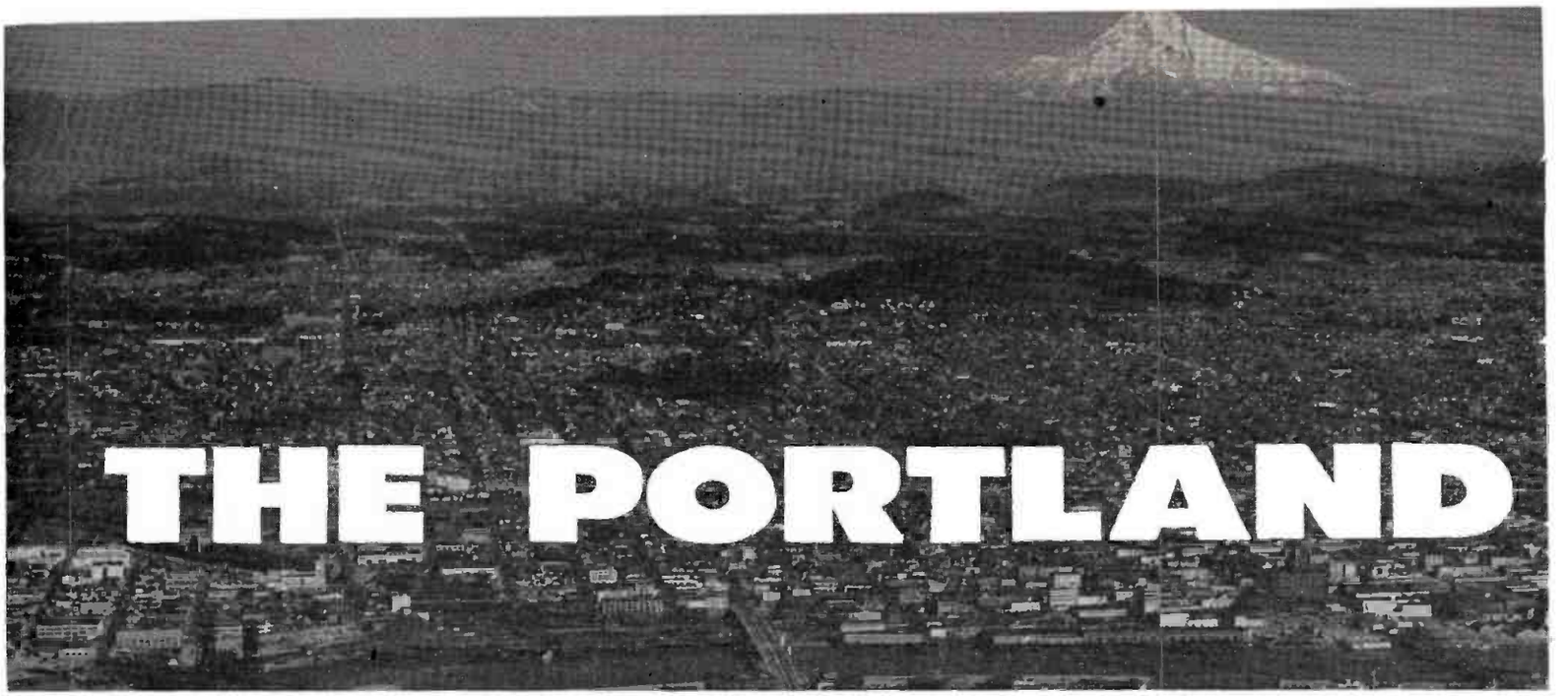


# THE PORTLAND

## *A REPORT ON A YEAR'S OPERATION BY THE WORLD'S FIRST COMMERCIAL UHF STATION*

A MILLION people up and down Western Oregon's Willamette Valley and its mountainous flanks have just completed one year's service as the first commercial proving ground for ultra-high frequency television.

The Sept. 19-20 weekend was notable in tv history as the anniversary date of KPTV (TV) Portland, only uhf station ever to celebrate a birthday.

