# NATION'S CAPITAL WILL HAVE POWERFUL RADIO BROADCAST

## TO OPEN GIANT PLANT BEFORE NOVEMBER 1ST

### Completion of Eighteen-Hour Broadcast Station Larger Than KDKA This Fall Will Provide Concerts for Every Fan in State—First of Chain.

By Fred Kosslow.

Confirmation of the report that the Radio Corporation of America, which has a virtual monopoly on American broadcasting, will erect one of the most powerful broadcasts in the country in Washington, D. C., this fall, was received last night from Secretary Elwood, of the corporation, in a letter to The Times-Dispatch.

This step will effect little short of a revolution in Virginia, according to local experts, and dealers who were informed of the move. The Washington station, Mr. Elwood stated, will be at least as powerful as KDKA and it is thought that ten kilowatts of power will be employed, making the plant a close rival of WGY, at Schenectady, N. Y., which every Friday night gives a Pacific coast schedule, the greatest feat of broadcasting yet accomplished.

Completion of the broadcast by not later than November 1 is announced by the corporation. This move is understood by national authorities as a step in the program to establish a chain of station at appropriate intervals all along the Atlantic Coast, which will furnish every fan equipped with even the smallest outfit a complete and satisfactory program.

**Will Operate Eighteen Hours.**

Although not definitely decided, it is stated that the new station will give either an eighteen-hour schedule or at least one considerably longer than the most pretentious station now operating. Such programs will embrace musical offerings, speakers drawn from the greatest source in the world—the nation's capital—and a complete news service. Local men point out that, because Washington is only about 115 miles from Richmond, even the small crystal outfits will be able to pick up concerts from the new station. Dealers here estimate that the consequences of such a possibility will be the sale of an unprecented amount of smaller sets and the opening of a new era in Virginia broadcast enthusiast which the approach of fall weather and ideal atmospheric conditions will augment.

**Fall Revival on Way.**

It is pointed out that due to the initiation of the bulk of broadcast fans last spring and this summer, the approach of colder and more favorable weather will have an effect on radio among the great mass of people that has no precedent. Hearing a few concerts under favorable conditions towards the close of last winter's excellent weather and for the rest of the summer experiencing the heaviest static shook to some extent the general belief in radio as a sport.

Predictions for an early fall have started local dealers on a campaign to fill Virginia with radio. Several merchants told The Times-Dispatch that they were "going the limit" on stock, giving careful attention to the great influx of jobbers now coming through the State, and purchasing anything worth while in the way of modern goods. Just at this point the experience of some months is beginning to have a good effect, and dealers as well as consumers are educated to a point that necessitates the best of apparatus to satisfy them.

## TO CUT 'PHONE BILL WITH RADIO SYSTEM

### Company's $1,000 Monthly Toll Would Be Reduced. U. S. Not Ready.

Further popularity of radio may bring about the creation of private long telephone "lines" throughout the world.

This would mean secret conversation between branches of a firm without the necessity of paying toll to a telephone company.

Plans for such kind of communication have already been considered by officials of some of the larger concerns of the country. Directors of the Midland Refining Company, with headquarters at Tulsa, Okla., have had this idea under consideration for some time.

**High Tolls.**

The company has branches scattered through this field far enough apart to necessitate long-distance telephone conversations. It was found that calls between the Tulsa and Eldorado offices ran the company's monthly telephone bill to slightly less than $1,000. The possibilities of radio were apparent to the officials.

Their plan was to install a radio transmitting and receiving set in each of their branch offices, so that they could communicate without the cost that line telephone calls would bring them.

To secure secrecy in radio telephony for such business firms special wave lengths would have to be assigned by the government. For this Federal officials say they are not ready. Further development of radio, however, might make such arrangements possible.

**Sharp Tuning.**

When radio telephony has progressed to such a fine state that tuning could be sharpened down to any given wave length, that secret communication will be possible.

Radio experts have declared this possible. In such cases of them, tuning will be brought down to the reception of a wave length where it would be almost impossible for an outsider to catch the message.

In such cases private and secret radio telephone lines will be possible.

## THE TRUTH ABOUT ASPIRIN

### See What Science Has Done In Tingle's Laxo Aspirin

Washington, D. C.—A statement made by the Therapeutic Research Laboratories definitely establishes that aspirin is non narcotic or habit-forming, but that taken in tablet form it does disturb digestion. Despite the fact that the world of medicine recognizes in aspirin the most powerful of all pain relievers, people believed it harmful because it so often interferes with digestion. Many people have craved the relief aspirin would give them, yet feared to take it because of the after discomfort. They will welcome the new, improved aspirin.

