

Radio-graphs

HOW YOU CAN BAR STATIC IS TOLD BY EXPERT

Devices Designed to Cut Down Interference Hamper Set

By R. L. DUNCAN, Director, Radio Institute of America.

All devices so far put forth to eliminate static interference also cut down the signal strength of the radio station.

But a balanced crystal set constructed by the English Marconi company operates with fair success.

It consists of two carburenum detectors energized by a local battery

current. One detector is adjusted to a high degree of sensitiveness and the other to a lesser degree.

When a heavy charge of static enters the aerial, the crashing sounds are somewhat eliminated by the reaction process of the crystal rectifiers. But incoming signals are likewise weakened.

In tropical countries, where one ordinarily can receive transmission from a station 500 miles away, it is at times impossible to receive even 10 miles on account of static interference.

To reduce static interference to a minimum, most transmitting apparatus today employ a 500 or 500-cycle

note—one having a high-pitched musical sound. Static comes in on a very low pitch.

A good way to cut down on static interference is to employ the least possible degree of coupling between the primary and secondary windings of the receiving tuner to the lowest point where the signals you wish to copy are still audible.

Don't forget to see that there is a good lightning switch on the aerial connection leading into the house. Not only is this necessary to comply with the rules of the fire underwriters, but it is a great protection for the house, making the aerial ground act as a lightning rod.

Munsingwear
Sooner or later you will adopt Munsingwear. Why not now? It's different, and better. For men, women and children.

Wright's
A GOOD PLACE TO TRADE

Room Rugs
Rugs for house cleaning time. Not a large stock but one of very good values. 9x12 size in standard makes. (Downstairs.)

Pictorial Review Patterns

Home Journal Patterns

Baby Week

A Week Devoted to the Needs of "His Majesty" the Babe

May 1st to 6th is National Baby Week—a week devoted to Better Babies or the bettering of babies. A valuable book entitled "Better Babies" will be given to each mother visitor. Also we call attention this week to the splendid infants' department, and to some exceptionally good values that are planned for this event.



- Let the Baby Play in Comfortable Creepers**
Of course, they are made of strictly washable ginghams, so that mother need not worry if they become soiled. In attractive pink and blue with stripes of white. For the babes of two months to two years. \$1.25
- A Baby Bed That Will Follow Mother**
These bassinets, or cribs, are fitted with wheels of good size and with rubber tires. Mother can move it from room to room without disturbing the slumber of "His Highness." Not expensive. Upward from \$7.50
- This Rubber Sheet a Necessity**
A crib size rubber sheet laid next to the mattress of little bed. Made of a gumber. Sanitary, odorless, positively waterproof. Offered in two sizes. The small, \$1. Large size \$1.50
- Most Babies Demand Nice Hosiery**
Since he will insist on keeping his legs in the air, good hosiery is quite necessary. These little white stockings with their pink or blue toes and heels are wanted. Cotton or silk and wool at \$1.00
- Some Babies Like Knit Jacket Best**
Loving hands must have these knit jackets. They are baby-like. Of the very best wool. White body with a border of pink or of blue knitted borders and sleeves. \$1.00
- And After His Bath a Cosy Kimona**
This fluffy, cosy little kimona is the right thing right after the bath. Made of a fleecy white outing and stitched in pink and blue. One that was made to sell for more. Baby week price is \$1.50
- A Dress of Nainsook For One Dollar**
Of course, this dress is worth more. This is but a "baby week" offering. Ready-to-wear dresses of very fine nainsook. Lace trimmings at the yoke, firm hemstitched hems. Bright, clean stock. Baby week \$1.00
- A Wool Shawl Is His Royal Robe**
As ermine is a sign of royalty, so these hair line shawls seem to belong to Babyland. Of softest wool, cream in color. The checks formed by the hair line may be large or small. Good ones at \$5.50
- Coveralls For Kiddies in Sailor Styles**
Why not good looking coveralls? These are of blue stifle stripe, usual coverall material. With a large sailor collar and deep V-neck. A jaunty little sailor tie. In all coverall sizes. (Boys' Shop.)
- Better Buy Outing Clothes Early**
For hiking or long auto trips there's no clothing quite so satisfactory as khaki. And this year we have these garments ready earlier than usual. Coats, breeches, skirts, hats. On the Second Floor.
- French Tub Blouses Are Now Ready**
Wash blouses in such styles as were never seen before. Made of a white washable fabric. The collars and cuffs are attached and are made of imported ginghams in neat checks. Some have tucked fronts. They are only \$2.25
- Even Kitchen Aprons Are Charming**
Here's a roomy overall kitchen apron that's so good looking that the kitchen work loses its terror. Made of an unbleached muslin; patch pockets ready cut and stamped to be set on. Clever color combinations. Easy prices.
- Styles Are Changing In Bed Spreads**
Fanciful bed spreads are in style. Many of them are made of ordinary bleach, but so attractively trimmed that they are indeed attractive. And here is a beauty, with wide lace border. Needlework designs in the center.
- It Is So Simple Now to Sew For Babe**
Baby things in package, ready made but for the embroidering. Mothers can now sew for the babe whether they be expert or not. The stamping is so well done, the instructions so simple. All sorts of baby clothes in packages.