In the 12 months since KPTV emitted its first program the eyes of the television world have been focused frequently and inquiringly on this Ch. 27 station. Literally hundreds of broadcasters, telecasters, technicians, manufacturers and public officials have made official pilgrimages to Portland on a common mission—to see if uhf really works.

One year of uhf in Portland yields an important and seldom disputed revelation:

° KPTV is an economic success and has provided a technically adequate signal over a surprisingly wide area.

In other words, Portland has embraced uhf as exemplified by KPTV, and tens of thousands of families—some say a hundred thousand—are pleased with their year of television.

So it has been demonstrated that a station operating on a uhf channel, even with low power for that part of the spectrum, can serve a metropolitan community, its environs and well beyond.

That is the capsule version of one year of uhf in Portland. However, the story of Portland television must take into account the special setting that existed one year ago when Herbert Mayer, president of Empire Coil Co. and operator of WXEL (TV), a vhf outlet in Cleveland, startled the electronic world by pioneering its first uhf commercial station.

The Portland setting was made-to-order for the first uhf commercial proving ground.

First, Portland had no television aside from fancy antenna arrays that groped with some success for KING-TV Seattle, 130 miles to the north.

Second, KPTV was reasonably assured of at least a year of one-station service.

Enjoying that favorable environment, KPTV (NBC-TV) has operated profitably. Now, however, it faces competition—and soon. A second Portland station, KOIN-TV (CBS-TV), has a transmitter in place and a radiator ready to meet its Oct. 15 target date. At this point KPTV faces (1) a competitive station with (2) a Ch. 6 vhf signal—reversing the usual post-freeze pattern found in many cities.

Given that background, Portland can look for another interesting and exciting television year. But that is Chapter 2, a chapter that can't be written for many months. Even so, the lessons to be learned from Chapter 1 are numerous, informative and fascinating.

### The Coverage Story

Before the economic aspects of Portland's uhf can be appraised it is necessary to review the coverage story, recognizing widespread interest in the ability of a uhf signal to saturate a rugged terrain.

KPTV is telecasting a signal rated at 17.6 kw, using the historic hand-made transmitter that RCA-NBC operated at Bridgeport, Conn., for three years in an effort to field-test the untried band that offered hope for full national video service.

The slot radiator is mounted atop a 250-ft. tower on Council Crest, a plateau standing 1,050 feet above Portland's business area.

Quiet, conservative Portland, which is growing faster than its older inhabitants care to concede, is proud of the fir-draped hills that mark some of its residential areas and the mountains that challenge propagation traits of the Ch. 27 KPTV transmitter. These elevations, some of them astonishingly abrupt, provide shadow areas where tv pictures are obtained only by means of high-flying yagis and bow-ties, or are not obtained at all.

How serious are the shadows?

Russell K. Olsen, KPTV general manager-chief engineer, and William McAllister, station operations engineer who was one of the RCA-NBC attending physicians at the Bridgeport laboratory, offer population, propagation and shadow maps indicating that good signals are available to over 90% of the population in Portland's three-county metropolitan area. They offer a map showing that when a new 540-foot tower is installed this fall, the shadow problem will be more than half licked (see page 116).

