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RADIO  
MAGAZINE

# The Daily News

EVERY  
MONDAY

MONDAY, JULY 14, 1924

## RADIO SHOW PLANNED FOR S. F.

### MERRY BUFFOON BAND TO PLAY OVER KGO



#### Gala Parade To Open Big Radio Show

The second annual Pacific Radio Exposition, to be held in the Civic Auditorium, Aug. 16 to 21, inclusive, under the direction of the Pacific Radio Trade Ass'n, will be launched with a street parade on the opening day. This was announced today by William P. Bear, recently appointed manager of the show.

Present plans are for a parade of more than 100 vehicles, many of them equipped with radio apparatus, and including United States army and navy apparatus.

A score of other features which will be on display were announced, among them being: complete 10-watt transmitter for C. W. & Voice, complete line of receiving sets including many super-heterodynes; booth by U. S. Radio Inspector; three U. S. Navy transmitters; display by S. F. Radio Club, Inc.; display by Department of Electricity; exhibition of actual manufacturing processes; educational lectures; coil winding machines in operation; storage battery exhibits; Best's super-heterodyne; sets wired and assembled daily; model radio home for four rooms, etc.

In addition an elaborate entertainment, including music, dancing, special lighting effects and stage settings is being arranged.

More than 100,000 persons including leading members of the trade from throughout the country are expected to visit the show.

#### Watch B Batteries

To avoid waste, use only the size B battery that you need for the set. To tap off the required voltage from a larger battery is waste, because the life of the unused cells also is shortened.

#### Pick Radio Plays

Station WGY is preparing a treat of 12 radio dramas for its listeners. They were picked from the 300 plays submitted in its drama contest recently.

The Musical Buffoons of Lawrence Swalley and Co. have been entertaining radio fans in this vicinity with their liting airs. They play over KGO tonight. They are, from left to right: Albert Stein, cornet; Harry Elliott, banjo and guitar; George Smith, saxophone; Frank Gron, drums; Lawrence Swalley, director, and Frank Snodgrass, piano and saxophone.

#### Suit to Protect Radio Buyers

Charged with using fraudulent and misleading advertising, George Modell, operator of a chain of retail radio stores in New York City, was haled before Judge Frothingham in the magistrate's court in White-st, New York, this week.

Modell was accused of selling a customer a cut-rate amplifying transformer, represented to be an Acme transformer, almost an exact duplicate of the famous Acme transformer which is distinctive in design and appearance from any other.

So far as known, this is the first case of its kind in the radio business to come before a New York court. This effort to protect radio buyers from unscrupulous dealers and fraudulently advertised apparatus illustrates that there is probably no business today in which the buyer can be fooled so easily as in radio.

The outcome of this case will be watched with interest, and it doubtless will tend to raise standards in the retailing of radio products.

#### FAN'S CHART

THERE are four classes of broadcasting stations in the United States.

Class A—Those having less than 500 watts power and assigned wavelengths up to 300 meters.

Class B—Those transmitting on 500 to 1000 watts or more, limited to definite wavelengths and to a high grade of programs.

Class C—Stations of Class A kind that transmitted on 360 meters before the classification came into use.

Class D—Experimental broadcasting stations for radio manufacturers.

#### Wireless in China

Hongkong has two broadcasting stations, but both are weak and do limited broadcasting. One, however, is planning a 1000-watt transmitting set for broadcasting vocal and instrumental music, besides news, weather and shipping reports.

#### Each Radio Set Serves 7 Fans

In the accumulation of letters and postcards received at KGO radio listeners, responding to a request by Howard L. Milholland, studio manager and announcer "HM," it has been found that an average of seven persons are depending upon each receiving set for reception of the KGO Sunday programs. Milholland said today that several letters report as many as 20 and more around a single receiving set, and a whole congregation assembled in a church received a sermon by radio. "I have just returned from church," writes Rev. Frank J. Bradley, pastor of the M. E. Church at El Cerrito, Cal. "We heard the services from the Oakland First M. E. Church through KGO. My congregation enjoyed the service very much. We used a receiving set built by a local electrician. On behalf of our people I desire to thank KGO for the service."

American Radio Relay League is checking up amateur radio conditions in foreign countries.

#### Radio Helps to Entertain British Fleet

The first welcome of San Francisco to the British fleet reached the ears of John Bull's tars over radio.

The final word of goodbye and "bon voyage" floated to them over the ether wave.

In between, special radio programs of speeches and tunes with an English, Scotch, Irish and Canadian flavor played a large part in the great success which attended the city's reception to the visitors during their four-day stay.

The radio welcome to the visiting armada was in sharp contrast to panoply of marching men, waving flags and glittering display which distinguished the official shoreside greeting.

The quiet, cheerful voice of Robert Newton Lynch, president of the Chamber of Commerce, broadcast over Station KPO, carried San Francisco's welcome to the fleet long before the visitors came within sight of the Golden Gate last Monday.

"San Francisco appreciates the honor extended to her of welcoming the British Special Service Squadron on behalf of Uncle Sam," he said. "It is indeed a signal honor that of all American ports, San Francisco is one to be visited by the British fleet."

"The coming of the British warships has a profound meaning. These ships, side by side with their American sister ships in the waters of San Francisco bay, stand not for war and uncivilized atrocities, but for the preservation of Anglo-Saxon ideals."

While the British fleet toured the Pacific waters, programs were heard from Stations KGO and KPO, and the tars proved they knew the latest American jazz hits at the gala ball which was a feature of the entertainment provided for them.

#### Voting Popular

The most interesting part of the political conventions, to most radio fans, was the voting. Letters to Station KDKA, Pittsburgh, stated that there writers helped count the votes as they were announced.



## THIS WEEK'S AIR PROGRAMS

Monday, July 14

KPO—Hale Bros., San Francisco (423 Meters)

1 TO 2 P M—Rudy Seiger's Fairmont Hotel Orchestra.  
2:30 TO 3:30 P M—Violin solos, Romance; Serenade; Alicia O'Neill Rivas; Irene Chism, accompanist.  
Soprano solos (Russian group): Was I Not a Blade of Grass Upon the Plain? The Song of India; Katrina Malova.  
Piano solos, Rigoletto; Japanese Etude; Irene Chism.  
Soprano solos (American group): Dawn; Love Me; Katrina Malova.  
Violin solos, Liebesfreud; Chant Negre; Alicia O'Neill Rivas; Irene Chism, accompanist.  
4:30 TO 5:30 P M—Rudy Seiger's Fairmont Hotel Orchestra.  
5:30 TO 6:30 P M—Children's Hour. Stories by Big Brother of KPO, taken from the Book of Knowledge: Where Salt Comes From; Kate Barlass; Animals That Serve Man.  
Piano solos, C Sharp Minor Waltz; Arabesque; Fredericka Levin.  
7 TO 7:30 P M—Rudy Seiger's Fairmont Hotel Orchestra.  
8 TO 9 P M—Organ recital by Theodore J. Irwin, official organist at the Wurliitzer.  
March, Semper Fidelis; prelude, Tristan and Isolde; Minuet in G; Liebestraum No. 3 (by request); Funeral March of a Marionette; waltz, Summer Nights; Erotik (by request); Serenata, Masta Manana; light opera selection, Yeoman of the Guard; fox trot, Not Here, Not There.  
9 TO 10 P M—Bass solos, Give a Man a Horse He Can Ride (by request); The Big Bass Viol; Shipmates o' Mine; Harlan McCoy.  
Program arranged by Frances Dwight Woodbridge; W. F. Wenzel, accompanist.  
Soprano duet, Love Like the Dawn Came Stealing; Every Flower (from "Mme. Butterfly"); Frances Dwight Woodbridge, Lena Susulich.  
Soprano solos, The Nightingale Has a Lyre of Gold; I Bring You Heart-ease; Alma E. Vance (pupil of Frances Dwight Woodbridge).  
Piano solo, Improvment in A Flat; Walter Frank Wenzel.  
Duet, Night Hymn at Sea; Frances Dwight Woodbridge, soprano; Martha Jane Tackabury, contralto.  
Soprano, "Cavalleria Rusticana"; I Know of Two Bright Eyes; Lena Susulich.  
Contralto solos, Goin' Home; By the Waters of Minnetonka; Martha Jane Tackabury.  
Piano solos, Nocturnal Tangle; Watteau Paysage; Walter Frank Wenzel.  
Soprano solos, Tell Me Why (from "Lakme"); Musetta's Waltz Song (from "La Boheme"); Solveig's Song; Frances Dwight Woodbridge.  
Duet, Passage Ends Farewell; Frances Dwight Woodbridge, soprano; Martha Jane Tackabury, contralto.  
10 TO 11 P M—E. Max Bradfield's Versatile Band.