**Science Triumphant**

Men of science have worked faithfully and thoroughly until now you get in TINGLE'S LAXO ASPIRIN a tablet that overcomes all these former objections. A gentle laxative has also been added, and once the pain is gone, this cleansing assures you thorough elimination of the cause.

It's the aspirin men and women are carrying with them daily. The aspirin with the three points:

—It's absorbed easily
—It relieves pain quickly
—It's a gentle laxative

TINGLE'S LAXO ASPIRIN

Ask Your Druggist for the "Three Point Box." Therapeutic Research Laboratories, Washington, D. C.

## Adjust Crystal

Adjusting a crystal detector often becomes quite difficult, especially when no broadcasting station is in operation. As an aid for quick adjustment a high-pitched buzzer is quite valuable when used in the circuit. A wire may be connected from the terminal of buzzer, where contact is made with the vibrating arm. The tiny spark, which appears when the vibrator is in operation, acts as a miniature transmitter. When a wire from the contact post is connected either to the ground post of the set or to the secondary of the coupler it causes a signal of uniform strength to act upon the crystal.

By adjusting the crystal while the buzzer is in operation, sensitive spots can be found on the crystal. Of course, the louder the buzzer note in the phones, the better the adjustment. Once a point is found, the buzzer is cut out and the set is ready for genuine reception of a broadcasting station.

**Automatic Receiver.**

[Special Cable Dispatch.]

LONDON, Aug. 26.—A wireless tuner, by means of which it is proposed to overcome the difficulty of adjusting receiving sets for particular stations, has just been perfected by H. Powell Rees, a British expert. In recent tests of the operation of the invention, listeners were enabled within eighty seconds to hear sending stations at Croydon airdome and Carnarvon talking to New Foundland.

(C, 1922, Public Ledger Co.)

**Difficult to Figure Range.**

The efficiency of radio transmission varies at times. One evening a set will receive loud and clear from a transmitter 500 miles away. Another evening it will barely receive at a distance of 100 miles. Therefore, receiving set range is always based upon the average distance to which the set will respond under normal conditions, but this range is often exceeded for short periods of time.

## Twelve-Hour Religious Services by Broadcast

**KDKA.**

(East Pittsburgh.)

9 P. M.—Services of the Point Breeze Presbyterian Church, Fifth and Penn Avenues, Pittsburgh. Dr. P. H. Barker, minister.

12:45 P. M.—Children's Bible story—"Stumblingblocks."

1 P. M.—Radio Chapel at Westinghouse Station KDKA, conducted by Rev. E. G. Forrester, of U. P. Church, East McKeesport.

5:30 P. M.—Community Open-Air Services from the Wilkinsburg Federation of Churches, Wilkinsburg, Pa. Rev. P. M. Camp, D. D., of Dayton, Ohio, representing the United Brethren Church, in the pulpit.

**WBZ.**

(Springfield, Mass.)

7 P. M.—Church services conducted by Rev. Albert E. Hylan, pastor of the Chase Memorial Baptist Church.

**WJZ.**

(Newark, N. J.)

2 P. M.—Radio Chapel Services.

5:30 P. M.—Readings and records from "The Bubble Books That Sing," by Ralph Mayhew.

6 P. M.—Special reading for older boys and girls by Marian Cutter.

6:30 P. M.—"Decorate With Light," Louise C. Reed, Society of Electrical Development.

6:45 P. M.—"Old Wine in New Bottles," by H. Askowith, of "The Independent."

8:20 P. M.—Opera recitals by Amy Grant, of New York City.

**KYW.**

(Chicago, Ill.)

2:30 P. M.—Radio Chapel Services by Rev. Frederick L. Seiden, Ravenswood Presbyterian Church, assisted by his choir.

## SEES UNINTELLIGIBLE BROADCAST IN TREES

### Suggests Real Language of Flowers, but, in Reality, a Dead Loss to Fans.

Trees are radio transmitters.

So far as known, they have not to date sent out any intelligible message.

But trees do take up electrical charges which, when they have grown sufficiently, are passed off into the atmosphere. Usually the "discharge" takes place suddenly and a certain variety of "static" is caused in this way.

For many years "static" was just "static—and nothing more."

But as science delved deeper and deeper into the mysteries of the origin of natural forces, we learned to differentiate between natural charges within limits depending upon their cause.