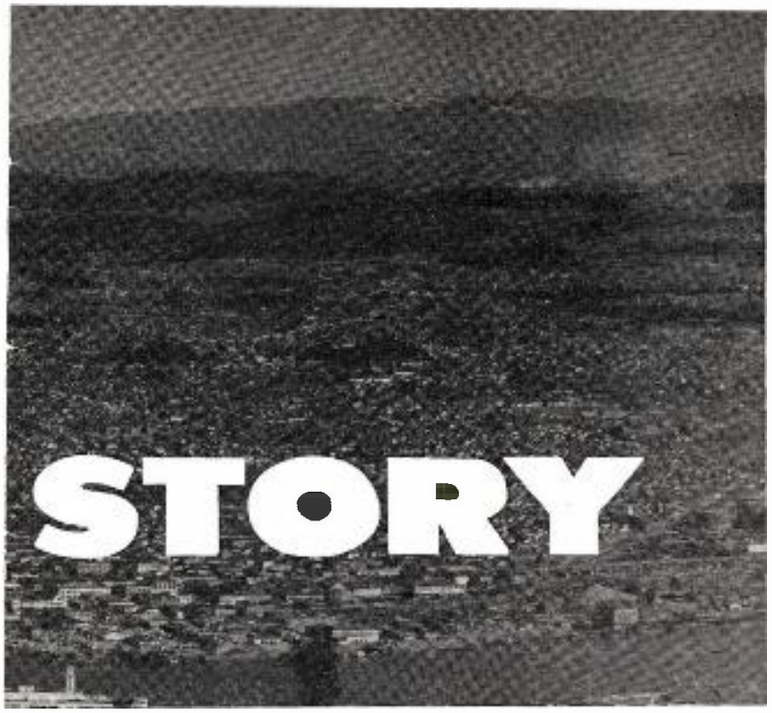
Then they point out that a new 10 kw RCA amplifier for the 1 kw driver is on order. Coupled with higher tower and higher-gain antenna, KPTV will penetrate practically every populous area with a signal approaching 200 kw, they contend.

What do the distributors and service companies think of KPTV's uhf signal?

J. G. Severtson, one of Philco's larger distributors who has the Western Oregon and Southern Washington territory, told B•T: "Uhf to me is a perfect picture and a perfect installation." He said his crews have found that KPTV reaches out 40 miles to Salem and well beyond, with a 10-foot mast adequate for most locations in that city where several thousand sets have been installed. Many technicians like the tricky uhf better than vhf.

Mr. Severtson conceded there had been some faulty installations at first but training schools took care of that problem. He operates AW Service Co., as well as Appliance Wholesalers, and generally charges around $30 for a high-gain bow-tie antenna with corner reflector mounted on a five-foot mast. The antenna is his own design.

The Philco receiver's built-in antenna is




**By J. Frank Beatty**

adequate, however, for 20% of installations, he said, with a much higher ratio in Portland proper. His service plant installs an all-wave tuner in the center panel of Philco sets for $55 additional. When vhf comes, his firm will fix antennas to receive both uhf and vhf for under $20.

He personally prefers uhf, he said, because it avoids man-made interference across the picture.

Tom Lowey, sales manager of Eoff Electric Co., Motorola distributor, says uhf is doing "a terrific job." Some problems arise but service crews nearly always find a very good signal, he said, though noting shadow spots along the southwestern hills toward the Lake Oswego residential area and Rocky Butte, for example. While the signal is a thin layer in some spots, his crews can find it "in 99% of cases," he told B•T.

Eoff's Motorolas are equipped with an all-wave tuner at the factory. Like most of them it includes an amplifying step. Mr. Lowey said the built-in antenna works in 55% of locations in the Portland city limits, with another 15% using a yagi atop the receiver. On outdoor jobs he uses three types of antennas, preferring all-wave v-behind-v but using yagis if necessary.

During Portland's tv year, Mr. Lowey added, radios have been selling well and they're moving faster right now than a year ago—a trend that has been found all around the nation.

These two distributors' views are typical of wholesaler-retailer opinion.

Some fear has arisen that all-wave tuners converting Ch. 27 to Ch. 5 will suffer interference from Ch. 6 when KOIN-TV takes the air. A local newspaper column started a young panic but several set manufacturers explain they have investigated several similar situations around the country and they scoff at these fears. Some of the strip tuners are giving trouble, they agree.

How many of its potential million viewers is KPTV serving?

Right now, Mr. Olsen claims, 310,000 families or 950,000 people live inside the 500-1000 microvolt contour in Western Oregon and Southern Washington. Addition of the 10 kw amplifier and a higher antenna will add 35,000 families or around 120,000 people, he predicted, plus another 15,000 people in the Portland shadow areas who are expected to get a good signal when the new tower is installed.

On the basis of figures compiled by John D. Jenkins, of the Portland State Extension Center, KPTV estimates there are 106,000 sets in an area ranging from around Longview, Wash., in the north down south of Corvallis. Possibly half of this area is now included in the secondary service contour.