STATIC, BUGABOO OF RADIO, SAYS DUNCAN

Despite Efforts of Experts Nothing Done to Curb Interference

By R. L. DUNCAN, Director, Radio Institute of America.

What is this "static" bugaboo of all radio enthusiasts, about which we hear so much grumbling?

After a respite during the winter, it is again beginning to break in and interfere with wireless transmission and reception. Despite the efforts of all experts, nothing much has been done to curb this interference.

It is hard to buck nature, and static, or atmospheric, is the name

given to electric waves sent out by nature.

WATER IN AIR.
During the warm spring and summer months, water evaporates very quickly. The warm air covering the earth's surface becomes laden with water vapor.

Because this warm air is light, it rises to the cooler regions above. There, owing to the change in temperature, it is condensed and formed into small particles of water.

Since there is always some electrification of the air, these small drops of water are charged with electricity. Drawn together by the billions, they form into clouds. When these become heavy, that is, they become saturated, they descend upon the earth as rain.

LIGHTNING.
Each of these particles constituting the cloud retains its electrical charge. There may be several combinations of these in the air. When the electrical pressure becomes too great, current jumps from one cloud to another in the form of lightning. This lightning flashes back and forth until it dissipates itself.

As these flashes from cloud to cloud, or from cloud to earth, take place, they radiate an electrical wave quite similar to that radiated by a wireless transmitter set. They are not particular about the wave length they use. It is therefore almost impossible to tune them out.

Just what has been done to combat this static will be explained tomorrow.

Need for Radio Language Shown by Wide Interest

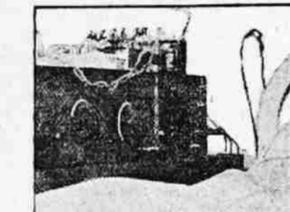
(By NEA Service)

LONDON, April 29.—Radio is receiving the movement for an international language.

Out of the international radio conference held here comes the suggestion of adopting some language like Esperanto, so that radio fans the world over may understand one another.

This is one of the subjects taken up by the wireless experts of America, England, France and Germany at this conference. It was suggested by Edward J. Nally, president of an American radio distributing firm.

RADIO HELPS CURE SICK



SICK?
Get a radio receiving set to occupy the weary hours of lying in bed and cheer you over the bad spells.

That's what many a hospital patient is doing nowadays, and doctors say radio has been helping them cure their cases.

There's Lester Pickler, 16-year-old high school boy of San Diego, Cal. He's a licensed amateur. His station is 6AJH.

But he has to lie flat on his back while working his station. He fell while erecting his aerial mast and now he is bedridden with a broken back. His physician says the set which his friends finished for him is going to speed his cure considerably.

Traffic Officer Jim Flynn, of Newark, N. J., has been in bed since an accident a year ago. But he is helping himself get well by listening in on the concerts broadcast from the powerful station in Newark.