Even the smallest child knows that electricity may be generated by the stroking of the cat's back. This is frictional electricity. The rubbing of almost any two substances against each other will result in such "charges" being set up on the surfaces of the two objects.

So with nature.

**Frictional Charges.**

When the gentle zephyr brushes through the tree there is friction. Frictional charges are generated. The air moves on, carrying its charge, and leaves behind with the tree a similar charge of opposite polarity. As more and more air passes the tree this charge becomes greater and greater.

Finally, perhaps, a change of wind, temperature or humidity will throw into the vicinity of the tree a body of atmosphere which is bearing very little or no charge at all. The tree imparts some of its charge to this new air strata. It is done suddenly. An infinitesimal spark may take place. There is set up an ether wave, which makes itself known in the radio receiver.

**"Clicks."**

It may be slight, it may be strong. Very frequently discharges of this sort are extremely numerous and their continuous "click, click, click" may completely obliterate the signals from distant stations.

Such static discharges as these are classed generally under the head of "clicks" as distinguished from the great "grinders" caused by lightning discharges in the sky.

"Clicks" are usually of local origin and are numerous when a change of weather, from dry to wet, is imminent.

"Grinders" may originate several hundred miles from the receiver, for they are usually caused by discharges which represent the expenditures of even thousands of horsepower of energy.

## RADIO BEACH DANCING POPULAR

Radio has been developed to such an improved state that a set can be brought to the beach and other similar places without trouble. It has made beach dancing popular. No aerial or ground connection is necessary with the radio set shown. It can be moved about while it is receiving music for the dancers.

## DISPATCH RADIO BILL FOR WEEK INCLUDES FINE LIST

### Piano Recital and Chorus Monday. Popular Westmoreland Orchestra Wednesday. Senor Andonegui, Violinist, and Mrs. R. S. Hudgins, Contralto, Friday.

A varied program that teems with great promise is the outlook from Dispatch broadcast for next week. The program will offer some of the best material in the city, and is expected to appeal to thousands of Old Dominion fans as no other program has.

Monday evening will be given over for the first half to a recital on the Ampico in the Chickering Piano, by Lee Fergusson Piano Company. Mr. Lee Fergusson, who is quite a critic of the classic in good piano selections, will offer a number of famous masters and composers on the piano, which has a reputation of being indistinguishable from the actual master performer. The program is expected to be thoroughly enjoyed by radiolists gifted with real appreciation. Lorillard Colored Chorus will sing following the recital.

On Wednesday the Westmoreland Orchestra, which was heard from WBAZ recently, will fill a return engagement with a dozen or more popular syncopations. The last engagement of this group aroused considerable interest among fans, as the orchestra is recognized as an excellent one among musical devotees here.

Friday evening is expected to bring the most interesting professional recital, which has yet been given by Dispatch radio. Senor Don Jose Andonegui, violinist, will be in charge and the program he has arranged is one of the best seen. His coterie has not been announced, but will include Mrs. Robert Scott Hudgins, contralto, one of the finest singers in the South.

## WBAZ Will Broadcast Trio of Popular Nights

(Program for August 28 to September 1.)

**WBAZ.**

(Dispatch Papers, Richmond.)

**Daily.**

7:30—Telegraphic code practice of baseball scores.

7:45—Baseball scores.

7:50—Late news flashes and weather report.

7:55—Stock quotations and bedtime story.

**Wednesday.**

7:55—Official U. S. Weather crop report for Virginia.

**Features.**

**Monday.**

8—Recital of Famous Master by the Ampico in the Chickering Piano, by the Lee Fergusson Piano Company.

8:30—Singing by the Lorillard Colored Chorus.

**Wednesday.**

8—Westmoreland Orchestra in popular songs.

**Friday.**

8—Recital by several of the most prominent professional musicians in the South, including Senor Don Jose Andonegui, violinist, and Mrs. Robert Scott Hudgins, contralto.

## FAN OF FUTURE WILL DISCARD BIG AERIAL

The day of the aerial antenna for receiving is gone.

This is the conclusion of radio engineers who have been conducting experiments for the Post-office Department to attempt to eliminate static interference in receiving. The experiments have been in charge of James C. Edgerton, superintendent of the radio section.

Instead of the aerial antenna, however, Edgerton has found three different methods of receiving that brought good results. These are:

1. Large vertical outside multiple turn loops.
2. Underground horizontal buried loops.
3. Underground antennae.

The Post-Office Department statement explaining the use of these forms of receiving antennae, says:

"The best results are obtained with the underground antenna when it can be laid in damp soil with a straight away of 1,000 feet. The horizontal buried loop is more or less of a new departure and has been very successful when well insulated and buried in water or very damp earth."