### The Receiver Story

Mr. Jenkins told B•T his estimates are based on distributor figures and checked against Radio-Electronics-TV Mfrs. Assn. reports. He said not all distributors are currently supplying data.

Using an oft-mentioned 28% saturation figure, the three-county Portland area would appear to have nearly 87,000 tv homes.

At any rate, somewhere between a fourth and a third of homes in the KPTV service area have tv sets. While this is not a high figure, Portland natives pointedly remind that the area doesn't catch fire easily and they boast of its steady but unspectacular development (an estimated 100,000 people since 1950). With a touch of civic pride they add, "Let Seattle bust its seams. We like it this way."

That's the general coverage situation, based on the best information available—and naturally different estimators have different ideas.

Now how about the economics of KPTV's first year?

Mr. Mayer, a sage industrialist who isn't given to revealing all his business secrets, told B•T the first year at KPTV has been "very satisfactory from a fiscal standpoint."

"We made the turn in January and have been in the black ever since the first quarter of the operating year," he said.

No financial figures on KPTV operations are available. An educated guess by B•T, based on examination of the station's schedules, suggests that business volume is now running at a rate of somewhere around a half-million dollars a year, possibly more.

While Mr. Mayer didn't care to comment on the operating figures of the station, he did express considerable satisfaction at the fact that earnings have been available to contribute "very substantially" toward KPTV's capital expansion program.

Spot and time availabilities have been virtually sold out since the beginning of the year, and profit-loss statements have reassured the management.

Obviously business has been good at KPTV. It had better be, because the station has a large plant that is being expanded rapidly, plus a staff of 68, recruited locally. The investment is described like this: Transmitter, tower building at Council Crest, $187,000; office building improvements, studios, electronic equipment, furnishings, $340,000. That's a total of $527,000. Add $135,000 for a new tower-radiator this autumn and a 10 kw amplifier in 1954 plus a soon-to-arrive $15,000 remote truck plus another $50,000 in studio improvements and you have a grand total of $727,000.

Under Mr. Olsen's overall direction, the job of bringing in money to finance this operation is handled by Charles R. White, commercial manager. Mr. White was told the morning of Sept. 18, 1952, that KPTV had suddenly gone on the air with a test pattern and he could start selling. The first day he sold First National Bank and Davidson Bakery, locally. RCA was lined up as the first national sponsor. Spots went for $50 (20 seconds) and $25 (10 seconds). The next day he sold the Irelands and Pagoda restaurants, U. S. National Bank, King building supply, First Federal Savings Bank, *Oregon Journal* (KPOJ), Chrysler dealer and Flav-R-Pac frozen foods.

At the grand opening party Sept. 20 in the Multnomah Hotel Mr. White earned his lunch, and more, by selling a two-hour film show to guests representing Union Pacific Railroad and F. B. Connelly Co.

Since that time station revenues have risen steadily. Operating evenings only, KPTV was sold out by the end of its first three weeks. Hours were added steadily, and when the live camera chains arrived in April the station moved its starting hour to 9 a.m.

Right now KPTV is doing business with 164 advertisers and 89 advertising agencies. Like all operators in one-station markets it has to exercise fancy diplomacy as eager sponsors insist on Class A time and often have to settle for B or C. Many a grudge is nursed by the frustrated, but agency men concede the situation isn't very serious in

One year of uhf in Portland, as described to B•T by Herbert Mayer, president of KPTV (TV) and Empire Coil Co.:

"Very satisfactory results from a fiscal standpoint.

"In the black since the first of the year and improving right along.

"No availabilities in Class A. Most of Class B and Class C sold.

"Our revenues therefore have been sufficient to help us improve the earnings of our employes, add to our general facilities, and contribute to the welfare of Uncle Sam.

"Our main objectives as we started what has been an exciting and tremendously interesting first year have in good measure been achieved. These were: To provide the very best in programming; to render a worthwhile service to our advertisers; to make KPTV a happy place to work for an outstanding group of Portland men and women; to improve the working facilities of KPTV to give the best service, coverage and quality transmission."

comparison with some of the other one-station areas. Practically all of KPTV's early sponsors are still on the schedule.

