

THE WORLD OF RADIO

Pad May Be Cause of Interference

Prize Is Offered for Way to Overcome Influence of Heating Devices.

A great deal of trouble is being experienced with broadcast reception at Saranac Lake, N. Y., caused principally by interference of electric heating pads. Some makes of pads give considerably more trouble than others. Practically all of the pads have a thermostat device which regulates the temperature within a few degrees, and there is almost continuous sparking with this device, which causes the interference.

The village of Saranac Lake is a health resort, and a great number of health seekers sleep outdoors throughout the cold weather. The heating pad, of course, is a great comfort to these outdoor sleepers, and almost all patients use one. Radio reception has developed into the principal source of entertainment in Saranac Lake, hence it is a distinct factor in the treatment of patients.

The Saranac Lake Radio club has decided to offer a prize of \$100 to any one submitting a device for, or as a means of, eliminating this interference. It must be possible, of course, to make practical application of the device to such heating pads as are now in use and cause trouble.

The pad manufacturers are aware of these troubles and are endeavoring to eliminate radio interference in future products. The Saranac Lake Radio club will be glad to send detailed information regarding the trouble to any one interested.

German Radio Experts Show Increase in '24

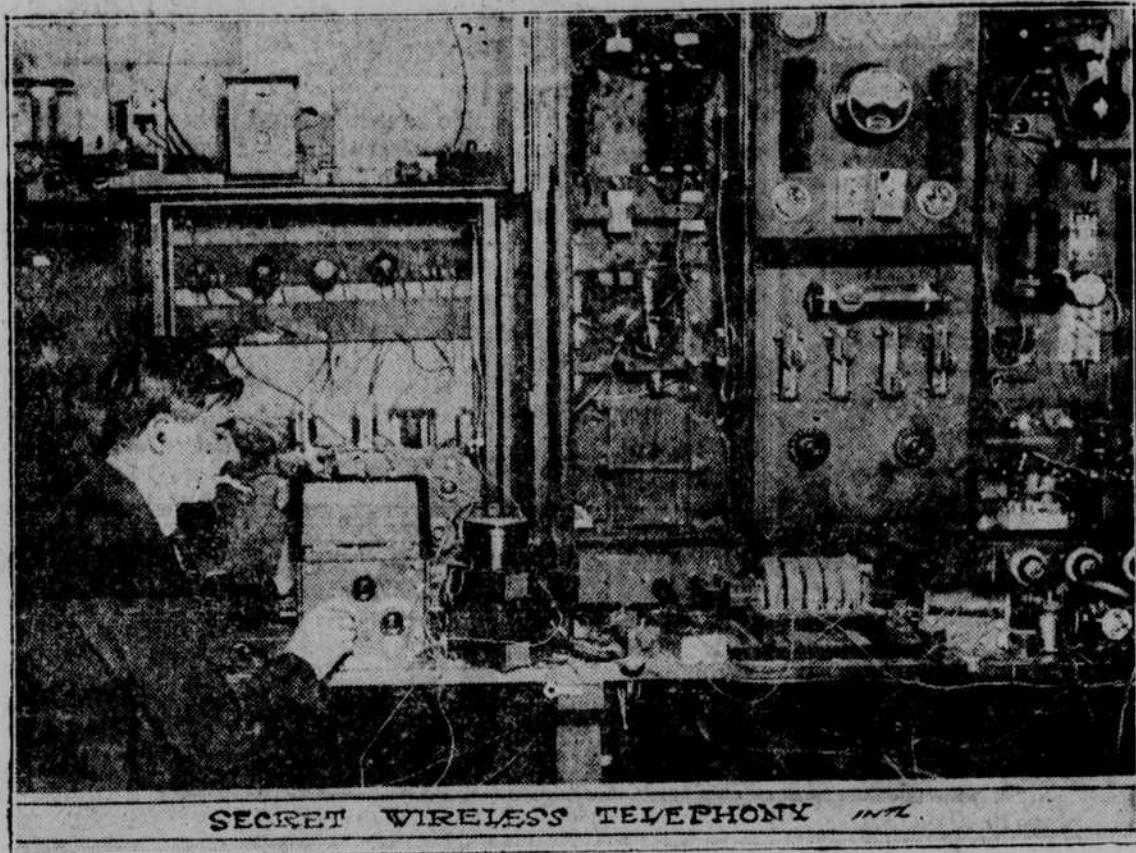
Exports of radio equipment from Germany have grown considerably during the last two years, as indicated by recent export statistics, says a report from the Department of Commerce from the commercial attaché at Berlin. The following figures show the exports of amateur and commercial radio apparatus for the first six months of 1924, with comparative figures for the same period of 1923:

Destination	Jan. June 1924	Jan. June 1923
Denmark	13	13
Great Britain	223	23
Netherlands	23	33
Sweden	86	8
Spain	10	18
China	19	24
Argentina	24	78
Brazil	5	5
United States	9	119
Other countries	119	140
Total	520	289

Loop Antenna

The directional properties of a loop are spoiled by the presence of magnetic materials situated near it. The steel framework of a building has a detrimental effect on the direction of a loop. These buildings have the characteristics of casting shadows across the loop, aside from shadowing the directional properties. This condition is particularly true of a pancake loop. It is wise to keep the loop away from metal stairways and radiators.

Synchronized Receivers to Make Secret Wireless



SECRET WIRELESS TELEPHONY

RADIO AMATEURS IN WORLD MEET

Paris, Jan. 16.—The International Committee for Wireless Telephony, which was founded in 1923, is planning to hold a great international meeting in this city from April 16 to April 20, 1925.

Twenty-seven nations are represented in this organization, which is in close relations with the league of nations, the International Chamber of Commerce, the International Law association and many other international organizations with wide interests in the legal, artistic and business development of wireless.

In view of the coming meeting, which is to be largely devoted to working out legal problems connected with wireless broadcasting and communication, radio amateurs throughout the world have decided to hold a meeting in Paris at the same time, and the two groups have decided to co-operate in the fullest measure possible.

Vacuum Tubes Differ

Two factors which should be considered in buying a vacuum tube are whether it is to be used as a detector or amplifier and whether it is to be used with a storage battery or dry cells. Some tubes are "soft" and others "hard." A "soft" tube is one containing more gas or air. It works best as a detector and the "hard" tube as an amplifier. The former requires less plate voltage. Amplifier tubes do not regenerate as easily as "soft" detector tubes.

Noises Not a Defect

Noises in a radio set are not always due to defective parts or loose joints. Much of the interference is due to power lines, violet ray machines, elevator motors, electric heating pads, doorbells, gas engine plants, telephone bellringers, street arc lights, trolleys and motors.

OUTSIDE, INSIDE AERIALS SAME

Which is better, the inside or the outside antenna?

If the wire is not too long to be stretched out in a room it makes little difference whether it is actually inside or outside, unless the walls contain a great deal of metal, such as steel or other metal conductors of electricity. In other words, one may shield an antenna from the radio waves by draining these waves off through other nearby electrical conductors, but an antenna cannot be insulated from these waves.

Glass, wood, brick, etc., do not stop the waves, but if all the windows were made of metal and the walls were also of metal no radio waves would get inside.

How Battery Is Exhausted

Tubes are primary causes for batteries to run down prematurely. Many defective tubes draw more plate current than they are rated for. Many tubes sometimes draw two or three times more current than standard ones and this soon exhausts the "B" batteries.

Connection of "C" Battery

The positive side of the "C" battery connects with the negative terminal of the "A" battery. The negative side of the "C" battery connects to one side of the audio transformer secondary and the other terminal of the transformer connects with the grid of the tube.

NEW STATIONS NOW IN EUROPE

Radio broadcasting development in Europe is progressing.

The Italian government has granted a concession of radio broadcasting to a group of companies, one of which is the Western Electric Italiana. A new broadcasting station at Milan will be of Western Electric construction.

Norway, too, has granted a concession for radio broadcasting to a group of companies, one member of which is the Western Electric Norsk Aktieselskap.

A new broadcasting station at Zurich, Switzerland, was put into service recently. The Bell Telephone Manufacturing company of Antwerp, which is associated with the International Western Electric company, supplied the equipment.

HOLBROOK HAS 26 RADIO SETS

Holbrook, Neb., Jan. 9.—Holbrook believes it has more radio receiving sets, comparatively, than any other town in Nebraska.

With a population of 455, there are 26 receiving sets in Holbrook, most of them five and six-tube sets.