The remarkable feature about Flynn's set is that the bed spring lies on its antenna. He resorted to this means of catching the signals when hospital rules forbade his having an outdoor aerial erected.



Radio as a medicine. Above, Lester Pickler of San Diego, with his vacuum tube set. Below, Traffic Officer Jim Flynn of Newark, N. J., and his crystal set.

NEED OF ESPERANTO.
"One of our greatest hopes," said Nally, "is the establishment of an international radio language or code, like Esperanto, which could be understood by all. This would place the activities of the whole world at everybody's ears."

"There is no reason why every American school house should not have a simple wireless apparatus to enable teacher and pupils to listen to what the rest of the world is doing."

Esperanto, the proposed language by which this world-wide communication may be made possible, has already been accepted by many countries as the language of the world. It was composed by Dr. L. L. Zamenhof, the Russian linguist, in 1887.

Since then Esperanto has spread in popularity until now, Brazil, Czechoslovakia, Russia, Finland and important parts of other countries have introduced the language in their schools. The Paris Chamber of Commerce is carrying on a campaign for the adoption of Esperanto by all the world's commercial bodies as the official commercial language of the world.

ARGUMENT STRENGTHENED.
The chief argument for Esperanto as the international language is being strengthened through the popularity of radio the world over. It is thought that this will draw humanity closer together by a single medium of intercommunication.

With the rapid progress made in the development of radio as a world-wide means of communication, the need of such language as Esperanto becomes more apparent.

SCIENTIST SEES RADIO PRIVATE AS TELEPHONE

(By NEA Service)

ROCHESTER, April 28.—Talking by radio may become as private as talking by line telephone.

Earl C. Karker, instructor at the University of Rochester, says it is possible. He has already worked out a method of guiding short wave lengths.

Scientists are trying further to give radio waves a sense of direction that will keep hit-and-miss radiation out of the air. If they succeed, private radio conversation will be possible.

STILL INEFFICIENT.
"Radio transmission," says Karker, "even at best is still a very inefficient system of communication because it lacks directional properties. Radiation occurs practically in all directions."

"Someone soon will undoubtedly evolve a means of directing these waves in a beam similar to the effect produced by using a reflector with a source of light. By this means, the entire energy of the light may be directed without great decrease in intensity in a given direction for a considerable distance."

"Radio transmission by such a device will be accomplished with much less expenditure of energy."

"Antennae are directional to some extent. But nothing much has yet been done in the way of reflecting radio waves. Of course, the magnitude of the reflector would have to be enormous if we keep on using the same wave lengths that we use now."

SUGGESTS REFLECTOR.
"But may it not become possible by the use of a reflector to produce sufficient radiation in a given direction at a much shorter wave length?"

"One can now reflect short radio waves by merely placing a metallic



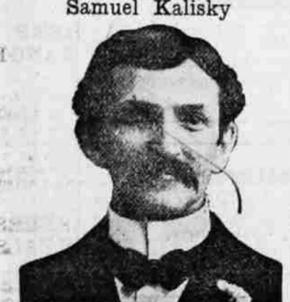
EARL C. KARKER, reflector behind them. I have done it. "The waves are sent out in parallel beams, caught by a similar reflector and brought to a focus with a corresponding increase in energy at the focal point."

Sounds easy.

"Some day," adds Karker, "the large transmitting and receiving stations may find that it works out just as easy as it sounds."

RADIO PRIMER

CAPACITY—The ability of an electrical circuit or apparatus to store up electricity. The practical unit for measuring capacity is a farad. But radio capacity is so low that it is measured by the micro-farad, a millionth part of a farad.