KGO—General Electric Co., Oakland (312 Meters)

1:30 P M—New York Stock Exchange and United States weather bureau reports.  
3 P M—An hour of music.  
4 TO 5:30 P M—Hotel St. Francis Dance Orchestra, San Francisco.  
6:45 P M—Final reading, stock exchange and weather reports, and news items.  
8 P M—Educational program, with musical numbers. Courses in agriculture, Spanish, music, economics and literature.  
KLX—Oakland Tribune (509 Meters)  
7 TO 7:30 P M—News items, United States weather bureau bulletin, market and financial news (except Sunday).  
Educational and musical program broadcast from Stephens Union Hall, at the University of California, over private leased wires through KLX.  
8 TO 10:20 P M—Elder Trio: Scott Elder, violinist; Miles Cutler, cellist, and Grace Jurgen, pianist. Selections.  
DISTANT STATIONS  
KGW—Oregonian, Portland (492 Meters)  
8 TO 10 P M—Concert by Miller's Merry-makers.  
KFI—E. C. Anthony, Inc., Los Angeles (469 Meters)  
8 TO 9 P M—Evening Herald-Radiolans Dance Orchestra.  
9 TO 10 P M—Examiner, Eurydiceum Music School.  
10 TO 11 P M—Ambassador Hotel-Cocanut Grove Orchestra.  
KHJ—Los Angeles Times (395 Meters)  
8 TO 10 P M—Special program presented through the courtesy of the Heilman Commercial Trust and Savings Bank, arranged by A. K. Berkland.  
KFOA—Rhodes Co., Seattle (455 Meters)  
8:30 P M—Myrtle Stewart and Florence Doty will give a program of solos and duets of new popular songs, ballads, etc. At their last appearance they were flooded with requests for songs and will endeavor to sing any and all requests. Write to Rhodes department store for requests.

Tuesday, July 15

KPO—Hale Bros., San Francisco (423 Meters)

12 NOON—Time signals; Scriptures.  
1 TO 2 P M—Rudy Seiger's Fairmont Hotel Orchestra.  
2:30 TO 3:30 P M—Organ recital by Theodore J. Irwin, official organist, at the Wurliitzer.  
Fox trot, Oriental Love Dreams; light opera selection, Mlle. Modiste; Valse Bluette; selection, Love Song of Olden Days; popular waltz song, Hula Dream Girl; march, Jersey Shore; song melody, For You a Rose; fox trot, Don't Mind the Rain.  
4:30 TO 5:30 P M—Rudy Seiger's Fairmont Hotel Orchestra.  
5:30 TO 6:30 P M—Children's Hour. Stories by Big Brother of KPO, taken from the Book of Knowledge: A Plant's Wonderful Secret; The Brave Young Doctor; The Goblins in the Gold Mine.  
7 TO 7:30 P M—Rudy Seiger's Fairmont Hotel Orchestra.  
8 TO 10 P M—Talk, "When East Meets West" by H. V. Kaltenborn, associate editor Brooklyn Eagle.  
Talk, "Public Speaking," by Prof. Leo Emerson Bassett, department of

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English, Stanford University.  
Talk, "Tribulations and Tribulations of Moving Picture Work From the Actor's Standpoint," by William Worthington, one of the directors of the Peninsula Studios at San Mateo.  
Mezzo-soprano solos, For You Alone; I Love the Moon; Lillian Tescher; Walter Frank Wenzel, accompanist.  
Baritone solos, On the Road to Mandalay; Mighty Lak' a Rose; A. J. Milligan.  
Program presented by Guatemala Imperial Marimba Band.  
Mezzo-soprano solos, I Love the Moon; Smilin' Through; Lillian Tescher; Walter Frank Wenzel, accompanist.  
Baritone solos, O Sole Mio; Down Deep Within the Cellar; A. J. Milligan.  
10 TO 11 P M—E. Max Bradfield's Versatile Band.

KGO—General Electric Co., Oakland (312 Meters)

1:30 P M—New York Stock Exchange and United States weather bureau reports.  
6:45 P M—Final reading, stock exchange and weather reports, and news items.  
8 TO 10 P M—Instrumental selection, Romance sans Paroles; Musaeus Trio; Natalie Levin, violin; Joziena Van der Ende, cello; Wilhelmina Wolhus, piano.  
Contralto solos, Friend o' Mine; The Sea; Eva Gruninger Atkinson.  
Baritone solos, To the Evening Star; Mattinata; Walter H. Bundy; Hjalmar Stromberg, accompanist.  
Cello solo, A pres le Reve; Joziena Van der Ende.  
Tenor solos, Duna; A Dream; Jack Sheean.  
Court scene from "Merchant of Venice," presented under the direction of Wilda Wilson Church.  
Instrumental selection, Orientale; Musaeus Trio.  
Baritone solos, Calm as the Night; The Night Has a Thousand Eyes; Walter Kliegel.  
Tenor solos, How Lovely Are Thy Dwellings; Absent; William Emery.  
Violin solo, Romance; Natalie Levin.  
Address, "The Imprisoned Splendor of Service," Rev. Harvey V. Miller.