When Tuning for DX

Do not increase the tickler dial to a point where the set will oscillate and act as a miniature transmitter when tuning in a distant station with a regenerative receiver. By doing this, a wave will be sent out from the transmitting station, therefore making it impossible for the neighbors to pick up the same station. The many whistles heard when fishing for DX

SIMPLE WAY TO MAKE TAPS

The easiest way taps may be taken off is by winding on a certain number of turns and the wire twisted together at the point so as to make a five or six-inch loop and a certain number of turns again wound on the tube and the next tap made in a similar manner.

Or a neater looking job is made by winding on a certain number of turns before making a tap and then allow six inches for a tap; push a hole in the tube and push the wire through it; push another hole in the tube about a quarter inch from the other and close in the last turn of wire and allow six inches for a tap and join the two six-inch ends on the inside of the tube.

London, Jan. 16.—D. V. L. Fellow is shown here at work on the experimental set with which he hopes shortly to complete successful tests with a new method of secret wireless telephony.

It is now possible with his invention to convey messages which are rendered unintelligible at the transmitting end, but which are rectified and corrected when received in the particular receiving set designed to correct the jumble of signals.

This method superimposes upon the wireless wave another variable frequency, rejecting that variable frequency in the receiving set, accepting only the resulting speech frequency.

This superimposed frequency can be varied in steps, and cancelled or altered at the receiving end by the use of selective electric filters and the necessary oscillating tubes. In this way the emitted wave is made a meaningless jumble to all those who do not possess the necessary synchronized receivers to convert it back into intelligible form.

Dust Causes Howls

A few specks of dust between the variable condenser plates or on the coils, loose connections and run-down batteries lower the range of many sets. Generally, most of the trouble, squeals and howls in a radio set are caused by little things which go unnoticed and seem unimportant.

Steinite Gives distance On Crystal Sets!

Steinite Laboratories, Atchison, Kansas.

My Super-Lo-Low, Lawrence, Kan., works best!

"My nephew was listening on Radio when the announcer said this is WDAF, Chicago. The kid went mad! He was listening to the second session announcer, KDKA, Pittsburgh. The next night we listened on KFYR, Hastings, Neb., and WJAW, Omaha. The next night we listened on WJAZ, Cleveland, and WJAZ, Warren, Ohio."

For those who doubt reception of long distance, this set was tested about two miles from center of town and there isn't any kind of a Radio within a radius of one mile of this set.

Special Offer Two STEINITE Crystals, one \$1 and Three Hook-Ups—ALL FOR \$1.50

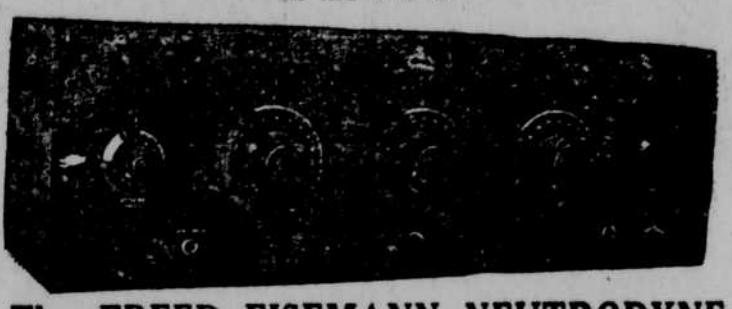
STEINITE is no ordinary crystal. It's an entirely new discovery. Opens up new possibilities for crystal set receivers. STEINITE CRYSTALS are being introduced. **Now \$5.00**

My Money-Back Guarantee I unreservedly guarantee STEINITE to give better results than you ever thought possible on your crystal set. If you are not surprised and more than pleased I will send back your money without any question. These two big Atchison letters will testify to my reliability. Exchange money for the radio sets you care for and order **STEINITE** crystals today—NOW. **None given**—without letter stamped on side.

National Bank, Atchison Savings Bank, Dept. Four STEINITE crystals today—NOW.

STEINITE LABORATORIES, 36 Radio Bldg., ATCHISON, KANSAS

The Finest Radio Receiver In the World



The FREED-EISEMANN NEUTRODYNE 4 and 5-Tube Sets, \$169.50 and Up.

Installed in your home complete. Aerial extra. Easy payments

A. HOSPE CO. 1513 Douglas St.

Radio Engineers Specify CHELTEN MIDGET

Use the Chelten Midget as a vernier adjustment for your grid condenser. Increases selectivity—gives more distance and volume.

