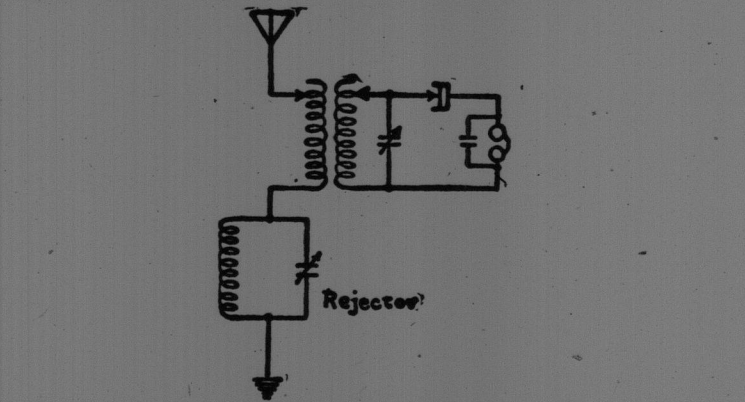


## FIFTEEN MINUTES OF RADIO EACH DAY

By Edward N. Davis  
Formerly Technical Electrical Expert For U. S. Government

Lesson No. 144.  
THE REJECTOR OR RADIO FREQUENCY TRAP.  
In localities where there are numerous transmitting stations, receiving stations frequently have difficulty in routing signals from distant stations when nearby spark stations are in operation. Local interference of this kind can often be reduced and sometimes entirely eliminated by means of a device known as the "radio frequency trap," the "absorption circuit," the "rejector circuit," as it is variously called. In a simple form this device consists of an inductance and capacity in shunt, forming an oscillating circuit, with arrangement for varying either the value of inductance or capacity so that the device may be adjusted to the frequency of the incoming signals.



The diagram shows how the rejector circuit is often connected in the antenna circuit of the standard form of receiving circuit. In order to reduce the interference from the disturbing station the absorption circuit is tuned until the signals from the unwanted station are eliminated or greatly reduced. The receiving circuit is then tuned so that the desired station is heard at the maximum intensity.

In actual practice the rejector circuit is often made with a fixed condenser of proper size for the wave length to be eliminated, and only a few turns of heavy wire or copper bar wound in helical form with a sliding contact. Best results are obtained with this device when capacity rather than inductance predominates in the oscillating circuit which constitutes the rejector circuit. Excellent results are obtained, however, by employing a coil of fixed inductance shunted by a variable condenser of the common air dielectric type.

When interference from nearby alternating current power lines is experienced in the receiving set, employment of the rejector circuit will usually reduce this source of annoyance to a minimum. It will be noted from the diagram that the oscillating circuit of the rejector circuit is connected directly in the ground lead of the receiving system, but the device is not placed in inductive relation to any other parts of the receiving circuit. If reception is attempted on the same wave length as the interfering station, it is obvious that there is no means of separating the two signals, but good results are obtained with the rejector circuit when the signals are on wave lengths only a few meters apart. If the signal from the interfering station is very strong and the wave is broadly tuned with no sharply defined resonant point on the receiving set, it may be impossible to entirely eliminate the interference, but the intensity of the disturbing signals can usually be greatly reduced.

The rejector or absorption circuit is simple to operate, having only one variable element and lends itself readily to use by the radio experimenter of limited experience and limited means. It is sometimes possible to employ a standard wave meter which consists of an oscillating circuit similar to the rejector circuit for this purpose, and since the wave meter is not in use continuously it is convenient to employ it for this purpose. Use of the wave meter as an absorption circuit facilitates the adjustment to the wave length of the interfering station since the wave meter is usually calibrated to read directly the wave length of the particular adjustment. (All Rights Reserved by United Feature Syndicate. Reproduction Prohibited)

Lesson No. 145.  
TROUBLE HUNTING IN RECEIVING SETS.

As long as the receiving set continues to function in a satisfactory manner the amateur with little or no difficulty in getting signals with the average modern simplified receiver, but often, when for some unknown reason the set suddenly stops functioning, he is at a loss as to where to look for the trouble and how to remedy it, when the fault is found.