Portland's retail stores have lagged behind other business lines in embracing television. Arrival of competition is expected to stir activity and perhaps lure such retail giants as Meier & Frank, user of vast newspaper space, and Lipman-Wolfe into regular and extensive use of tv.

Some spotty recognition of tv's sales power is appearing. Giles K. Handy, manager and buyer of the Buster Brown shoe department at Lipman-Wolfe, second largest store, told B•T the new NBC-TV Smiling Ed McConnell program had drawn swarms of youngsters and parents into the store, with 3,000 comic books given away in a fortnight. He called this "a very good response" and said "quite a few Buster Brown shoes have been sold." Lipman-Wolfe has a tie-in spot on the program. Lucy Marlowe, KPTV merchandising manager, has KPTV labels pasted on all the store's shoe boxes plus other promotions. KPTV is just getting into active merchandising, a function that will get a shot in the arm as competition comes to Portland.

### Philco Freezer Stunt

Another KPTV stunt was built around a Philco Freezer Week in August. Richard McNamara, assistant advertising manager of Appliance Wholesalers, joined in rounding up 95 Philco dealers who gave a metal plate to all who went into stores to look at freezers. Store traffic was heavy and interest in these major appliances was whetted by use of promotion devices and cooperation of Barbara Angel, who presides over KPTV's *What's Cooking*. Cost was trivial and everybody was happy.

KPTV is becoming increasingly active in the field of civic programming. Arrival of its RCA remote truck will permit expansion of outside originations, now limited to the facilities of an ingenious two-wheel trailer equipped with sliding racks and built-in wiring. Education officials have publicly expressed appreciation of KPTV's readiness to telecast local features and to place them in choice periods. First National Bank is happy about sponsorship of the famed Rose Festival Parade and the recent Shrine football game. William Swing, assistant to the manager, is in charge of KPTV public service programming.

Then there's *The Toymaker*, a gem of an idea and the talk of Portland since it took the air last May 11. Like many top programs it has a simple format—a teller of tales for the kiddies. And like many kiddie programs, it has developed a large teen-age and adult audience.

Frederick Giermann, veteran actor, is KPTV's toymaker. He tells little stories about the adventures of such toys as Ajax the Elephant and Sneaky the Snake, all the while seated at a toyshop workbench.

Richfiield Oil, one of the early sponsors, offered a comic book about the outer spaces. All 20,000 available copies were disposed of in five days; 5,000 more were sent from Seattle and these, too, were gone in a couple of days.

Other sponsors include Sperry Wheathearts, Plot-O Products, Grandma's Cookies, Doughboy plastic pools, Alphenrose Dairy and Toy House (retail). The program was developed by John R. Ralston Productions, which provides script and production.

Little Ajax, a grey elephant with flapping red-trimmed ears, can be found in suburban New York nurseries and possibly, if the truth ever comes out, in a few desk drawers of timebuyers who selfishly refuse to carry this Herbert Mayer promotion piece home for the youngsters.

*The Toymaker* has inspired a stack of endorsements from parents, educators, civic leaders and other community groups, and has attracted network feelers.

What about Portland radio during KPTV's first year?

Richard M. Brown, general manager of KPOJ (*Oregon Journal*) and NARTB District 17 director, said Portland radio was hurt for a while last autumn, but by winter the aural broadcasters were working harder and selling with more vigor. All this led to better management and broadcasters are doing nicely since adjusting themselves to the new competitive picture.

H Quenton Cox, president of KGW (sold by *Oregonian* recently to KING-AM-TV Seattle and others), conceded tv left its impact but joined Mr. Brown in observing that radio business is fine, with stations cooperating in meeting the common problem.

Howard Lane, president of KOIN (AM) and the embryo KOIN-TV, which gets under way in mid-October, said KOIN didn't feel tv's arrival. Right now he's busy getting ready to put KOIN-TV on the air. CP was granted last July 23. The GE 5 kw transmitter is in place atop Sylvan Hill, about the same elevation as KPTV and not far away.