The Chelten Midget is recognized as standard for use as a variable low capacity condenser. Put one in your set. Sold by radio dealers, \$1.50 complete. Accept only a Chelten.

CHELTEN ELECTRIC CO., Phila., Pa.

CHELTEN MIDGET.

Sold in Omaha by **THE RADIO SHOP** 308 South 18th Street JA cksn 1434

RADIO

Program for January 17, (Continued from Page 1)

By Associated Press.

WAB, Atlanta Journal (4:59); 8-9, Wenhall Hall, Hired Help; 10:45, Hidding concert.

WGR, Buffalo (8:19); 8-4:30, music.

WJAG, Chicago News (4:17); 6, Blue club; 8, orchestra; 8:30, photoquiz; 9, Chicago theater review.

WLS, Chicago (3:45); 7, entertainers; 7:20, organ, orchestra, harmony; 8:15, Charlie, jazz dance, fiddlers.

WGN, Chicago Tribune (7:30); 6, organ; 8, concert; 8:15, orchestra; 8:30, orchestra; 8:45, concert; 9, orchestra; 9:15, classical; 12, carnival.

WJW, Cincinnati (4:23); 4, Herschfeld, piano-accompanist.

WJAM, Cleveland (8:30); 8, dance.

WPK, Columbus (4:00); 7:30, orchestra.

WFAA, Dallas News (4:16); 8:30, serenaders; 11, orchestra.

WOOD, Dayton (4:48); 7:30, religious discussion; 9, orchestra, songs, novelty.

KOA, Denver (12:15); 10, orchestra; 10:30, Hollywood (3:37); 8, music; 10, tour of South Beach; 12, orchestra; 1:4, m. popular songs.

WDAF, Kansas City (4:13); 6:7, school of the air; 11:45, Nighthawk.

WIAS, Louisville Times (4:00); 7:30-9, concert, readings.

KHJ, Los Angeles Times (3:55); 8, concert; 8:15, orchestra; 8:45, m. Lost Angels of KMJ.

WICD, Minneapolis-St. Paul (4:17); 8, philosophers; 8:30, musical; 10, orchestra; 10:30, concert.

WJSC, Milwaukee News commercial Appeal (8:59); 8, bedtime; 8:30, concert.

WJZ, New York (4:55); 8, orchestra; 7, talk; 7:30, talk; 7:45, banquet; 9:30, orchestra.

WEAF, New York (4:53); 6:15, thrift; 6:45, choral club; 7:15, pianist; 8:30, Fitzgerald's Association entertainment; Eddie Cantor, band, entire Kid Boots company.

WJNY, New York (5:00); 7:30, orchestra; 8, concert; 8:45, tenor; 9:15, old time melodies; 10, entertainers; 10:30, orchestra.

WOR, Newark (4:53); 7, Trinity cathedral.

KGO, Oakland (3:12); 6, orchestra; 10, musical; 11, orchestra.

WDBR, Philadelphia (3:55); 6, talk; 7, talk; 8, concert.

WCAE, Pittsburgh (4:55); 6:30, Uncle Rayless; 8:45, movie chat; 7:30, musical; KDKA, Pittsburgh (3:26); 7:30, concert.

WJY, Portland (4:52); 12, orchestra; WGT, Schenectady (3:30); 8:30, orchestra; popular songs.

KFOA, Seattle (4:05); 8:45, program; 10:30, dance; 12:05, dance.

WJL, Springfield (3:17); 6:18, lecture; address; 7:30, concert; 10:30, orchestra.

KID, St. Louis Post Dispatch (4:13); 8, concert.

KPLZ, Atlantic (2:33); 8 p. m., dance orchestra.

WHAA, Iowa City (4:41); 7:30 p. m. Iowa-Creighton basket ball game.

WJNP, Shenandoah (2:46); 12:25, concert; 7:30, program.

WOAW Program

Saturday, January 17.

8 p. m.—Dramatic hour, selected readings and regular lesson program.

8:45 p. m.—Dinner program.

9 p. m.—Program by Rock Fort American Legion band.

11 p. m.—Frank Hodel and his Omaha Philharmonic.

11:30 p. m.—Organ music, organist Arthur Hays.