One of the most common places for open circuits is in the flexible cord attached to the telephone receivers. These cords are constantly being twisted and bent so that it is not an infrequent occurrence for the wires to break at some point, usually near the tips. Such condition is made evident by intermittent signals in the telephone receivers when the cord is shaken or a series of clicks similar to static may be heard. The remedy is a new cord, since it is useless to repair a broken cord which is weakened by constant usage.

Another common source of trouble evidenced by intermittent signals lies in the "pig-tail" connections often made to moving coils such as the rotors of variometers and variocouplers. This condition is usually apparent when the knob controlling the coil is rotated, and the remedy is to replace the "pig-tail" with a new lead. Variometers in which the bearings are relied upon to conduct the energy from the moving coil to the rest of the circuit are often troublesome, since the bearing is either too tight to turn readily or too loose to make good electrical contact. It is better to put stops on the coil and use flexible leads to the rotor.

Aerial connections, unless soldered, may become corroded and offer great resistance to the flow of radio frequency currents, especially those of small amplitude such as received signals from distant stations. Ground connections also may become so corroded as to form a source of annoyance.

Coils on which variable contact is made by means of sliders are sometimes rendered inoperative by dust accumulating on the path over which the slider moves so that imperfect contact is made with the wire. Little trouble is experienced with switch contacts except in cases where the set has been standing idle for months and the switch contacts may become sufficiently corroded to form imperfect contact.

Opens in the tuning coils themselves may be detected by means of a buzzer, dry coil and telephone receiver, no signal being heard through the coil if it is open circuited.

A short circuit in a fixed or variable condenser may be detected by means of a dry coil and telephone receiver. A loud click will be heard when the coil and receiver are connected across a short circuited condenser. The absence of a good strong click when the telephone and dry coil are connected across an amplifying transformer winding indicates that the winding is open.

The only reliable way to test "B" batteries to ascertain if they are still capable of rendering good service is by means of a voltmeter. New coils will show a spark when the two terminals are touched together, but older coils have been found serviceable long after a spark could no longer be obtained, and short circuiting the battery shortens its life, so this method is not recommended. (All Rights Reserved by United Feature Syndicate. Reproduction Prohibited)

**MEXICO DESIRES INVITATION TO PAN-AMERICAN CONGRESS**  
Mexico City, Oct. 19.—(Associated Press, by Mail).—Participation of Mexico in the Pan-American Congress in Santiago, Chile, next March which is still in doubt, has given rise to much editorial comment here, the consensus of opinion being that if Mexico is not invited to the conference she will send herself readily to a Pan-American league of nations as recently suggested by President Brum of Uruguay. There is in the editorial an undercurrent of pique and hurt pride, however, that Mexican participation is even in question. El Universal recently stated that "if Mexico is not present at Santiago, the congress will not have full significance and will serve to create a feud between Spanish-America and Washington." The newspaper says it believes the Latin countries will eventually demand that Mexico be admitted as an equal.

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Paying from \$30 to \$45 a month and living, while in training.  
McLean Hospital Training School for Nurses offers a three years' course in the care and treatment of nervous and mental diseases, with affiliations that also offer training in medical, surgical and obstetrical work. Instruction consists of lectures and practical work on the wards. Board, room and laundry are furnished and an allowance of \$30 per month for the first and second years, and \$45 per month for the third year. This course is open to young women who have had 4 years or equivalent in high school. Entrance January and September. For information apply at once to  
MISS HELEN C. SINCLAIR, R.N., Supt. of Training School, Waverley, Massachusetts.

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Most Women of the present day would feel lost without a Wrist Watch. They are sensible, useful and extremely ornamental.  
See our "Ferguson & Page" Special.  
Best Goldfilled Cases and Bracelets, - - \$20.00  
10-K Gold Cases and Bracelets, - - \$33.00  
14-K Gold Cases and Bracelets, - - \$44.00

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## RECENT DEATHS

**James Morrissey.**  
The death occurred at the General Public Hospital yesterday, of James Morrissey at the age of fifty-six. The late Mr. Morrissey served with distinction in the South African war and in the Great War. He was a member of the Royal Horse Artillery in South Africa and regimental quartermaster-sergeant of the Royal Canadian Garrison Artillery during the Great War, later he was transferred to the Royal Canadian Military Police. He leaves one daughter to mourn.