KGO—General Electric Co., Oakland (312 Meters)

1:30 P M—New York Stock Exchange and United States weather bureau reports.  
3 P M—Short musical program. Speaker furnished through the courtesy of the Cora L. Williams Institute, Berkeley.  
6:45 P M—Final reading, stock exchange and weather reports, and news items.  
KLX—Oakland Tribune (509 Meters)  
3 TO 5 P M—Baseball.  
7 TO 7:30 P M—Financial news; weather.  
8 TO 10:20 P M—Studio program and music from the American Theater. The studio program is under the direction of Walter Horace Bundy. The program follows:  
Vocal selections, Macushla; Mother o' Mine; Herbert H. Robson, tenor.  
Vocal selection, Suicidio (from "La Gioconda"); Separazione (an old Italian song); Miss Corinne Keefer, contralto.  
Piano selections, Witch's Dance; To a Wild Rose; Miss Dorothy Edwards.  
Tenor solos, When I'm With You; Down Here; Leon A. Mills.  
Scotch songs, My Laddie; Ye Banks and Braes; Loch Lomond; Miss Maude Allen, mezzo-soprano.  
Violin solos, Canto Amoroso; Waltz No. 2; Miss Jeannette Ginter.  
Vocal selections, The Banjo Song; Smilin' Through; Miss Olive Harlow, contralto.  
Vocal duets, The Old Refrain; Somewhere a Voice Is Calling; Miss Keefer, Mr. Mills.  
Baritone solos, I'll Take You Home Again; Absent; Walter H. Bundy.  
Piano duet, Poet and Peasant; Ernest Boodt and Hjalmar Stromberg.  
Songs (to be announced), Miss Maude Allen, mezzo-soprano.  
Tenor solos, The Wanderer; My Sweet Repose; Herbert H. Robson.  
Contralto solos, Trees; Japanese Lullaby; Dreamin' Time; Miss Corinne Keefer.  
Piano selections, Arabesque; Mazurka.  
Vocal duets, I Love You Truly; Moonlight Nights; Miss Maude Allen, Walter H. Bundy.  
Viola solos, To Spring; Gray Days; Miss Jeannette Ginter.  
Vocal selections, Lungo dal Caro Bene; I Passed by Your Window; Miss Olive Harlow.  
Tenor solos, Sylvellin; Love Is a Rose; Still Wie Die Nacht; Leon A. Mills.

DISTANT STATIONS

KGW—Oregonian, Portland (492 Meters)

8 P M—Concert by George Weber and his orchestra.

KFI—E. C. Anthony, Inc., Los Angeles (469 Meters)

6:45 TO 8 P M—Edith Lillian Clark and pupils in vocal and instrumental recital.

8 TO 9 P M—Ambassador Hotel-Cocanut Grove Orchestra.

9 TO 10 P M—Examiner-Highland Park Six Orchestra.

10 TO 11 P M—Fullerton Radio Broadcasters.

KHJ—Los Angeles Times (395 Meters)

8 TO 10 P M—Program presented through the courtesy of St. Paul's Cathedral. Dr. William McCormack, speaker.

10 TO 11 P M—Art Hickman's Dance Orchestra from the Biltmore Hotel.

KFSG—Angelus Temple, Los Angeles (278 Meters)

8 TO 9 P M—Auditorium service. Sermon by Almee Semple McPherson.

9 TO 10 P M—Grey Studio program, presented by John Hall's Swanee Jubilee Singers and Sierra Trio of Pasadena. Daisy Thompson, soprano.

10 TO 11 P M—Organ recital and program through courtesy of Roy Reid Brignall, with assisting artist.

Wednesday, July 16

KPO—Hale Bros., San Francisco (423 Meters)

1 TO 2 P M—Rudy Seiger's Fairmont Hotel Orchestra.

2:30 TO 3:30 P M—Jack Falt's Entella Cafe Orchestra.

4:30 TO 5:30 P M—Rudy Seiger's Fairmont Hotel Orchestra.

5:30 TO 6:30 P M—Children's Hour. Stories by Big Brother of KPO, taken from the Book of Knowledge: The Chinese Republic; Twelve Dancing Princesses; Answers to Questions.

Piano solos, C Sharp Minor Waltz; Marche Alla Turca; Austin Rosebrook (pupil of Mischa Lhevinne).

7 TO 7:30 P M—Rudy Seiger's Fairmont Hotel Orchestra.

8 TO 11 P M—E. Max Bradfield's Versatile Band. During the intermissions in this program:  
Talk on "Irises" by Curtis Redfern. The Theater Arts Club presents two plays, personally directed by Talmadge Wilbur. "Plutimouse," a farce-comedy, by Mary Katherine Reely. The people in the play: Prissie...Natalie Esther Greenblatt Maude...Marjorie Hipslav Mrs. Ellis (their mother).....Henrietta Still Gerald (professor in state university).....E. O. Van Austen Early evening in late summer at

Harry Grant, Jr., says:

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KUO

San Francisco Examiner—360 Meters

Daily Except Saturday and Sunday

9:05 A M—Weather forecast.

11:00 to 11:30 A M—Market reports.

3:30 P M—Financial bulletin.

6:00 to 6:20 P M—Financial and garden hint broadcast.

6:40 P M—Weather forecast.

Saturday Only

9:05 A M—Weather forecast.

6:00 to 6:20 P M—Financial and garden hint broadcast.

6:40 P M—Weather forecast.

Sunday Only

9:05 A M—Weather forecast.

6:45 P M—Weather forecast.

Additional Friday

6:45 to 6:00 P M—Health bulletin.

the Ellis home.

"Miss Civilization," a comedy drama by Richard Harding Davis. People in the play:

Alice Gardiner (daughter of James K. Gardiner, president of the L. E. &amp; W. railroad), Thelma Petersen

"Uncle" Joseph Hatch (alias "Gentleman Joe"), William Vann Connors

"Brick" Meakin (alias "Reddy, the Kid"), James Nickolas

Harry Hayes (alias "Grandstand" Harry), Clifford L. Hughes

Captain Lucas (chief of police), C. S. Hobron

Police, brakemen, engineers.

Dining room in country home of James K. Gardiner, near midnight the day after Christmas.

KGO—General Electric Co., Oakland (312 Meters)

1:30 P M—New York Stock Exchange and United States weather bureau reports.

3 P M—Short musical program. Speaker furnished through the courtesy of the Cora L. Williams Institute, Berkeley.

6:45 P M—Final reading, stock exchange and weather reports, and news items.

KLX—Oakland Tribune (509 Meters)

3 TO 5 P M—Baseball.

7 TO 7:30 P M—Financial news; weather.

8 TO 10:20 P M—Studio program and music from the American Theater. The studio program is under the direction of Walter Horace Bundy. The program follows:

Vocal selections, Macushla; Mother o' Mine; Herbert H. Robson, tenor.

Vocal selection, Suicidio (from "La Gioconda"); Separazione (an old Italian song); Miss Corinne Keefer, contralto.

Piano selections, Witch's Dance; To a Wild Rose; Miss Dorothy Edwards.

Tenor solos, When I'm With You; Down Here; Leon A. Mills.

Scotch songs, My Laddie; Ye Banks and Braes; Loch Lomond; Miss Maude Allen, mezzo-soprano.

Violin solos, Canto Amoroso; Waltz No. 2; Miss Jeannette Ginter.

Vocal selections, The Banjo Song; Smilin' Through; Miss Olive Harlow, contralto.

Vocal duets, The Old Refrain; Somewhere a Voice Is Calling; Miss Keefer, Mr. Mills.

Baritone solos, I'll Take You Home Again; Absent; Walter H. Bundy.

Piano duet, Poet and Peasant; Ernest Boodt and Hjalmar Stromberg.

Songs (to be announced), Miss Maude Allen, mezzo-soprano.

Tenor solos, The Wanderer; My Sweet Repose; Herbert H. Robson.

Contralto solos, Trees; Japanese Lullaby; Dreamin' Time; Miss Corinne Keefer.

Piano selections, Arabesque; Mazurka.

Vocal duets, I Love You Truly; Moonlight Nights; Miss Maude Allen, Walter H. Bundy.

Viola solos, To Spring; Gray Days; Miss Jeannette Ginter.

Vocal selections, Lungo dal Caro Bene; I Passed by Your Window; Miss Olive Harlow.

Tenor solos, Sylvellin; Love Is a Rose; Still Wie Die Nacht; Leon A. Mills.