THOMPSON Neutrodyne Radio

There is a genuine satisfaction in possessing a radio with all the advantages given by the Thompson Neutrodyne. For it enables you to get the utmost of enjoyment from radio.

The instrument shown above is a 5-tube receiving set, embodying two stages of tuned radio frequency amplification, detector, and two stages of audio amplification. It is manufactured under the Hazeltine Neutrodyne patent and displays the most advanced application of the Neutrodyne principle.

Both in performance and appearance it is designed to appeal to the most exacting. Its simplicity and reliability will delight you.

It is more than a loud speaker. It is a real instrument, carefully made and beautifully finished.

Music Master has a wood amplifying bell, for the same reason that a violin is built of wood. Wood enriches the tones and they become life-like and pleasant to the ear.

It will sing its way into the heart of every listener. Hear it at the first opportunity and let your ears decide.

Tune in on KFAB

Nebraska Buick Auto Co., Lincoln

Full Line of Radio Parts

BE SURE TO SEE THE ZENITH

Beautiful cabinet. End compartments for batteries.

The set pictured above is the Super-Zenith model. It is truly a super instrument. Surmounts every wall of interference and selects any desired station. You can run over your entire dial in 90 seconds and pick up almost any station with great clarity and volume. Six tubes, two for tuned radio frequency amplification, one for detector, three for audio frequency amplification.

Enjoy all the pleasure that radio offers—by using a Zenith. More and more, the Zenith, in one or the other of its several models, is being chosen by discriminating folks. Certainly it has come to be one of the most popular sets.

Starting Saturday A Radio Event Extraordinary!

2 for 1

Sale of **RADIO SUPPLIES**

Come on, Radio Fans. Share to the limit of your needs in this most unusual sale. We candidly believe these to be the most outstanding values ever afforded Omahans on Radio Supplies.

Buy One Article and Get the **SECOND ARTICLE FREE!**

Hundreds of items included. Just the things you need are included in this 2-for-1 sale. We urge your early attendance Saturday.

Here Are a Few of the Scores of TWO-FOR-ONE RADIO SUPPLY OFFERINGS:

Vernier Rheostats	.....\$1.50	Now	\$1.25
3-inch Dials	.....40	Now	.40
Kellogg Condenser	.....\$7.75	Now	\$7.00
Double Wound Couplers	.....\$1.25	Now	\$1.25
Aluminum Cabinet Frames	.....50	Now	.50
4-inch Dials	.....75	Now	.75
Closed Circuit Jacks	.....75	Now	.75
Rheostats with Knob and Dial	.....60	Now	.60
Switch Levers	.....30	Now	.30
Armad Tube Sockets	.....75	Now	.75
Switch Contacts with Nuts, dozen	.....20	Now	.20
Foote Guaranteed Twin Crystals	.....50	Now	.50
Foote Guaranteed Triple Crystals	.....60	Now	.60
Jefferson Tube Sockets	.....75	Now	.75
Cronley Tube Sockets	.....50	Now	.40
Rocky Mountain Triple Crystals	.....60	Now	.60
Wartinje 13 P. Condenser	.....\$5.00	Now	\$5.00
Wartinje 23 P. Condenser	.....\$5.50	Now	\$5.50
Wartinje 43 P. Condenser	.....\$6.00	Now	\$6.00
Walmart Ind. Switcher	.....\$1.25	Now	\$1.00
Metro Crystal Sets	.....\$3.50	Now	\$3.50
Hook-up Books	.....25	Now	.25
Panel 3-16x7, sq. inch	.....02	Now	.02
Pathfinder Crystal	.....25	Now	.25
Westrad Rheostats	.....90	Now	.90
C. R. L. Rheostats	.....\$1.25	Now	\$1.00
Baldwin Single Phone and Cord	.....\$6.00	Now	\$6.00
King Aluminum Horn	.....\$6.00	Now	\$6.00
Large Enclosed Detector	.....60	Now	.60
Mounted Detectors	.....50	Now	.50

Wolfe ELECTRIC CO. OMAHA'S OLDEST ELECTRICAL FIRM SEVENTEENTH AND HARNEY.

Nebraska Buick Auto Co.

LINCOLN OMAHA

- Schmoller & Mueller Piano Co.
- Troup Auto Supply Co.
- P. A. Clark Motor Co., Benson
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- A. Hospe Co.
- Wilbur Brandt, Inc.
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