With a 35 kw amplifier due to help kick the Ch. 6 vhf signal out over the hills and valleys, Mr. Lane promises 56 kw from a temporary tower and three-element antenna. Later a new radiator and higher tower will permit use of full 100 kw power.

A large downtown building is being overhauled and equipped as a second Portland tv center. Formerly a dance hall, the spacious structure includes two large (64x64 and 37x64) studios. Like KOIN, founded in 1923 and operated many years by the late C. W. (Chuck) Meyers, KOIN-TV will go in heavily for local live programming and public service features.

### When VHF Hits Town

What happens in Portland television when KOIN-TV joins KPTV should be interesting to watch. KPTV points out that the Bridgeport uhf transmitter has amazed even its best friends by defying the line-of-sight traits of the upper band. There are shadows, of course, but at KPTV they're predicting that vhf will have shadows, too, as the signal meets up with the tumbling topography of this area. They claim interference-free uhf needs fewer microvolts than required by vhf in fringe areas.

KPTV's executives state that the uhf transmitter has only been off the air a little over three hours in a year because of technical troubles. They react violently to reports that the RCA-NBC transmitter has often quit perking for hours at a time.

KOIN-TV will take the air with a $500 basic hourly rate. KPTV started off at $250 a year ago, went up to $350 in February and is pondering the idea of Rate Card No. 3, possibly by late autumn.

The stations will have cable trouble from the start. They must share, along with three Seattle-Tacoma stations to the north, a single network channel. Portland telecasters complain that the single coax from California passes only 2,900 kc and doesn't do that the way they desire. A radio link goes north to Seattle. AT&T leases the cable from Pacific

RUSSELL K. OLSEN
*general manager, chief engineer*

Telephone & Telegraph Co., it is pointed out.

KPTV hopefully looks forward to KOIN-TV's arrival as a means of getting off the one-station hook. Still to come are Ch. 8 and Ch. 12 stations, once FCC has sorted out a half-dozen powerful applicants. KOIN-TV is the result of a Ch. 6 merger by the S. I. Newhouse interests and Theodore R. Gamble, a union that forced the Newhouse group to sell KGW to a firm headed by KING-AM-TV interests.

Of interest to Portland are upcoming tv projects in Vancouver, Wash., just across the Columbia River to the north, as well as in Salem and other communities. Salem and Klamath just a few days ago were awarded additional uhf channels by the FCC.

KPTV will break out into a formal first birthday party Sept. 30, a year and ten days after the first programming started but on the anniversary of full commercial operation. The governor, mayor and others will join business and civic leaders in the Multnomah Hotel ballroom where the station's inaugural ceremonies took place just a year ago. Mr. Mayer will be on hand for the event. He has spent many weeks in Portland during KPTV's first year.

The guests will re-live the exciting moment in 1952 when the ballroom provided a setting for one of television's notable events.

Things started to happen, and fast, the moment FCC granted Mr. Mayer's application July 7, 1952. All the hazards of the commercially untried ultra-high medium confronted him. An additional, and quite genuine hazard loomed: "How to get a transmitter?"

In all the world there was only one fully tested and available uhf transmitter—the custom-made job that RCA-NBC had been testing since 1949 at Bridgeport. This $3 million experiment—known as KC2XAK—had been holding the attention of the electronic and advertising world ever since its erection. Manufacturers had used it as a proving ground to test uhf circuits and components.

Many covetous eyes were focused on the Bridgeport transmitter, among them Mr. Mayer's. Back in his mind was a conviction that he could pull the electronic coup of the era by slamming KPTV on the air months ahead of any reasonable forecast—provided he could latch onto KC2XAK's gear.

All the details of Mr. Mayer's successful effort to land the equipment haven't been told, and likely he's the only one who knows the full story. In any case he, as usual, set out to get it—and got it. Perhaps it was a realization of Portland's tv plight; or dogged Mayer determination; or his close connection with RCA as a supplier of components. It doesn't matter now. He got it.