DISTANT STATIONS

KGW—Oregonian, Portland (492 Meters)

8 P M—Concert.

10 P M—Dance music by George Olsen's Metropolitan Orchestra of the Hotel Portland. Intermission solos by Leona Mourton, contralto.

KFI—E. C. Anthony, Inc., Los Angeles (469 Meters)

8 TO 9 P M—Evening Herald-Blue Boys Orchestra.

9 TO 10 P M—Examiner-Penwomen of America program.

10 TO 11 P M—Hollywood Community Orchestra.

11 P M TO 12 M—Ambassador Hotel-Cocanut Grove Orchestra.

KHJ—Los Angeles Times (395 Meters)

8 TO 10 P M—De luxe program. Dr. Mars Baumgardt, lecturer.

10 TO 11 P M—Art Hickman's

## Specials on Radio Receivers

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OPEN EVENINGS

Dance Orchestra from the Biltmore Hotel.

KFOA—Rhodes Co., Seattle (455 Meters)

8:30 P M—Seattle Rotary Club program; every person participating is a member of the Rotary Club, with the exception of the vocalist, Mrs. Phillip Frederick Apfel, wife of a Rotarian. Seattle Rotary Glee Club of 30 members, under direction of Graham Morgan, internationally famous director of men's glee clubs, will render several groups of songs; Sidney Jones, piano soloist and accompanist. An announcement of interest to all Rotarians will be made by Phil Apfel, chairman program committee. The famous Rotary Quartet will sing several groups. Address, "Rotary: What Is It?" by Worrall Wilson, past president Seattle club.

Thursday, July 17

KPO—Hale Bros., San Francisco (423 Meters)

1 TO 2 P M—Rudy Seiger's Fairmont Hotel Orchestra.

2:30 TO 3:30 P M—Matinee musical.

4:30 TO 5:30 P M—Rudy Seiger's Fairmont Hotel Orchestra.

5:30 TO 6:30 P M—Children's Hour. Stories by Big Brother of KPO, taken from the Book of Knowledge: Little Claus and Big Claus; Dick Whittington and His Cat; How Gas Is Made.

7 TO 7:30 P M—Rudy Seiger's Fairmont Hotel Orchestra.

8 TO 9 P M—Organ recital by Theodore J. Irwin, official organist, at the Wurliitzer.

March Slav; The Swan; Prelude to Third Act of Lohengrin; song melody, Land of Sky-Blue Water; musical comedy selection, Little Miss Bluebeard; gavotte, Dorothy; I Russignuolo, May in Tuscany; Hymn to the Sun; fox trot, Easy Melody.

9 TO 10 P M—Program under the management of Leda Gregory Jackson.

Vocal solos, The Song of the Brown Thrush; Desert Wind; O Could I Call the Years Back; Leda Gregory Jackson.

Piano solos, Nocturne; Troika; Muriel Berry.

Vocal solos, Ah, fors' e lue (from "La Traviata"); Just a-Wearying for You; Leda Gregory Jackson.

Piano solos, Polichinelle; Rustle of Spring; Muriel Berry.

Vocal solos, Would God I Were a Tender Apple Blossom (old Irish); When Irish Eyes Are Smiling; Mother Macree; Leda Gregory Jackson.

Piano solos, Nocturne; Etude; Muriel Berry.

Vocal solos, Sittin' Thinkin'; Shad-ows; In the Garden; Leda Gregory Jackson.

10 TO 11 P M—E. Max Bradfield's Versatile Band.

KGO—General Electric Co., Oakland (312 Meters)

1:30 P M—New York Stock Exchange and United States weather bureau reports.

6:45 P M—Final reading, stock exchange and weather reports, and news items.

KLX—Oakland Tribune (509 Meters)

3 TO 5 P M—Baseball.

7 TO 7:30 P M—Financial news; weather.

8 TO 10:20 P M—Studio program and music from the American Theater. The studio program is under the direction of Walter Horace Bundy. The program follows:

Vocal selections, Macushla; Mother o' Mine; Herbert H. Robson, tenor.

Vocal selection, Suicidio (from "La Gioconda"); Separazione (an old Italian song); Miss Corinne Keefer, contralto.

Piano selections, Witch's Dance; To a Wild Rose; Miss Dorothy Edwards.

Tenor solos, When I'm With You; Down Here; Leon A. Mills.

Scotch songs, My Laddie; Ye Banks and Braes; Loch Lomond; Miss Maude Allen, mezzo-soprano.

Violin solos, Canto Amoroso; Waltz No. 2; Miss Jeannette Ginter.

Vocal selections, The Banjo Song; Smilin' Through; Miss Olive Harlow, contralto.

Vocal duets, The Old Refrain; Somewhere a Voice Is Calling; Miss Keefer, Mr. Mills.

Baritone solos, I'll Take You Home Again; Absent; Walter H. Bundy.

Piano duet, Poet and Peasant; Ernest Boodt and Hjalmar Stromberg.

Songs (to be announced), Miss Maude Allen, mezzo-soprano.

Tenor solos, The Wanderer; My Sweet Repose; Herbert H. Robson.

Contralto solos, Trees; Japanese Lullaby; Dreamin' Time; Miss Corinne Keefer.

Piano selections, Arabesque; Mazurka.

Vocal duets, I Love You Truly; Moonlight Nights; Miss Maude Allen, Walter H. Bundy.

Viola solos, To Spring; Gray Days; Miss Jeannette Ginter.

Vocal selections, Lungo dal Caro Bene; I Passed by Your Window; Miss Olive Harlow.

Tenor solos, Sylvellin; Love Is a Rose; Still Wie Die Nacht; Leon A. Mills.

Friday, July 18

KPO—Hale Bros., San Francisco (423 Meters)

12 NOON—Time signals; Scriptures.

1 TO 2 P M—Rudy Seiger's Fairmont Hotel Orchestra.

2:30 TO 3:30 P M—Organ recital by Theodore J. Irwin, official organist, at the Wurliitzer.

Fox trot, Shine; light opera selection, It Happened in Nordland; gavotte, from Heibel suite; selection, La Tosca; popular waltz song, Nightingale; Down South; song melody, Somewhere a Voice Is Calling; fox trot, All Because of You.

4:30 TO 5:30 P M—Rudy Seiger's Fairmont Hotel Orchestra.

KGO—General Electric Co., Oakland (312 Meters)

1:30 P M—New York Stock Exchange and United States weather bureau reports.

3 P M—Musical program and a few minutes with new books, by Wilda Wilson Church.

6:45 P M—Final reading, stock exchange and weather reports, and news items.

KLX—Oakland Tribune (509 Meters)

3 TO 5 P M—Baseball.

7 TO 7:30 P M—Financial news; weather.

DISTANT STATIONS

KGW—Oregonian, Portland (492 Meters)

8:15 P M—Studio concert by George Olsen's Metropolitan Orchestra of the Hotel Portland, Herman Kenin, director.

10:30 P M—Hoot Owls.

KFI—E. C. Anthony, Inc., Los Angeles (469 Meters)

6:45 TO 8 P M—Program by Myra Belle Vickers.

8 TO 9 P M—Evening Herald-Marion Warde Players.

9 TO 10 P M—Examiner-Floryane Thompson, soprano, and others.

10 TO 11 P M—Frederick North Concert Co.

11 P M TO 12 M—Ambassador Hotel-Cocanut Grove Orchestra.

KHJ—Los Angeles Times (395 Meters)

8 TO 10 P M—Program presented through the courtesy of the Heilman Commercial Trust and Savings Bank, arranged by A. K. Berkland.

