est consists of a telegraph key.

busser and one or two dry cells.

The pitch of the busser may be

varied by the addition of more

cells. The note it gives off is sim-

ilar to that of a radio transmitter. Probably one of the best layouts and one that is silent in oper-

ation is made from a tube, a rheo-

stat, an audio transformer, a key,

a head set and accompanying bat-

teries. Either a 199 or WD11

tube is ideal, as neither uses much current. The equipment is connected so that a Hartley oscillator

results. When the key is pressed

a buzz is heard only in the phones.

Its pitch may be varied by adjust-

The amount of B battery should

not be over 22 1/2 volts, and very

often much less will give a tone

more suitable to the ear. This set

may be laid out "breadboard"

An hour or so daily at the prac-

ment of the rheostat.

fashion.

DAY BROADCASTING **BECOMES POPULAR**

San Francisco Station Offering Excellent Program Each Day

Daylight broadcasting is coming into its own! KPO, the Hale, (wontcle station at San Frane was is offering a most interesti. . attractive and diversified schedule between the hours of 6:45 a. m. and 6 p. m. daily.

Music, in many forms of presentation will reach the audience. Gypsy and Marta, the adorable pair of harmony singers, known from coast to coast, are a regular 11 to 11:30 a. m. feature, and are presented by the Charles Arnao company, distributors of Arnao Steamers and Arneil.

A splend'd concert by the KPO Instrumental Trio, a piano, violin and cello combination of consummate skill, is a regular 1 to 2 o'clock presentation.

havid Kane's Hawaiians, Victor artists, hold forth daily from 11:30 to 1 o'clock. Native instruments and quaint melodies make a novel program. KPO's Bib brother, the dearly

lived director of the children's from 5 to 6 o'clock. This hour is a musical school but took lessons constructive etnertainment. During the baseball season,

Jack Keough, KPO's popular you Last year's presentations established Jack Keeugh as a success.

body and spirits." followed by the

daytime broadcasting, and is Song and Rosalie. bound to compel the interest of the radio public.

WAR AND RADIOS BRING OUT IDEAS

Got Busy With Excellent Results

The European war and the derelopment of radio have brought about a new "declaration of independence" in America, according to Sigmund Romberg, composer of "The Staudent Prince," "The Desert Song" and other popular light operas, who will be heard on the air for the first time in the Chevrolet hour of the General Motors Family Party on Monday evening, March 19

"Prior to 1914." says Romberg. duced in this country were brought over from Vienna. When war was declared it became difficult to continue using European mous songs of Daisy Wood Hilcompositions, so composers in the United States began to assert themselves and now radio has made their songs known throughout the country. As a consequence. America today leads the world in musical productions.

send more American-made light operas to Germany and Hungary is that they can't afford to pay musical shows are produced in most of their best composers are working in this country."

Romberg was born in Hungary and studied to become a construction engineer. He never attended

RADIO DIRECTOR ASSERTS MARRIED SINGERS ARE BEST



The married singers are undouteden the best.

Yours all wet Wh. Johnson country, Mr. Lafount declares. for instance, Many Garden! The changes effective March 1 were designed to imprave the local

and male octet.)

STATIONS ASKED

and out of the entire selections.

Land and My Land" made by

Rhoderic Graham for the Colum-

TO MARK TOWERS

Considerable Aid to Flying

Would Be Done by Cor-

rect Marking

WASHINGTON (AP)-To elim-

Areonautical experts of the

Three methods of painting are

ed alternate bands of white and

chrome yellow separated by black

white and chrome yellow bands.

Additional fixed red lights using

50 watt lamps are suggested for

radio towers, one being placed at

tower. These lights would be ar-

ranged so as to be visible from

LISTEN IN

SUNDAY MORNING 12:00-9:00—KXL (220). Sleep Wreck-

ers. 8:30-9 :80-KGW (492). Comis strip

grams. 11:00-12:00—KGW. Hinson Memorial

Baptist church service. 11:00-12:90—KWBS (260), Classical

reading. 9:00-11:00-KXL. Morning musical pro-

two-thirds of the height and one

civil airway.