Samuel Kalisky

Vim, Vigor, Vitality and Red Blood FOLLOW THIS ADVICE

Los Angeles, Cal.—"I will gladly tell of the relief Dr. Pierce's Golden Medical Discovery gave me. I was sick with troubles of stomach, liver, etc., and La Grippe with all its attending ailments. When all else failed Dr. Pierce's Golden Medical Discovery did the good work. I also took Dr. Pierce's Pleasant Pellets for biliousness, with grand success. I write with gratitude to tell others of the relief that is in store for them. Do not delay but hasten to get the above mentioned remedies if suffering from similar indisposition."—Samuel Kalisky, 978 Euclid Avenue.

Obtain this "Discovery" of Dr. Pierce's in tablets or liquid at your nearest drug store and you'll quickly find that it builds you up, beside curing your distress.

Write Dr. Pierce's Invalids' Hotel, Buffalo, N. Y., for free medical advice. Send 10c for trial package tablets. Advertisement.

POPE ASKS PRAYERS FOR GENOA SUCCESS

International News Service.

ROME, April 29.—Pope Pius XI tonight invited the prayers of the world for the success of the Genoa conference and the establishment of world peace.

If failure attends the efforts that are being made toward the peace of the world, then the vision ahead is one of general ruin, his holiness stated in a letter dealing with the Genoa conference, addressed to Cardinal Gasparri, the papal secretary of state.

The holy father stated he had been following the work of the statesmen at Genoa "with trepidation" but was happy to learn that the premiers were surmounting the obstacles in their way. He expressed the hope that each delegation would sense its responsibility at Genoa and establish world peace, "otherwise the vision" is one

BODY OF PASTOR IS FOUND IN RIVER

PEORIA, Ill., April 28.—The body of the Rev. W. J. Leach, missing pastor of the Averyville Presbyterian church was found this morning by a fisherman on the Tazewell county shore of the Illinois river.

The body was wedged between the willows.

The body was found two and one-half miles south of the upper free bridge where the minister was last seen on the night of his disappearance.

The Rev. Leach disappeared on April 2, after conducting Lenten services of the Averyville church.

NEWSPAPER PAYROLL OF \$4400 IS STOLEN

SEATTLE, Wash., April 29.—Two unmasked bandits today held up Frank Webster, office manager, and

WILMA MEYER, CASHIER OF THE SEATTLE STAR, AN AFTERNOON NEWSPAPER, AS THEY DESCENDED FROM AN AUTOMOBILE WITH THE NEWSPAPER'S WEEKLY PAYROLL FUND, SECURED THE ENTIRE FUND OF \$4400 AND ESCAPED IN A WAITING AUTOMOBILE.

The tomato was once known as the love apple.

LEAGUE EXECUTIVE COUNCIL WILL MEET

GENEVA, April 29.—The executive council of the league of nations will meet here on May 11, regardless of

Have You Tasted Divinity Fudge?

Here's a candy we make every day. Soft, creamy divinity fudge. Soft enough to cut with a case knife. Filled with dried cherry bits and wafer meats. Quite fluffy, so the pound is a bagful. Fresh every day. Pound \$1.00

A Handy Package Good Stationery

Sometimes we grow tired of a whole box of stationery of the same style, color and size. Here is a package of 10 different styles and 10 envelopes. In a heavy envelope. Good paper and every sheet of different shape and size. Package \$1.00

Freshen Up Your Frock of Last Year

Most any suit, and surely a dress, may be brightened and made to appear new by the addition of one of the new lar and cuff sets. They are made of imported gingham, washable, and easy to buy in the assortment.

Gingham Frocks \$4.95

A Special Event for Tomorrow Dresses of Imported Gingham

The whole story is quickly told in our corner window. Have a look today. Here are dresses of imported gingham—embellished with sash, or collars and cuffs of French organdie in contrasting colors. Dresses for smart afternoon wear—for the street. Tub proof and sun proof. So clean and fresh.

The selling is to begin at 10 in the morning. None sold before that time. None on approval. Only \$4.95.

Silk Dresses \$14.95

This sale of dresses at \$14.95 has been a pleasure to many women. Dozens of dresses of silk, taffeta and other silken fabrics have gone out at this low price, and still there will be good choosing tomorrow. Dresses for afternoons, for evenings and for the street. All bright new styles. \$14.95