10 TO 11 P M—Art Hickman's Dance Orchestra from the Biltmore Hotel.

KFOA—Rhodes Co., Seattle (455 Meters)

8:30 P M—Uncle Remus and His Successors. A recital by Mrs. Jessie L. Whitney, assisted by members of colored race. Piano solos by Lorenzo Jordan Cole and vocal solos by Melee Robinson. Negro spiritual songs by colored quartet composed of Mrs. Hall, Miss Wilson, John Gayton and James Gayton. Vocal solos by Mrs. Estella Slater Jackson.

Saturday, July 19

KPO—Hale Bros., San Francisco (423 Meters)

8 P M TO 12 M—Dance music by Art Weidner's Orchestra. KPO Trio during intermissions.

KGO—General Electric Co., Oakland (312 Meters)

12:30 P M—New York Stock Exchange and United States weather bureau reports.

8 TO 10 P M—Program given through the courtesy of the Oakland division of the Southern Pacific Co., assisted by the Arion Trio.

Instrumental selections, Southern Pacific Orchestra.



## 'Hams Unite In World Radio League

The private citizens of the world promise to accomplish what their official representatives and diplomats have so far failed to effect.

It is the cultivation of an international friendship and understanding by means of radio communication.

Already amateurs of America, England and France are staging regular conversations across the Atlantic, sending felicitations and other friendly greetings and expressions of confidence in one another. A few weeks ago Argentina was heard in this country by another "ham" who replied with an expression of good will and best wishes—by wireless.

### Radio "Belt"

American-built broadcasting stations promise soon to knit the entire globe within a belt of powerful stations which will be able to relay a message around the earth with the speed of light. It is the forerunner of what is expected to become an international broadcasting system for the transmission of concerts and other forms of entertainment from one country to another.

A few days ago a Dutch amateur, who had succeeded in "getting America" as far west as Nebraska, was hauled in by the authorities who said the amateur had used his set without authority from the minister in charge of communications. But he was released and a victory was won for the private citizens who are communicating with one another without government red tape.

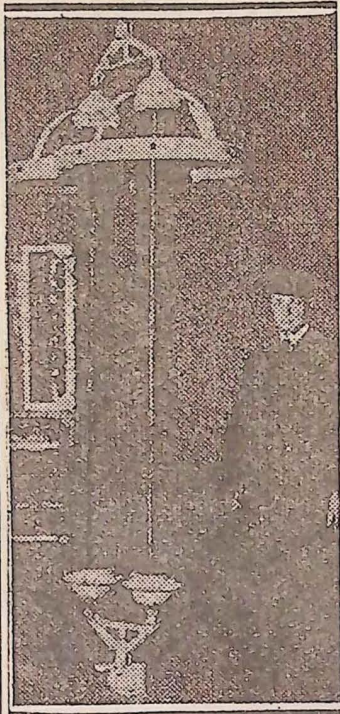
### Ilo Points Way

Ilo, the international language, is being advocated for radio communication between countries. Esperanto is another international language, based on roots from the major languages of the world.

One of these, or perhaps another form of world language, may some day become universal through application of radio communication. Lessons in Ilo have already been broadcast from various broadcasting stations, and the language has been spread through other means.

The American Radio Relay League has been looking about for such an international language, so that their amateur

## FOR AERIAL



If your aerial shorts, or the wind is too strong for the insulators you're using, try this naval insulator. It's the largest in the world, one of a kind used by the U. S. navy at its high power stations. It has a capacity of 50,000 pounds.

## Across the Tropics

Sixty-six amateurs in America have succeeded in getting through to South America. Two of them are in Canada and the rest are scattered through all the radio districts, except the seventh.

## Radio Kills Birds

Members of the United States Biological Survey report the death of thousands of birds annually due to radio. They are not electrocuted, but they meet death by crashing blindly into aerials.

members may the more easily communicate with those of other countries. It would mean a saving of time and considerable trouble converting one language into another.

And a universal language would be one of the strongest possible ties to bind the nations into world amity.

## S. F. R. C. Radio Auction Is Great Success

Many local radio fans took Dame Opportunity by the horns and stocked themselves with a supply of tubes, condensers, rheostats, phones, etc., at the raffle of the San Francisco Radio club Thursday night.

Local hams are awaiting with much interest the experiments of 6BS, who is going to erect an 80-ft. pole made out of rain pipe, according to specifications in the last issue of QST. If this proves successful, it will result in local hams saving quite a few shekels.

7PN, who has been visiting San Francisco for some time, is going back to Seattle. He expects to erect a 10 watt set, with which he will keep in touch with members of the SFRC.

6CW is on the air again with a 50 watt set. He gets 1 amp. on 150 meters.

The record for the best long distance work during this summer is held by station 6RY, Julius Brunton Storage Battery Supply station.

Local hams have been at a loss to figure out why 6CPW has been off the air lately. According to 6CPW, interference upon the part of his neighbors forced him to take down his antenna, which protruded over into his neighbor's yard. However, he now plans to build an 80 ft. pole in his own backyard.

Local hams report that DX is improving. However, no one looks forward to good results until the latter part of August or September.

## Short Waves For Air

Aerial lighthouses may be constructed with short wave transmitting sets for all year round guidance of aviators. These transmitters are to be based on the one and a half and two-meter radio wave transmitters recently produced by the French commandant, Rene Mesny.

Chimes from Ohio State University at Columbus will feature the regular program from its broadcasting station, WEAO.

## 2 IN 1



Just put on this ear set and get any local station, if not more. For Frank Ferris of Boston has fitted it up with a crystal detector in each phone—a complete receiver in one piece. He is shown wearing the set which, he says, will act as a reflex with any single tube set.

## Wireless in Arctic

The Oxford University arctic expedition is to be fully equipped with wireless transmitting and receiving apparatus. The sledding party which will explore the islands north and east of Spitzbergen will carry both types of apparatus, and airplanes also will be armed with radio.

## Big New York Radio Outfit Now Ready

### NEA Service

NEW YORK, July 14.—New York is ready to broadcast concerts, lectures and other entertainment from its own station.

According to a letter from Grover A. Whalen, commissioner of plants and structures, to Secretary of Commerce Hoover, applying for a license and call letters, the new municipal station will be the largest of its kind in the world.

Some time ago, New York experimented with a radio broadcasting station atop the Municipal Tower, 560 feet above ground, but found so many interfering difficulties that the station had to be abandoned. Further experimenting by New York's engineers finally have resulted in a way out.

The engineers have found that the tall structure itself has a natural wave length of about 400 meters. If New York, they decided, could get a higher wave length assigned to it, broadcasting could be effected despite the interference of surrounding tall steel buildings.

Whalen has, therefore, asked for a wave length of 525 meters, which would also be well out of range of other Class B stations.

A Lake Linden (Mich.) fan reports he has logged 242 broadcasters on a simple regenerative set and three-tube amplifier.

## PROGRAM CONTINUED

(Concluded from Page Two)

L. L. Brenner.

Tenor solo, Mother Mine; Wesley Parks.

Instrumental selection, Indian Love Lyrics; Arion Trio.

Tenor solos, Macushla; Somewhere a Voice Is Calling; Olan P. Brooks.

