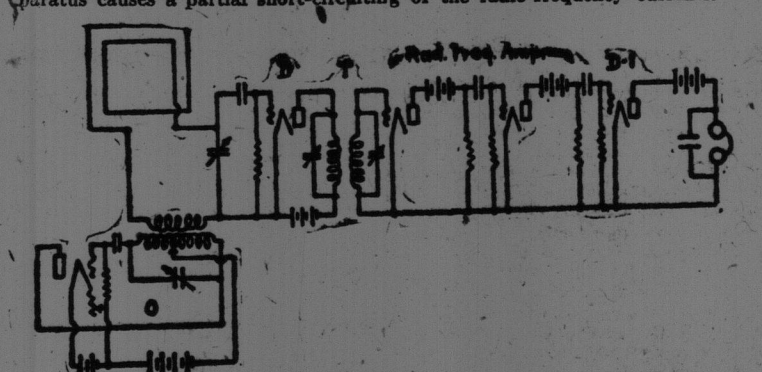


FIFTEEN MINUTES OF RADIO EACH DAY

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

Lesson No. 154. SUPER-HETERODYNE RECEPTION.

Radio-frequency amplification, that is, amplification of the received radio signals before they have been subjected to rectification, has several decided advantages over audio-frequency amplification, which consists in magnifying the signals after they have been converted into oscillations having an audible frequency. One of these advantages is due to the fact that tube noises and other disturbances resulting from current variations are not magnified as greatly in circuits employing radio-frequency amplification.



To compensate for the limitations attendant on radio-frequency amplification, when used with high frequencies, E. H. Armstrong has originated a method of amplification known as the Super-Heterodyne. In this method, a local oscillation is combined with the received oscillation and "beats" are produced which have a frequency below that of the received oscillation but of a frequency above audibility. The beating oscillation thus produced is then rectified after which it is amplified through two or more stages of amplification and finally the amplified oscillation is rectified and impressed upon the receiving telephone with consequent reproduction of the tones of music or speech which originated at the transmitting station.

Three Looks At Discounts In Black Fur



PONY AND LYNX—Buying before the rise lets you sell a Coat you must give \$125 for anywhere—\$75. Forty-five inches of shining Russian Pony with the correct wave and unrivaled wear. Large shawl collar of deep brown Australian Lynx that keeps its full charm, however wrapped. Cuffs to match. Convertible pull through belt. Here only \$75.

ELECTRIC SEAL, the perfect "double" of Hudson that's half the cost. Black Skunk shawl collar and flared bell cuffs. Forty inches long, convertible belt, crocheted inset buttons and a lining of Satin with pale blue roses on Californian gold. A \$240 value for \$215.

Another among hundreds is an Electric Seal Sport Coat similarly trimmed with grey Opossum from Australia, \$135.

H. Mont Jones
EXCLUSIVE FUR DESIGNERS
92 King Street.

LILY BOWLS

Flower Centres and Salad Bowls in English Crown Ducal Ware.
New Designs and Colorings.

W. H. HAYWARD CO.
LIMITED
85 to 93 PRINCESS STREET

The Store of **DYKEMAN'S** Complete Satisfaction

Important Announcement To Misses

FLANNEL AND HOMESPUN FROCKS

The Leading Utility Dress shown by all the important fashion centres.

Flannel Homespuns

In splendid color combinations

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\$7.75 each \$6.75 each

On Sale Today. See the Show Window.

F. A. DYKEMAN & CO.

The accompanying diagram, in which filament battery connections have been omitted for simplicity shows the arrangement of circuits for the Super-Heterodyne method of reception. The circuit for the production of the local oscillation is shown at (O) and is so adjusted that the locally generated oscillation, when combined with the frequency of the incoming signal, produces a "beat" frequency substantially above audibility.

For example, if the incoming oscillation has a frequency of 1,000,000 cycles per second (corresponding to a wave length of 300 meters) and the heterodyne is adjusted to 1,000,000 cycles per second, a "beat" frequency of 50,000 cycles per second will be produced.

The combined currents of the 1,000,000 cycles and the 1,050,000 cycles are then rectified by the rectifier (R) and produce in the primary of the transformer (T) a direct current with a superimposed 50,000 cycle component. The primary and secondary of the oscillation transformer (T) are tuned to 50,000 cycles and the 50,000 cycles current is amplified through the successive stages of resistance coupled radio-frequency amplification and the resultant amplified current is rectified by the detector (D-1).

Due to the fact that the received oscillation, modulated at the transmitting station by music or speech, retains this modulation through the various stages of amplification, the detector (D-1) by rectifying the modulated 50,000 cycle oscillation causes a modulated direct current to flow through the telephone receivers and thus reproduce the original tones of music or speech.

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RECENT DEATHS

Mrs. Mary A. Taylor.

Bangor Commercial.—The body of Mrs. Mary A. Taylor, widow of Xenophon Taylor, was brought to Lincoln for burial on Sunday. She passed away at the home of her daughter, Mrs. Fred Harrison in Hampton, N. H., where she had made her home for the last four years. Mrs. Taylor was for many years a resident of Lincoln, coming here from New Brunswick. She was born in Sussex, N. B., in 1834. In 1859, she married Xenophon Taylor. Eight children were born to them, only four of whom are living: Howard D. of Somerville, Mass.; Brunswick M. of Fairfield, Me.; Henrietta M. of Norway, Me., and Mrs. Harrison.