Even while lightning was striking, the report adds, communication was carried on with the use of the underground antenna.

## EXPERT GIVES HINTS ON BEST RADIO SETS

### Modern Receivers Divided Into Few Groups, Depending on Use to Which They Are Put and Cost. Few Principles Necessary.

By Paul F. Godley.

"What receiver shall I buy?" It's the universal question most often asked by the radio enthusiast who comes into the supply store. Instead of leaving it to the salesman, who may be thinking more of his commission than your need, answer it yourself. It's easy if you get an understanding of the several standard sets.

There are two general types of receivers—those using some form of mineral rectifier as detector and those utilizing the three-element vacuum tube.

Regardless of the type of detector, all receivers are divided into two general classes. First comes those which employ but a single-tuned circuit. Single-circuit receivers are comprised by means for tuning only the antenna circuit. They are not selective. Though they may continue to serve admirably to introduce radio to a doubting public at a small price, they cannot become permanent.

**Two-Circuit.**

The two-circuit receiver gives considerably greater selectivity than its forerunner. At the same time one or two additional adjustments are necessary before proper signal strength is attained. These adjustments are learned quickly. Additional trouble is more than offset by freedom from extraneous effects. In either crystal or vacuum tube set of moderate price the two-circuit receiver should be selected by preference. The additional cost is slight.

For those living within fifteen miles of a broadcasting station, the crystal receiver will suffice for all time, providing the listener is willing to wear headphones and is content with the program from the near-by station alone. The two-circuit vacuum tube receiver should treble the range at least.

**Regenerative Set.**

Perhaps the average listener will be satisfied with nothing less than the regenerative receiver, which takes full advantage of the properties of the three-element vacuum tube. Using a single tube, ranges of several hundred miles are to be had with such an outfit during darkness in fall, winter and spring. For nearby programs the single tube may even give sufficient volume to operate a small loud speaker. When the phones are worn, distant programs come in clearly.

Even in regenerative receivers we have a choice between what is known as the "two-circuit" regenerative receiver, and the "three-circuit" regenerative receiver. Both give considerable amplification of signal, due to the regenerative action. The two-circuit receiver costs about 30 per cent less than the three-circuit receiver and has but two or three adjusting controls. It also gives less in the way of sensitivity and freedom from interference. It is for the latter reason that where possible it has been passed by for the slightly more complicated and expensive type.

**Amplifiers.**

While the regenerative types of receivers bring distant programs in clearly, they will not provide sufficient energy to operate a loud-speaker excepting when signals are from nearby sources. For loud-speaking horns amplifiers must be used. All present-day amplifiers utilize vacuum tubes. The usual type employs two stages of amplification, though where a lecture hall is to be filled, four may be used.

The de luxe set for the average home should consist of a three-circuit regenerative receiver and two-stage amplifier. Most farms will be found equipped in this way eventually.

Inability to erect antennae will call in the future for the use of Armstrong's super-regenerative receiver, particularly in the cities. A desire for the extreme in distance on the part of fan or experimenter suggests immediately the super-heterodyne receiver, which is, as Armstrong says, "the Rolls-Royce receiver."


## The Importance of Healthy Kidneys

In the removal of waste material from the body, the kidneys are called upon to perform a very important duty. The failure of these marvelous and delicately constructed organs to properly do their work means retention in the system of poisonous matter. This poisons the system, and, if permitted to remain, results in severe backache, headache, torpid liver, constipation and other serious ills. Warner's Safe Kidney and Liver Remedy, a combination of herbs and other healthful ingredients, was discovered about 50 years ago, and its value in strengthening the kidneys and liver was at once appreciated. Today it stands as one of the standard remedies in the treatment of diseases of the kidneys and liver. Many persons suffer from diseases of the kidneys unknowingly. The use of Warner's Safe Kidney and Liver Remedy will invariably improve your health and make you feel that life is really worth the living.

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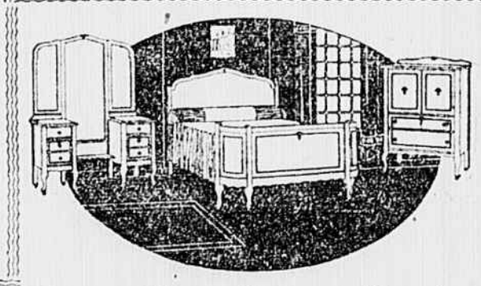

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