Address, "Transportation," C. J. McDonald, assistant superintendent of transportation, Southern Pacific Co.

Soprano solos, The Swallows; In the Time of Roses; Beth Miller Porter.

Instrumental selections, Southern Pacific Orchestra.

Reading, "The Shooting of Dan McGrew"; H. E. Hunt.

Tenor solo, Sweet Genevieve; Wesley Parks.

Cornet solo, Intermezzo (from "Cavalleria Rusticana"); Lyman L. L. ner.

Address, "Safety First"; J. B. Monahan, supervisor of Safety, Southern Pacific Co.

Piano solo, The Sleigh Ride; Helen Blake, daughter of David Blake, chief

dispatcher.

The Georgia Minstrels, under the direction of Miles B. Hunter.

Interlocutor, Miles B. Hunter; end man, Archie Nicholson; end man, Johnnie Miller.

Quartet: Henry Young, J. B. Williams, William Andrews, Walter Jones; Henry Star, accompanist.

Instrumental selection, Snake Dance; Arion Trio.

Tenor solos, When the Candle Lights Are Gleaming; Little Dusky Dreams; George Schulz's Metropolitan Orchestra.

Instrumental selections, Southern Pacific Orchestra.

10 P M TO 1 A M—Hotel St. Francis Dance Orchestra.

KLX—Oakland Tribune (509 Meters)

3 TO 5 P M—Baseball.

7 TO 7:30 P M—Financial news; weather.

### DISTANT STATIONS

KGW—Oregonian, Portland (492 Meters)

10 P M—Police reports, baseball scores, weather forecast and dance music by George Olsen's Metropolitan Orchestra of Hotel Portland (two hours).

KFI—E. C. Anthony, Inc., Los Angeles (469 Meters)

6:45 TO 8 P M—Vocal concert.

8 TO 9 P M—Alma K. Moss, contralto, arranging recital.

9 TO 10 P M—Examiner-Sorority Six Dance Orchestra.

10 TO 11 P M—Popular song program.

11 P M TO 12 M—Ambassador Hotel-Cocoanut Grove Orchestra.

KHJ—Los Angeles Times (395 Meters)

8 TO 10 P M—Program presented through the courtesy of Mrs. J. L. Hunter, San Juan Inn, San Juan Capistrano, presenting Julie Kellar, harpist, and her trio.

10 TO 11 P M—Art Hickman's Dance Orchestra from the Biltmore Hotel.

KRE—Berkeley Gazette (278 Meters)

8 P M TO 12 M—Dance music by Horace Heldt's Orchestra of the Hotel Claremont.

### Sunday, July 20

KPO—Hale Bros. San Francisco (423 Meters)

11 TO 12 M—Organ prelude, Theo. J. Irwin, prayers, sermon, Rev. T. E. Kingley, head Northern California Baptist church, solos, Alexander Ferguson, tenor.

8:30 TO 10 P M—Rudy Selger's Fairmont hotel orchestra.

KLS—Warner Bros. Oakland (360 Meters)

11:30 A M TO 1 P M—Nonsectarian church services, Rev. R. L. Chambers, pastor Radio Church of America.

KLX—Oakland Tribune (509 Meters)

9:30 TO 10 P M—Talk by Rev. John Snape, pastor First Baptist Church of Oakland, with sacred music before and after the talk by members of the church choir.

KGO—General Electric Company, Oakland (312 Meters)

11 A M TO 12 M—Non-sectarian church services, First Methodist Church, Oakland, Rev. John Stevens, pastor.

3:30 P M—KGO Little Symphony Orchestra.

7:30 P M—Church services, First Methodist Church of Oakland, Rev. John Stevens, pastor.

## Million Point Super-Crystals

are unconditionally guaranteed to be the best for distance and there is no louder crystal made. Sold by first class jobbers and dealers everywhere.

Sample postpaid 40c

If your dealer does not stock them.

Hubbard Laboratories

1944 Cabrillo St., San Francisco

# RADIO FROM THE GROUND UP

When the tube detector is connected in the simple manner shown in the last lesson, its sensitivity is scarcely greater than that of a crystal rectifier. By means of a slight variation of the connections and by the introduction of another coil, the signal strength may be increased about twenty-five times. We know that a very small amount of power in the grid circuit causes a fluctuation of much greater power in the plate circuit. Now if some of this power from the plate circuit be brought back again to the grid circuit and added to the energy picked up by the antenna, there will be a much stronger impulse on the grid to cause fluctuation of current in the plate circuit.

This process of using some of the energy over again is appropriately termed "Regeneration." In practice it consists in placing a coil of wire in the plate circuit and coupling this coil, in the proper direction, to the secondary inductance. A workable circuit in which honeycomb coils are employed is given herewith. The amount of energy abstracted from the plate circuit is negligible, but its effect on the signals is tremendous. The coil of wire in the plate circuit is called the "tickler," and its adjustment is very critical as to its precise location near the secondary.

### The Amplification

The curve shows the effect of regeneration is graduated in degrees of coupling between tickler and secondary on the horizontal and in signal strength in the telephones on the vertical. As the coupling is increased from zero, the amplification effect at first not pronounced, suddenly shoots up in a remarkable manner.

In the case of reception from a nearby station the effect of regeneration is not so pronounced as with a weak distant station.

If the strength of the local station, without regeneration, is already nine, let's say, regeneration won't increase it twenty-five times, because that would be far beyond the capacity of the tube. But in the case of a very weak signal, regeneration will work to maximum efficiency and will magnify an impulse so faint that the ear cannot detect it at all until it is loud and easily understandable.

There are many methods of making a circuit regenerative, though the tickler coil is the simplest and perhaps the most effective. One of the most popular schemes is the "tuned plate" arrangement. Here is a variometer or a combination of a coil and a variable condenser

are inserted in the plate circuit instead of the tickler, but no coupling between the variometer and the secondary is needed. The feedback of energy takes place through the small condenser formed by the plate and grid elements of the tube itself, as soon as the variometer is set to the same wave length as the secondary circuit.

In previous discussions, the effect of too much resistance in the tuning coils was shown to result in broad tuning and to be a common cause of interference. Regeneration seems to have the effect of reducing the resistance of the secondary circuit, for it sharpens the tuning very greatly and makes the adjustment of the secondary condenser a critical matter. However, this does not

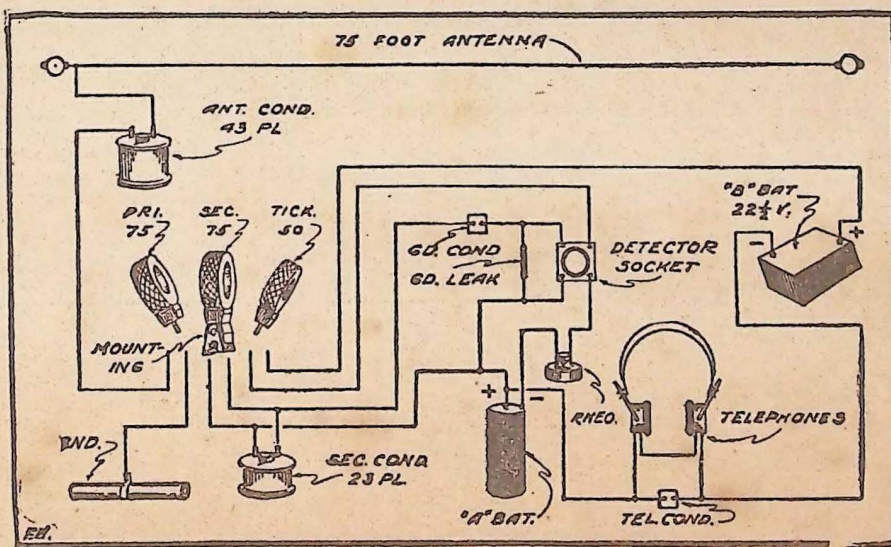
mean that it is permissible to use small wire having high resistance for the secondary tuning coil, even though regeneration does in a measure compensate for it.