RCA-NBC, Adler Communications and Empire Coil engineers started to dismantle KC2XAK Aug. 23, roughly a month-and-a-half after the KPTV CP had been granted. It was loaded on a truck and dispatched to Portland where it arrived a few days after a frantic Herbert Mayer had recovered from an attack of hammers-in-the-head induced by

FREDERICK GIERMANN
*a hit as the toymaker*

reports that the truck had disappeared somewhere between the Alleghenies and the Rockies.

Dispatched to the Northwest, also, were RCA-NBC installation engineers; R. G. Freeman, top assistant to Mr. Mayer; Tom Friedman, chief engineer of WXEL; Mr. Olsen, assistant chief enginer of WEWS, and an express car loaded with an RCA TFU-21B radiator.

While the industry was anticipating a Thanksgiving debut of KPTV, earnest engineers and building workers were devoting 24-hour days to the task of setting up the plant and making it tick. By Sept. 15 the transmitter was ready for power tests and at 12:01 a.m. Thursday, Sept. 18, 1952 A.D., the first KPTV call letter was broadcast visually.

Delighted, Mr. Mayer exclaimed: "The picture is better than I expected . . . this is great news for the nation."

Two days later, at 4:30 p.m. after inaugural ceremonies in the Grand Ballroom of the Multnomah Hotel, Mr. Mayer voiced these historic words from the Council Crest transmitter: "Ladies and gentlemen, good afternoon. This is Television Station KPTV Portland, the World on View, Ch. 27. We are signing on the air this 20th day of September, 1952, in accordance with authority granted to us by the Federal Communications Commission. . . . And so, let us now witness the inauguration of television in Portland and the first commercial uhf broadcast in history."

No one would have been surprised if the early days of tv in Portland had developed into dollar-snatching and signal-fumbling chaos. The setting was perfect. Distributors and dealers didn't know how to service vhf, let alone the somewhat more delicate uhf. Fly-by-night stores and service firms were sure to unload all the junk they could collect on this novice community. Even the set makers were short of experience—to say nothing of receivers.

Fortunately, responsible elements of the community stepped in with a plan based on cooperation and integrity. Better Business Bureau, newspapers, radio stations, dealers, distributors and set manufacturers joined in what was called "The Portland Plan."

BBB drew up an advertising Code of Ethics to prevent misrepresentation and the business interests joined the movement. So Portland was ready when tv arrived and for the most part the public got good merchandise and good servicing at fair prices.