Floyd B. Johnson, director or an air station in Chicago, is confident that marriage improves the voice of any singer. So much so that he has made that claim for the wedded stars, citing John McCormack, Schumann-Heink, Chaliapin and others to prove his point. Friends of Mary Garden, foremost among the unmarried stars, have come forward to refute Johnson's remarks

replete with timely readings, ap-propriate musical renditions and and did not become a professional until he came to America nearly twenty years ago. Since then he Jack Keough, KPO's popular has become one of the foremost young sports announcer will modern composers. His first ofbroadcast play by play reports of ferings were of the popular songthe games daily except Monday. hit type, and were found in "The Whirl of the World" at the Win-Hugh Barrett Dobbs, assisted ter Garden, which he wrote in by William H. Hancock, begins 1913, and in "The Passing Show the day at 6:45 with invigorating of 1914," for which he also comand stimulating exercises 'for posed the music. He was one of

> nineteenth, Romberg will play his the motor industry—the sale and commercial centers, the Federal 8:00-9:00—KgW. Concerts most melodious and best known delivery of 250,000 new model Radio Commission may find it 9:00-10:00 KOW Studio program. selections at the piano, with or- Chevrolets since January 1. Hour" offered by the same spon- selections at the piano. In addi-

Composers in United States NATIVE COMPOSER **WILL GIVE PROGRAM**

omposer, will appear in person lows: this week in an entire program of Blossom Time-Selections her own compositions to be broadcast Thursday by the stations of the ABC chain.

The recent ABC broadcast featuring Charles Wakefield Cadman was heartily applauded by Northwest radio listeners, and the Hildreth program promises to be

equally interesting. Florence Beeler, mezzo contralo who was heard on the Cadman program will also be the assisting artist for the concert this week, singing "The Blind Girl," "The Road to Kinsay," and other fa-

The composer will preside at the piano, and the second assisting artist will be Margaret Lang, violinist. This program will be broadcast from 8:30 to 10:00 o'clock Thursday evening by stations "The only reason we do not KEX. Portland: KJR, Seattle; and KGA Spokane.

The German postal chief has for them. The English take all decreed that woman postal emshows we give them. Very few ployes during working hours must wear skirts eight inches be-England or Europe now because low the knee. This, no doubt is to prevent interfering with the

Read the Classified Ads

Prgoram Will Be Broadcast During Chevrolet Hour On Monday Evening

Martha Attwood, soloist of the Shell Happy Time from 8 to 9 the first musicians to evolve the Metropolitan, and Sigmund Romo'clock, presided over by these "revue" type of entertainment. In berg, composer of "Student two "emanators of pep and per-later years he has achieved un- Prince," "Blossom Time" and sonality" Dobbsie and Wee Willie. usual distincting in the field of "Desert Song," assisted by a sym-Of tremendous interest to wo- light opeers with Blue Paradise, phony orchestra and a concert men are the daily talks offered, Maytime, Girl From Brazil, Her band, will give a Romberg proon art topics, fashion, home eco- Soldier Boy, Sinbad, Music Mel- gram in the Chevrolet hour of the nomics. cookery, housekeeping ody, Bombo, Desert Song, Blos- General Motors family party on som Time, Student Prince, Prin- Monday evening, March 19. . The All this makes for worthwhile cess Flavia, My Maryland, Love occasion will mark the celebration by the members of the big automoinate a serious hazard to aviation 7:30-9:30—KXL. Studio features. In the Chevrolet hour on the tive "family" of a new record in which is developing rapidly in Christ services.

> paniment. It will be a "Romberg air for the first time when he plays their towers in order to increase Hour," similar to the "Friml a number of his more melodious the visibility to fliers, tion to Miss Attwood, a baritone Army, Navy and Commerce departsoloist, and a male octette will ments have approved methods of also sing some of the better known marking air navigation obstruc-Romberg songs. It is expected tions such as radio masts, transthat the programs will be as dis- mission towers and flag poles in tinctive and enjoyable as the the immediate vicinity of an air 'Friml hour" presented by the port, intermediate landing field or same sponsors a month ago.

The program, to be sent over thirty-two stations from the new recommended: For the maximum studios of the National Broadcast- desired visibility, towers less than Daisy Wood Hildreth, American ing Company in New York fol- 250 feet in heigth should be paint-

...... . Orchestra bands one half the width of the Featuring "Song of Love" Miss Attwood and Baratone Mr. Romberg at Piano

'Omar Khayyam''-Passing Show chrome yellow and black. As an 1914 Mr. Romberg other alternative, the towers could When Hearts are Young"-Lady be painted with bands of black in Ermine. Miss Attwood ac- and white or black and alunium. companied by Mr. Romberg and From sunset to sunrise, the towers

faytime selections.. Orchestra making 80 to 120 flashes a min-'Will You Remember"..... ute. In order to afford adequate Miss Attwood and John Donald protection to aircraft, the expert Parker

ove Call—Selections..... Eyes That Love"; "I Live, I landing fields.