## College News Service

Chief colleges of the country are banding together to start a new service by radio, co-operate in broadcasting and help one another in research work. The league formed by these colleges is expected to include a membership of 100.

Simultaneous broadcasting in England has received great popularity.

Rub panel with pumice to obtain a soft, satin finish.





## 'Hams' To Make Attempt to Span Ocean

NEA Service  
HARTFORD, Conn., July 14.—Amateurs of America and Australia are planning for the greatest enterprise in short-wave wireless they have ever attempted.

It is a two-way transmission and reception test between this country and Australia, across the Pacific.

Success in their two-way transmission work between America and Europe, the "hams" of the United States and Canada have arranged with those of Australia to try this longer step. It means spanning a distance ranging from 5000 to 8000 miles or more.

The test is being arranged by the American Radio Relay League, with headquarters here, at the request of C. D. MacLure, president of the Australian Radio Relay League. It will take place from Aug. 10 to 20, and then from Sept. 7 to 16, and will be conducted on short wave of about 100 meters.

While transmission on 100 meters is somewhat restricted for U. S. amateurs, it is hopeful there will be enough of the special licensed amateurs on the air to make the tests successful. Many American amateurs are already being heard in Australia on short waves.

## Sweden Eases Amateur Ban

HARTFORD, Conn., July 14.—The ban on amateur radio telegraph transmission in Sweden has just been lifted by the government and 30 licenses for transmitting stations have been issued, says Bruno Rolf of that country in a letter to the American Radio Relay League. Mr. Rolf is secretary of the Svenska Radio-Klubben (Swedish Radio Club).

The number of listeners has grown rapidly the last few months as this organization now has a total of 1600 members. All receiving sets are licensed by the government, 30,000 of these licenses having been issued since the new regulations were passed.

There is still a great deal of confusion "in the air" and the Swedish club is co-operating with the transmitting amateurs in order to provide for a fair division of wave lengths.

## Samoans Listen In

Natives of Samoa are preparing to listen in on speeches from the House of Commons in London. They have already succeeded in receiving broadcast cast programs from New York over a distance of 7300 miles.

## RADIO 'BORN' YEARS AGO

First steps in the invention of wireless may be traced as far back as 1840, when Prof. Henry first produced high frequency electric oscillations and pointed out that the discharge of a condenser is oscillatory.

Morse, inventor of the telegraph, two years later made wireless experiments by electric conduction through water.

In 1832, Prof. Dolbear was awarded a United States patent for wireless apparatus in connection with which he said "electrical communication, using this apparatus, might be established between points certainly more than one-half mile apart, but how much farther I cannot say."

Edison in 1885 took out a patent on long distance wireless telegraphy.

But it was not until the discovery of Hertz, in 1887, that electromagnetic waves are in complete accordance with waves of light and heat, that a big advance was made in radio signaling.

In 1897 Marconi established wireless communication over a distance of four miles.

## 'KEYNOTING' BY RADIO

BY HARRY B. HUNT  
NEA Service Staff Writer

NEW YORK, July 14.—Political spellbinders for the campaign of 1924 will have to develop a new style of oratory.

The small-time, second-rate speechmakers that heretofore have been used to fill in at meetings in the town hall and the village crossroads will no longer play an important part in shaping public thought on the campaign issues.

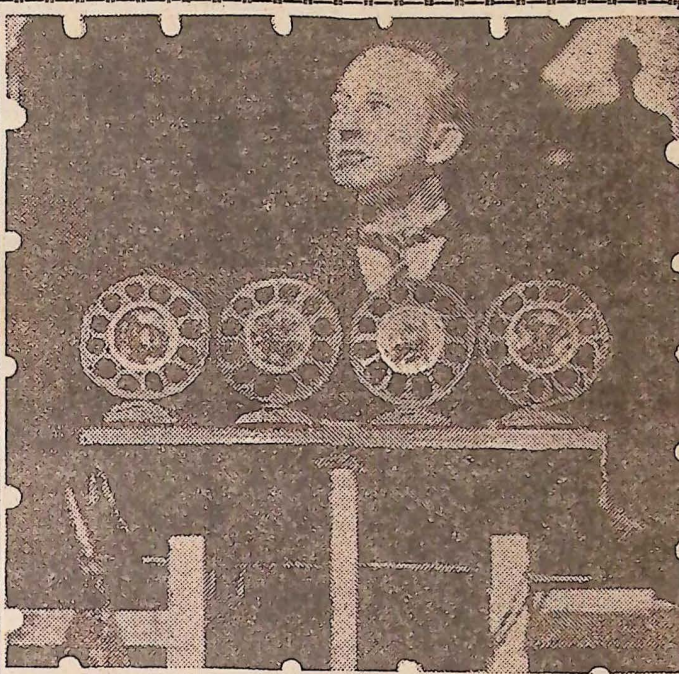
The big figures in state and national politics, who can speak convincingly and authoritatively, will have vastly increased audiences and influence.

All this will be due to radio, which will be utilized by all parties to transmit their campaign arguments, as presented by their biggest spokesmen, to the most remote parts of the country.

But the old style of spread-eagle oratory, delivered in impassioned tones and with much frantic gesticulation, is not good radio oratory. Neither is the long-winded, thin spun speech lasting for an hour or more.

To hold a radio audience, according to C. B. Popenoe, program director of Station WJZ, political orators will have to condense. The speaker who can compress his message into 15 or 20 minutes, presenting it clearly, logically and convincingly, will develop a following that will "tune in" on him whenever he is broadcasting.

The speaker, however, who by indulging in flowery rhetoric and pretty perorations, prolongs his speech to longer than half



Sen. Pat Harrison of Mississippi speaking into the microphone through which were broadcast the speeches of the Democratic national convention.

an hour, will be deserted by his audience.

Because radio makes it possible to widen the audience of any given speaker to include the whole country, large radio audiences, Popenoe believes, will be sought after even more eagerly than large public gatherings.

Radio popularization of a few effective speakers, together with the occasional nationwide broadcasting of addresses by the presidential candidates themselves, rather than indiscrimi-

nate haranguing of hit-and-miss spellbinders who confuse instead of clarify the issues, is proposed as the most promising program for "selling" the respective candidacies "by air."

With some 10,000,000 radio sets now in American homes, every voter who cares to hear the candidates can do so.

Senator Pat Harrison of Mississippi is shown in the accompanying picture "keynoting" by radio to an audience of hundreds of thousands.

## COPP CIRCUIT HOLDS FAVOR

BY ISRAEL KLEIN

NEA Service Radio Editor  
DESPITE the howls against it, the simple Copp circuit remains most popular of all. There are three reasons for this:

It is cheap. It is easy to build. It is easy to control.

Besides, it has the advantages of sensitivity, long range and strong signals. A single tube receiver of this type can tune in easily on stations up to 500 miles and even 1000 miles away, under good atmospheric conditions.