**Mrs. George Stange.**  
Word was received in the city yesterday of the death of Mrs. George Stange in the Notre Dame Hospital, Montreal. She is survived by one daughter, Miss Ruby Stange, of this city, and one son, Leonard, of Maine.

**David Moore.**  
Miss Elizabeth F. Moore, 125 Rotheray avenue, received a telegram yesterday from Peabody (Mass.), announcing the death there, on Wednesday, of her uncle, David Moore, aged over eighty years. The late Mr. Moore was a former resident of Waterloo street, St. John, and well known here in his younger days. He was a baker and worked for Shaw and Rankins.

He moved to Peabody about fifty years ago and followed his occupation there. He was brother of the late Benjamin Moore. He is survived by one sister, Miss Elizabeth Moore, of Peabody, and other relatives there and in Massachusetts, and several nephews and nieces, among whom are Miss Elizabeth Moore, Roxbury avenue, and Andrew Moore, 85 St. James street. Andrew T. Moore, of the post office staff, is a cousin. The body arrived on the Boston train at noon today.

## MORNING NEWS OVER THE WIRES

**Captain Angus Walters of the champion fishing schooner Bluebird** replied last evening to a challenge from Captain Henry Larkin of the schooner Mayflower. In his telegram to the captain of the Mayflower, Captain Walters suggests a race from Newfoundland to Turk's Island, West Indies, and return, with cargo both ways, the stakes to be a \$10,000 side bet.

It is said to be conclusively settled that Canada will have a representative in Washington to deal directly with the United States consuls. The sending of the minister will be held up pending the result of the British general elections.

**Geneva, Nov. 2.**—The council of the International Labor Bureau concluded its sessions yesterday. The council unanimously re-elected Arthur Fontaine, France, president and M. Carlier, Belgium, and Yan Oudegroot, Holland, vice-president. The two latter are respectively representatives of the employers and workers. A tribute was paid to Albert Thomas, director general of the international labor organization.

**FUNERAL YESTERDAY.**  
The body of Mrs. Annie Buckley was taken to Sussex yesterday morning at 7.10. Rev. Father Hannigan celebrated requiem high mass. Interment was at Ward Creek.

**ENGAGEMENT.**  
Moncton Transcript.—Mrs. Albany E. Bourque of Fox Creek, announces the engagement of her daughter, Marie Lorraine LeBlanc to Harold Harvey LeBlanc of Leger Corner, the marriage to take place in the near future.

**MAURETANIA IN NEW RECORD ACROSS OCEAN**  
New York, Nov. 4.—The Mauretania, which arrived yesterday, broke the speed record between Cherbourg

Stores open 8.30 a.m. Close 6 p.m. Saturday 10 p.m. Phone Main 2400.

## Sale of Goods That Are Much Wanted Just Now

## Plaid Back Coat Cloths

FOR LADIES' AND MISSES' COATS  
Having secured the surplus stock from a manufacturer of these Plaid Back Coat Cloths at a Special Price, we will offer them on TUESDAY MORNING at a very low price. 56 to 58 inches wide—  
**\$3.15 a Yard**

These are all FRESH NEW CLOTHS direct from the mill. The colors are dark brown heather, dark grey heather and dark green heather.  
Don't fail to arrive early TUESDAY MORNING, as many are waiting to secure these Plaid Back Cloths. Sale in Wool Dress Goods Dept. No samples given.

## We Offer The Following Suggestions

**Ribbons**  
For Girdles and Dress Trimmings  
Wide brocaded ribbons, two tone. Picot Edge and Velvet ribbons, all popular shades.  
**Ribbons for Millinery**  
All kinds of Ribbons are in use. Wide Moire and Gros Grain are especially favorable.  
**Hair Ribbons**  
at reduced prices 45c., 65c., 75c. yd.  
Wide Taffet and Moire Ribbons, Special, 50c. yd.  
**For Longerie**  
Ribbons in the better grades of heavy satin or double faced two tone and brocaded patterns, in all widths; also Cash's Cambric Wash Ribbons.  
**Xmas Ribbons**  
Narrow Ribbons for tying gifts in Yuletide. Mistletoe, Poinsetta and Holly Red—put up in bunches and bolts.