Die for You," "Tis Love" lue Paradise Mr. Romberg at piano in paraphase on "Auf Wiedersehn"..... Male Octette and Orchestra Closing at one-third of the height of the

with ensemble My Maryland-Selections Orchestra any angle of approach. Featuring "Silver Moon". . Miss

Attwood and Baritone Mr. Romberg at piano Desert Song-Selections Novelty Orchestra

West Point March"-Rosalie Band and Octette Medley of airs from Twilight Voices-Princess Flavia

..... Band 'Little Peach"-Louis XIV Band Student Prince-Selections ...

Parker

"Students March Song" "Serenade" John oDnald Parker "Drinking Song" . Male Octette 'Deep in My Heart' Miss Attwood and John Donald

SAYS RED PEPPER HEAT STOPS PAIN

Rheumatism, lumbago, neuritis, backache, stiff neck, sore muscles, strains, sprains, aching joints. When you are suffering so you can hardly get around, just try Red Pepper Rub. Nothing has such concentrated, penetrating heat as red peppers, and when heat penetrates right down into pain and congestion relief comes at

Just as soon as you apply Red Pep per Rub you feel the tingling heat. In three minutes the sore spot is warmed through and through and the

torture is gone.
Rowles Red Pepper Rub, made from

LISTENERS OFFER THEIR APPROVAL

Efforts to Clear Interference in Far West Meeting With Favor

WASHINGTON. - (AP) - The first big step of the Federal Radio ommission to bring better radio eception to the far west has been accorded general approval by broadcasters and listeners.

Station owners in the Pacific coast and mountain states, who have written the commission, commend the recent changes in 71 station assignments, recommended by Commissioner Harold Lafount. The second step in the program

to improve conditions in the remote sections of the west cannot be made until changes are put into effect in other sections of the learn what is taking place a cerwere designed to improve the local is necessry. broadcast situation only.

ations are made in the coast by Continental or International The large majority of the alterstates where most of the stations Morse code, which is somewhat that provide programs for the entire fifth sone are located. Listen- in wire telegraphy, It consists of ers in the mountain and desert groups of dots and dashes so ar-Mr. Romberg at the piano in areas are dependent on the coast stations and a very few local regions are not receiving good Program to close with 4 minute broadcasters for their radio enter- service and his chief problem is to special arrangement of "Your tainment. These sparsely settled improve conditions there, Mr. La-

bia Phonograph company featur- 11:00-12:00—KXI. Services from First ing (baritone, band and orchestra Methodist church. 1:00-12:30-KTBR (229). First Presbyterian church service. 11:45-12:45—KWJJ (250). Organ con-

SUNDAY AFTERNOON

12:80-1:00—KOIN. Organ recital.

12:30-2:00—KXL. Musical features. 1:80-2:00-KOIN. Music. 3:00-4:80-KOIN. Municipal concert. 8:00-5:00—KTBR. Symphony program. 3:00-5:00—KGW. NHC program. 4:30-6:00—KEX (278). Studie program. 5:00-5:30—KXL. Organ concert. 5:00-5:30—KTBR. Salon orchestra. 5:00-5:30—KGW. Concert. 5:30-6:00-KXL. 5:00-6:30-KGW. Courtesy program. U. of O. Glee club.

5:00-6:30—KGW. U. of O. Gree club.

SUNDAY NIGHT
6:00-7:00—KCIN (319). Organ concert.
6:30-7:30—KGW. (278). Dinner concert.
7:00-7:30—KGW. NBC symphony hour.
7:00-7:30—KEX. Religious lecture.
7:00-8:00—KGN. Concert erchestra.
7:30-6:00—KGW. Pinnists. :80-8:45-KTBR (229). First Presby terian church service. :60-8:80—KEX, Service from Mt. Ta

necessary to order owners of 10:00-11:00-KGW. Symphony orches-

KOMO-Seattle (809). 6:80, NBC; 7:30

musical; 8, church service; 9, varied.

KFON—Long Beach (242). 6, orchestra;
7, mandelin orchestra; 7:45, church
service; 9-1, frolic. KFOA-Seattle (447). 6:30, NBC symphony bour. KCO—Oskland (384). 6:30, NBC; 7:35, church service; 9, musical program. KFI—Los Angeles (468), 6, 6:30, NBO;

7:30, music; 8, Acolin organ; 9, 9:30, pianist; 10, orchestra.