But the great objection to the Copp circuit is that it causes trouble to neighboring fans—it re-radiates.

This can be easily avoided, however, if the operator of a Copp circuit set uses care in tuning in. The tube can be kept just below the oscillation point, to avoid trouble to others, and at the same time bring in the best results.

### Few Parts

Parts for the set shown here include:

C1, 43-plate variable vernier condenser, .001 mfd.

C2, fixed condenser, .001 mfd.

C3, grid leak and condenser, .00025 mfd.

L1, L2, variocoupler.

Six ohm vernier rheostat.

Switch lever, seven taps and two switch stops.

One tube socket.

Six binding posts, one pound No. 16 DCC wire, bus wire for connections, phone jack, panel and base.

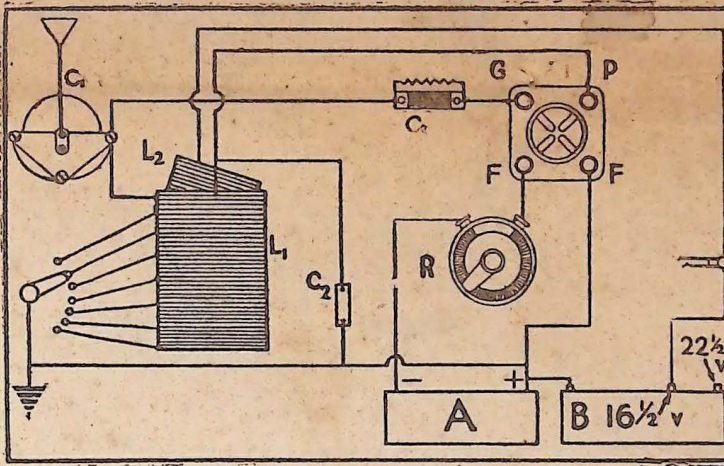
The entire receiver can be constructed on an 8-inch by 12-inch panel and a base 6 inches by 12 inches.

### The Variocoupler

The variocoupler may be made as follows:

The primary, of No. 16 DCC wire, is wound on a piece of 4-inch dielectric tubing 6 inches long. This heavy size wire is chosen because it has less loss than the lighter variety and therefore gives much clearer and stronger results.

Wind 70 turns of this wire about the primary, taking a tap off every 10th turn and running each to the switch points. The center of the switch goes to the ground and the positive of the



Hook-up diagram of Copp circuit.

A battery, which in turn is connected to the negative of the B battery.

For the secondary, a 3 1/2-inch ball rotor may be used, or a tube of that size. Wind 17 turns of the No. 16 wire on either side of the brass rod that goes through the center of the tubing

and connects with a dial on the panel.

Try only 16 1/2 volts of the B battery voltage on the plates at first, and increase gradually up to 22 1/2 volts if you find more volume will be produced without distortion or resultant battery noises.

## S. F. Fickle In Radio, Styles Are Changing

"The latest fashions in radio?" Conrad Richter, dean of San Francisco radio dealers, paused to reflect upon the many radio styles that he has seen come into existence and pass into oblivion since he first opened his shop in San Francisco.

"Three circuit tuners, reflexes and everything from a crystal set to a superheterodyne are fashionable in radioland," said Richter. "The radio craze seems to be similar in some respects to the early automobile fad. Anything that goes on wheels, including flivvers, will appeal to the automobile addict, and the same holds true with the radio fan. A fan can get as much satisfaction out of a 50c crystal set, built in a cigar box, as the luxurious super-eight radiola. Fashions in radio apparatus are limited to the size of the pocket-book."

"In the pioneer days of radio,

fashions were limited to one style, the crystal set. These sets were used by amateurs and commercial licensed operators for code broadcasting and reception. The early spark set was far different from the vacuum tube radio apparatus in use at the present time."

"While single tube or two tube sets were the rage for a period," Richter stated, "the 1924 de luxe radio model is the 5-tube neutrodyne. This is the elite of radio models. Many of the fans who build their own sets are enthusiastic over the superheterodyne at the present."

### Most On the Farms

Sixty per cent of the radio receiving sets in Canada are on farms, reports the Dominion government. The government is using this means to encourage colonization.

## Radio Proves Aid, Not Rival Of Theaters

The menace of radio to the theaters has not developed, according to San Francisco managers.

Fear that the public would soon get all its entertainment through the ether instead of the box office, expressed in the infancy of the wireless craze, has evaporated.

"We notice no effect one way or the other of broadcasted entertainment," Jack Partington, manager of the Granada, Imperial and California theaters said.

## ANSWERS

Questions addressed to this department will be answered by L. E. Day of the Day Radio laboratory, 693 Mission-st. No hookups will be printed.

R. J. W., 205 Madison-st., asks: Could a loud speaker be attached to a Brownie radio?

Only by the addition of one or two vacuum tubes.

W. C., asks:

Could two honeycomb coils be used as a variometer and how?

It is doubtful whether you would obtain good results, as the variation is not fine enough.

Emil Mogel, 902 Bryant-st., asks:

(1) What distance could I get on a Reinartz receiver if I used standard parts? (2) Would it be necessary to place a small condenser across the primary of the transformer if I wished to amplify it?

(1) It is impossible to give distance for a receiver, as so many things must be brought into consideration. Generally transmitting and not receiving apparatus is rated. (2) Place a .002 MF fixed condenser across the primary of transformer.

Irvin Manning, 1360 26th-av., asks:

Please help me locate the hum in my set. The connections are not loose, batteries are in good condition. Am using a WD-11 tube.

If you are sure that all connections are tight, look for open circuit in variometer, poor contact on tube, or condenser might need to be pig-tailed. Hum or noise like a motor running generally can be attributed to a loose or omitted wire.

C. C. Ebert, 1223 York-st., asks:

(1) Can a loud speaker be attached to a crystal set? (2) What is the cheapest set which will operate a loud speaker?

(1) A crystal set will not operate a loud speaker satisfactorily. (2) There are several sets that are good: Radiola 3, Crosley and Lemco. Any reflex of the 2-tube style is good.

Roy McKay, 1536 Hayes-st., asks:

Would you kindly tell me if I could construct a cheap amplifier to be used with a crystal set?

There have been many attempts to build amplifiers for crystal sets, but the most satisfactory is that standard tube amplification. In most magazines you will find instructions for building such an amplifier. It is the same as is used with tubes.

Theodore Kroger, 1673 Sutter-st:

(1) States that he is building a 2-tube reflex set and wishes to know what transformers can be used for audio and radio frequencies. (2) Is the reflex as good as the neutrodyne circuit?

(1) Erla transformers may be used throughout with good results. They make a specialty of the reflex. (2) The neutrodyne is generally considered the best of the two circuits.

## LET'S SWAP

These "Swap" advertisements will be published free of cost until further notice in the Monday Radio Magazine of The Daily News. The article to be traded must be radio equipment. Keep the word concise.

TO SWAP—Brand new tubes UV199 or C299 or C300; will swap one for audio-freq. transformer or new 45-volt battery; or will sell each for \$3.50. Call at 2711 Bryant-st between 7:30 and 9 p.m.

TO SWAP—25-volt rechargeable "B" battery and 4-volt rechargeable "A" battery, for a loud speaker. J. R., 3369 Howard-st. Phone Mission 6966.

TO SWAP—Good crystal set for vacuum tube and socket or a good "B" battery or "A" condenser. Francis Kirby, 244 Allison-av, San Francisco.