Daniel Newman.

The death of Daniel Newman, an old and respected citizen, occurred at his home, 119 Guilford street, West End, yesterday. The late Mr. Newman was in eighty-four years old and leaves to

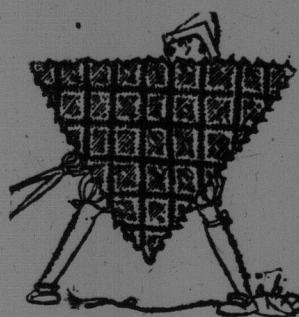


Stores open 8.30 a.m., Close 6 p.m.,
Saturday 10 p.m. Phone Main 2400.

SALE OF Winter Coat Cloths ON WEDNESDAY

If you're needing a winter coat be sure and take advantage of this unusual offer.

This timely sale provides you a great opportunity to secure a very desirable cloth at an exceptionally low price.



Soft Wool Coat Cloths in the Fashionable Heather Effects, with Invisible Overchecks, 57 in. wide \$2.19 yd.

Showing in grey, brown and green heather mixtures.

Sale commences 8.30 a.m.

(Dress Goods Dept., ground floor.)

This is The Last Week of The Hoover Drive

During this drive the small sum of \$4.75 will secure a "Hoover" for you and have it placed in your home. The balance of the purchase price is payable in small sums each month for a short time.

Why not place your order for Christmas while this special easy term offer prevails?

The Hoover is the only electric Suction Sweeper that beats—as it sweeps—as it suction cleans.

Phone 2400 and ask for "The Hoover Man."

(Carpet Dept., Germain street entrance.)

Manchester Robertson Allison Limited
KING STREET GERMAIN STREET MARKET SQUARE

Comfy Shoes

that feel so good and alleviate that tired feeling.
These Women's Shoes are made of fine soft kid with a roomy, yet graceful toe, and medium high heel.

5.50

ANOTHER STYLE
in fine soft kid, made Blucher Pattern with patent toe caps and flexible turn soles.

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ANOTHER STYLE
made similar excepting that they have plain broad toes and flexible elk leather soles and rubber heels.

4.50

Let us demonstrate how comfortable these are.

McROBBIE
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Purity Frost Kist bars, 5 cents at all Purity Ice Cream Dealers. 11-16

REFUTES IDEA OF EXTRAVAGANCE OF NEW YORKERS

One of Every Four of Population Has Money in the Bank.

New York, Nov. 11.—(A. P. by mail.)—The popular idea that the term "New Yorker" is synonymous with prodigality in expenditures for unimportant things, extravagance in dress and style of living and outlay for bright light amusements, is refuted by some significant figures just compiled by the Merchants' Association.

On July 1, 1922, the savings banks of New York held on deposit \$2,069,779,824.85, representing accounts of 1,680,625 depositors or more than one out of every four of the entire population.

"These figures," said the statement, "are as significant relatively as positively. They prove that the habit of thrift among the wage earners in the city has grown enormously during the last twenty-five years."

"In 1907 the books of the New York savings banks showed deposits to a total of \$229,907,247.75. The actual deposits in that period have therefore multiplied almost four times. Within the same period the number of de-

positors has increased from 1,222,366. It is true that the increase in numbers of accounts is not commensurate with the increase in population, but a significant fact appears in the per capita comparison. The depositors of 1897 showed an average savings account of \$432.51, while the depositors of today show an average savings deposit of \$1,261.65.

"Those who analyze the significance of figures may draw various deductions of interest from these remarkable showings which are newly assembled, but any argument tending to show that new Yorkers in general are a wasteful lot would have some difficulty in maintaining itself unchallenged."

PROHIBITIONISTS TO PUSH CAMPAIGN IN SCOTLAND

London, Oct. 12.—(By Mail.)—"The London Daily Telegraph" reports that indications were clear at the annual meetings of the Scottish Temperance and No-License Union in Glasgow that renewed and stronger efforts to turn Scotland "dry" would be made in view of the forthcoming local veto polls next year. It was declared that the last polls showed that a majority of Scotsmen were not in favor of the drink traffic, and that what the temperance party needed, was organization. The union of all the temperance forces in Scotland under one control was advocated.

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At \$3.50 - \$3.98 - \$4.98

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The biggest bargain ever offered in Blouses, comprising numerous styles especially made for our November Sale, together with all odd Fall lines taken from regular stock and reduced to less than half-price for quick selling. Both overblouses and tuck-ins.

All are New Fresh Blouses in late Fall styles and make ideal Xmas Gifts. See Window Display.

The Best Blouse Bargain this Fall!

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Blouses and Lingerie

81 King Street

Amdur's Bargain Bulletin No. 32

WEDNESDAY—ALL DAY

An exceptional attraction in

Men's Sox —AND— Sweaters

Men's Work Sox—Warm and long wearing 19c pair

Men's Sox—Pure wool and of high grade 29c pair

These sox have just come from the manufacturer and are a phenomenal offer.

Men's Sweaters—All wool. \$1.25

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THEY'RE VERY SMART

Particularly new styles in
Tricotine and
Poiret Twill
Dresses

Exceptionally well made frocks of quite the youthful stamp in style and a surprise at their price. There are many new touches of trimming or a bit of color that is quite refreshing. One smart little dress has bright color wool embroidery.



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