RIBBON NOVELTIES IN BAGS, SHOE TREES, COAT HANGERS, GARTERS, Etc. Ribbon Department, - - - - - Annex

November Clearing Sale of MEN'S OVERCOATS Clothing Dept.  
Enquire about the Unusual Opportunity to Buy a Hoover Vacuum Suction Sweeper  
Early November Sale of MEN'S COLORED SHIRTS, Men's Furnishing Dept.

**Manchester Robertson Allison Limited**  
KING STREET GERMAIN STREET MARKET SQUARE

## DELAY COSTLY TO THESE PATIENTS

A recent review of 519 cases of cancer treated at the Massachusetts General Hospital developed the fact that an average of five months and twelve days had elapsed between the time the patient first noticed the disease until he consulted a physician. An average of another three months had passed between the time the patient first visited the physician until the physician advised radical procedure. Therefore, eight and one-half months of valuable time had been lost with the result that a heavy percentage of these patients will die.

**FUTURE AVIATION.**  
The American Society for the Control of Cancer, New York, is making a nation-wide and persistent campaign not only to inform the public as to the initial symptoms of cancer, but to impress physicians generally with the necessity of a speedy and accurate diagnosis that surgical or medical relief may be immediately obtained. The wide distribution of its literature has already saved an enormous number of lives.

The Executive Committee of the Society has fixed the week on November 12th next as "National Cancer Week," when it will attempt to reach even more persons with cancer facts than it did during the cancer week of last autumn. Informative information on that occasion was supplied to over 10,000,000 people.

**ARTIFICIAL EYELASHES ADORN PARISIAN WOMEN**  
Paris, Oct. 12.—(Associated Press, by Mail).—A superb set of silk eyelashes, secure for all time and impervious to loss through laughter or tears, may be had in Paris for a price, or rather two prices, the cost in francs charged for the operation and the pain which this operation entails.

There are Parisian women who gladly pay both. The lashes are sewn into the edges of the lids by a deft surgeon, and take root there after about twenty days. Seen close at hand, they show no scar or rim around the lid to betray the surgeon's touches.

Flying for business and pleasure, achieving greater safety, will be popular. On account of their rapidity of flight aircraft should become invaluable in business. In Canada they will be in a position to facilitate colonization. At present settlement in many regions is awaiting the railway and the good automobile roads.

At a meeting of the buildings committee of the school board yesterday afternoon the chief matter of business was the awarding of the contract for installing a new furnace in Aberdeen school to H. B. Weatherhead. Aberdeen school has had two furnaces, only one of which is required to heat the building, except in the colder weather of mid-winter. One of the two furnaces is completely worn out and has had to be replaced. No trouble has been reported but the new furnace was a necessity as a preparation for severe weather. The furnace now in use is comparatively new.

J. A. Manson, representative of the National Cash Register Company, is in the General Public Hospital as a result of an injury to his eye sustained in a game of volleyball.

**Use the Want Ad. Way**

## Do Your Tuesday's Shopping at the London House

The \$20,000.00 November Drive and Business Campaign Continues For 5 More Days

The campaign idea is simply this: "If we can sell twice as much merchandise in a given time it can be done at half the expense."  
Tuesday will have most interesting specials.  
THERE WILL BE ON TUESDAY—  
A sale of lovely Fur Trimmed Coats  
A sale of Model Coats  
A sale of Canton Dresses  
A sale of Tricotine Dresses  
A sale of Children's Coats  
A sale of Thousand Yards Dress Goods  
A sale of Curtain Materials  
A sale of Women's Underwear  
Besides these, every department is offering November Drive Bargains for Tuesday.

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F. W. DANIEL & CO. HEAD OF KING ST.

## Amdur's Bargain Bulletin No. 25

TUESDAY MORNING 9 to 11 O'clock

MEN'S TROUSERS Fifty Only

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