels. And present design of transmitters points to the possibility of vastly cheaper amplifying equipment for UHF than the older channels.

The ultimate criterion of UHF's technical acceptability performance can be measured only in the market place of public recognition.

Those UHF broadcasters who have had a fighting chance by virtue of program availability have all been successful. But where good programming was unavailable, or already offered by an established V channel in the same area, the public had little incentive to tune to the U station. And this is a problem that all stations face, regardless of their channel numbers.

It should be pointed out that Lady Luck can contribute immeasurably to the success of a fledging UHF broadcaster. Luck played an important role when we began operations back in 1953, when we managed to overcome a number of severe economic problems.

We were lucky in that there was only one VHF station on the air in our region when we started. Thus, we were able to obtain, right at the outset, a substantial number of excellent network programs on an exclusive basis. We were fortunate in that any viewer interested in watching either CBS' or NBC's programming had to tune in to a UHF station.

We were also lucky in that our stockholders viewed our station not as a get-rich-quick proposition, but as a means of serving and developing our community. And they were willing to put more money into our operation to keep us alive during lean periods. Fortunately, these stockholders will not have to wait until

the next world for their reward. We have paid regular quarterly dividends and year-end extras for the past six years.

Nor have we spared any expense in equipping our plant with the best available equipment. We were one of the first videotape-equipped stations in the country, and we were one of the nation's earliest users of color, locally. And back in the days of *Wide, Wide World*, we did more network originations than any comparable station that I know of. We are one of the very few local stations to have originated simultaneous pickups for all three networks, and we've done it more than once.

We have worked for the recognition given to us by our community (Springfield is our city of license) and the support we have received from national, regional and local advertisers. Every major retail concern in our area is a regular, year 'round patron of our facilities. No national advertising schedule is complete without our station.

I suppose I could go on for some time appearing to "blow my own horn." But I want to put across the point that a UHF station can be successful. However, you must offer what people want to see; you must be willing to persist against the real handicap of "no set circulation" at the outset; and you must be lucky enough to have good people working for you. ♦

## with UHF

By William L. Putnam

President  
Springfield Television Broadcasting Corp.  
(WWLP Springfield, WRLP Greenfield  
and WJZB Worcester, Mass; WKEF  
Dayton, Ohio)

*As working president of Springfield Tv, Bill Putnam not only oversees the policies of four UHF stations, but personally works both before and behind the cameras, makes sales calls and performs such chores as changing his stations' beacon lights. A strong believer in community involvement, he has written and delivered some 4000 editorials during the past five years. His stations have also been in the forefront of tv broadcast innovation: among the first to use videotape, local color-origination equipment, etc. The WWLP Springfield outlet was one of the first U facilities to open in 1953.*