KHJ—Los Angeles (400). 6, 6:15, music;
6:45, news; 7, church service; 8, vocallsts; 9, orchestra.

As an alternative, the towers could be painted with bands of Schaefer's Herbal Cough should be marked with red lights. Syrup-recommended that lights of higher candle power be used on major

One of the Finest Cough syrups made

Gives Immediate Relief From Coughing and Throat Irritation

Sold only at

Schaefer's DRUG STORE

135 North Commercial St. Phone 197

Penslar Agency Original Yellow Front

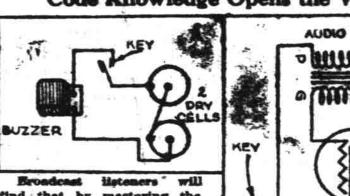


DO YOUR EYES WORRY YOU?

You should never know you're wearing eye glasses. If your glasses make you nervous and frritable, see a good optometrist today. Our glasses "feel good to the eyes." That's because a man who knows lenses also knows and fits frames,

Pomeroy & Keene Jewelers and Optometrists-Salem, Oregon

Code Knowledge Opens the World



find that by mastering the radio telegraph code meny interesting things may be heard eode test sets are shown. That at the left uses a buszer, while the one at the right is a Hartley oscillator. By C. E. Butterfield

(Associated Press Radio Editor)
NEW YORK—(AP)—An interesting world of dots and dashes accompanying box. awaits the radio fan familiar with Particularly is this the case under 200 meters, where will be found thousands of amateurs "talking" to each other and others services using short waves. To

Radio telegraph transmission is

fount says.

stations in the middle west and east and the lower powered stations on the Pacific coast cause serious interference in the mountain states. Mr. Lafount is opposed to stations having as great power as 50,000 watts because their signals interfere and drown out some of the good smaller sta-

The new setup was the first major undertaking of Commissioner Lafount since taking office a few months ago and the first important change in the far west allocations since his predecessor, Col- Gradually speed may be increased onel John F. Dill was stricken until it becomes an easy matter to with a fatal illness last summer. copy as high as 40 words a min-Most of the changes were time di- ute. visions between neighboring sta-

One Miami County farmer is may practice sending and receiv saving up a load of tin cans, bot- ing at the same ime. The simpl-Romberg will be heard on the broadcasting stations to mark NBC-1-2, orchestra and soloists; 8-4:30, tles, picnic plates, paper sacks, KPO—San Franciaco (422). 6:30, NBC; sas City and scatter over the bou7:30, organ recital; 8:30-10, orchestra.
KNX—Hollywood (337). 6:30, church
service; 8, orchestra and organ; 9, the rightful owners.—Miami Kansas Republican.

> invented a mechanical man and we suppose that if properly wound up he will work all week and bring home the pay envelope Saturday evening before he runs

Read the Classifled Ads

AUDIO TRANS. PHHHHH

The characters are shown in the

An easy path to knowledge of the code used in radio telegraphy, the code may be taken by listening

> c -.-D --.. F ..-. G ---

K ---

Heterodynes between powerful

etc., which he will take to Kanlevard, thus returning property to

Now an American scientist has

ranged that each represents a letter of the alphabet or a number.

tice key soon will familarize the

code listeners-to-be with the various symbols and it will not be long INTERNATIONAL CODE before he is ready to tune in for regular air transmission. When that point is reached he will find that at first he is able only to pick out letters here and there, then a word or twe. But finally the entire message no longer is a series of puzzling buzzes.

Many Salem people are making the

Campbell Court Hotel

Their Home When in Portland

A pleasant place to live, in beautiful surroundings. An unusually good

dining room service and food. Accessibility to

business center and garages.

Eleventh and Main Sts. E. JEAN CAMPBELL Owner and Manager

Zenith-Crosley RADIO HEADQUARTERS Sets-Radio Specialists-Parts CHAS. K. DENISON

Phone 1161 Res. 2029-J

to help him, there are available

several test circuits by which he

175 S. High Street Salem, Oregon



users never cease to marvel at the true, clear quality of Sparton reception - the unalloyed purity of its tone.

Visit us. Hear the marvelous Sparton Electric-No Batteffes

SPARTON

CYE at Tijuana, Lower California, Mexico, may be heard through- get the genuine, with the name Rowles out the length of the Pacific coast. This photo shows the masts and on every package. antenna of the Tijuana station.

Since changing its call letters and enlarging its scope, station store. Get a jar at once. Be sure to

MEXICO STRETCHES RADIO ARM