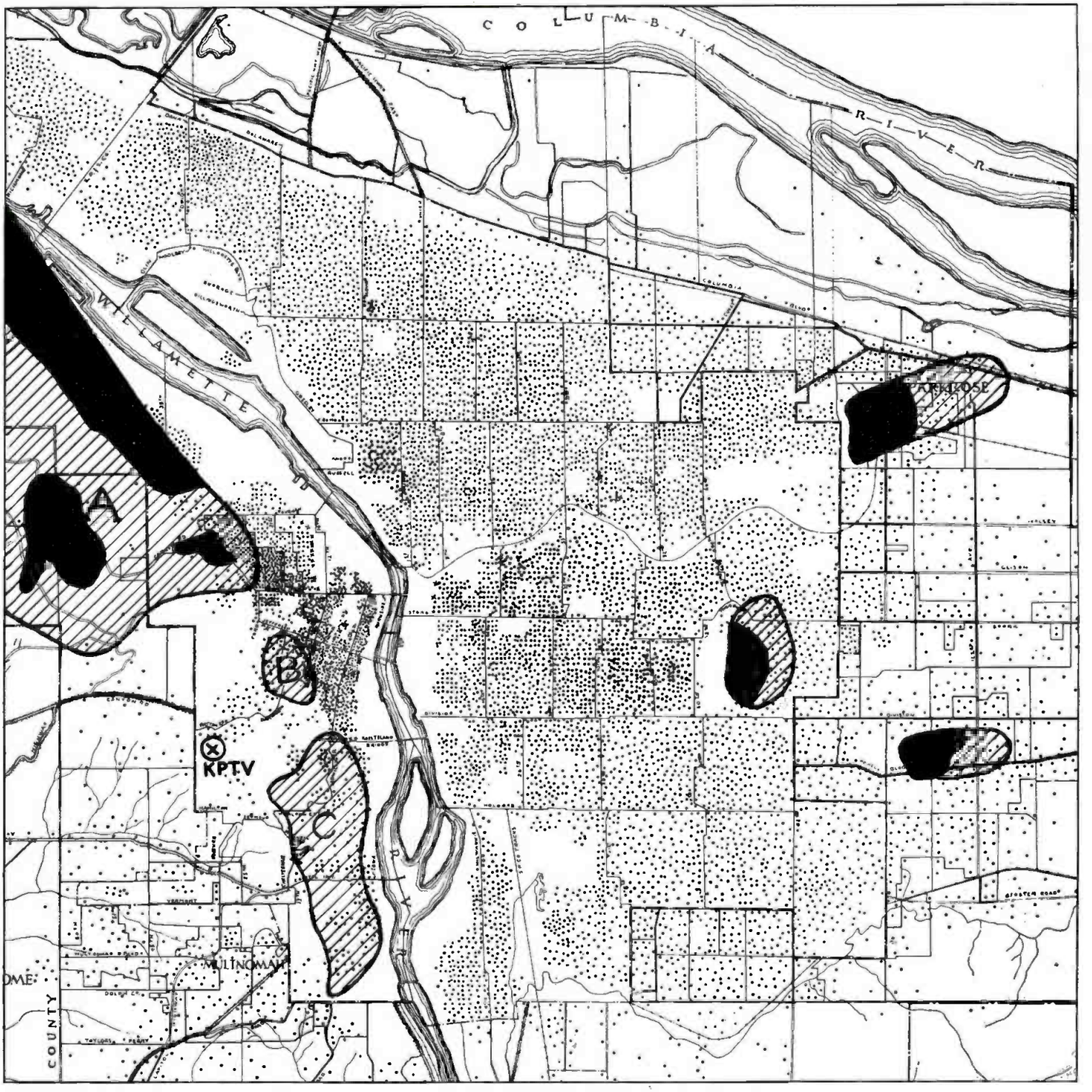
Portland still boasts it has the best tv distribution and servicing record in the nation, and The Portland Plan is still in effect.

Obviously Portland likes television. Few viewers realize their picture is different from any other city's picture—technically, that is. The sets have an extra gadget or two, but there are 21-inch known-brand table models that sell for around $200. Occasionally some uhf converters drift after they warm up and there's snow to be found in shadow areas.

Everything adds up to this conclusion—uhf has been a commercial success for one year in this major northwestern market.

(Map on next page shows how KPTV signal covers Portland area.)

WILLIAM MCALLISTER
*station operations engineer*




# SHADOW AND SUBSTANCE

How bad are the uhf shadows in Portland?

This population density map of the Oregon city prepared for B•T depicts (1) original shadow areas based on NBC-KPTV (TV) engineering measurements and (2) the areas to be removed from the shadows (portions denoted by parallel lines) when KPTV's new antenna adds another 250 feet to the radiator's height. Black areas will remain in shadows.

Shadow areas A, B and C lie in the residential districts west of the Willamette River. The shadow effects are due to the southwestern hills. Lined portions show how the higher antenna, with new radiator, will give added coverage. Each dot on the map represents 40 people, based on the 1950 U .S. Census.

Three shadow areas east and northeast of the radiator will be eased by at least half, according to the engineering predictions. They are caused by small hills—Mt. Tabor, Rocky Butte and Kelly Butte, each about 200 to 300 feet above the immediate neighborhood.

The shadow effects are computed on the basis of a relief map in which a tiny light was placed at a height comparable to the new KPTV radiator. The map then was photographed. In actual operation, KPTV signals were found occasionally in some of the shadow areas.

KPTV's new radiator will reach 540 feet above Council Crest, 290 feet above the present radiator.