RADIO DOINGS
THE PACIFIC COAST PROGRAM
AND TECHNICAL MONTHLY

Black and Blue
KHJ

March, 1931
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DAVISON-HAYNES Mfg. Co.
717 S. Mateo St. Los Angeles
TRinity 1072

The Leader
March, 1931

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March, 1931
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PILOT SUPER WASP

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1801 South Hill Street,
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WE APPLAUD . . .

David Hartford and Frances Nordstrom . . . KMTR

BECAUSE: David Hartford, old-time director and favorite of the Belasco and Morosco Stock Companies and his wife, Frances Nordstrom, actress and author are presenting a series of fine one-act plays over KMTR on Monday and Thursday evenings at 8:45; because Miss Nordstrom has written these plays; because in the "good old days," David Hartford was largely responsible for bringing the original production of "Peg O' My Heart," "Country Boy" and "The Dollar Mark" to Los Angeles; because he has directed such now famous stars as Lewis Stone, Florence Reed, Marjorie Rambeau, Florence Oakley and Richard Bennett; but principally because we are whole-heartedly in favor of more dramas for radio production.
STUART BUCHANAN, director of theatrical performances for the United Broadcasting Company, began his dramatic career under the expert tutelage of no less a person than Otis Skinner, himself. Skinner happened to be in the audience at a college play and was so impressed by the ability of the young student, he offered him an attractive part in one of his plays, thereby opening avenues to a very successful dramatic career. Varied experiences undoubtedly have gone to make of Stuart Buchanan the actor whom Edwin Schallert of the Los Angeles Times gave credit for "the finest piece of acting of the year" in the Pasadena Playhouse production of "Spindrift." Dramatics, however, do not seem to be Mr. Buchanan's only forte. He has been an athlete, playing with Knute Rockne on the Notre Dame football team; has won his letters in track, baseball, basketball, swimming and football; as well as having coached and refereed for the major sports. Mr. Buchanan is now playing the part of Louis XV in the "French Miniatures," a series of dramas by Kay Van Riper, written around the romances of the French court, which are being released over the Pacific Coast Network of the United Broadcasting Company every Thursday evening at 8:30 o'clock.

A new and joyous picture of Eddie Holden, whose delightful character, Frank Watanabe, Japanese Houseboy, amuses thousands nightly over KNX, is shown here for the first time. And on the right is Reginald Sharland, well known moving picture actor who created the role of the "Honorable Archie." We are aware that we are throwing quite a bomb when we reveal the Honorable Archie's identity. A lot of you thought he was Eddie Holden, didn't you? Frank Watanabe is quite enough of a character for one young and personable man to create at a time. By the way, Frank really learned his Japanese by haunting the Oriental sections of San Francisco, where he counts many charming Japanese as his intimate friends. If you haven't heard Frank and Archie, don't miss another night 7:00 to 7:15 week nights.
HAVING received from Miss Dorothy Hummel an invitation to write something about the KFRC artists in the same manner that Dick Creedon wrote about the KHJ artists in last month’s RADIO DOINGS it has taken me three days to make up my mind—not because I don’t like to write about the KFRC artists, but because it’s a tough assignment to write like Dick Creedon.

How can I so felicitously mix delightful humor and unstinted praise and convincing revelations of virtue and artistry? How can I make people laugh and at the same time see the halo around the artists’ heads? How CAN I write like Dick Creedon? Well, anyway, I can write like Monroe Upton, which will have to do until Dick comes along again.

Not being equal to the “pick-em-out-of-the-hat” gag I’ll have to give you as many of our artists as space permits and then try and survive the hard looks of the rest as best I can.

My practical sense moves me to start off with the man to whom I go for a raise every three months (once I got one), Mr. Harrison Hollway. He is five feet eight inches in height, has a blonde mustache which he wears au natural, a boyishly engaging smile, a clean cut profile, smokes a pipe, and he never misses a thing that goes on over KFRC when he is at home evenings. He watches the steady stream of programs like a hawk. After KFRC shuts down he breaks out his short wave receiver and listens to the “hams” over in Japan, Australia, South Africa and Turkestan. He was a “ham” himself back in 1911, when he was ten years old, and since that time traveled all over the world as a radio operator. He has been KFRC’s manager since its inception over five years ago. Well, after he is tired of the “hams” it’s about time that Harrison the III, aged seven months, requires some attention. And 9 o’clock finds him at his KFRC desk again. We can’t leave Harrison without mentioning his pretty wife, Juliette, who was a radio artist before her marriage. Now she has taken up being a wife and mother in a large way and the unemployment situation hasn’t bothered her at all. You hear Harrison Hollway announcing the Golden State Blue Monday Jamboree each Monday night.

Meredith Willson, KFRC’s Musical Director, also has a very beautiful wife, Peggy Willson. All Meredith does is direct the station’s music and conduct the orchestra for the most important programs, but Peggy drops occasionally looking very sweet and lovely, which is a lot more important to us around here. They were married back in Iowa before Meredith found fame as flute soloist with the New York Philharmonic, as director of the Seattle Symphony at the age of 27, as score of pictures in Hollywood and as Musical Director of KFRC. His favorite magazine is the New Yorker, which is Peggy’s favorite also, and he is well liked by the alleged comedians because he laughs at their gags. I don’t know whether he laughs at the blue notes of the alleged musicians or not—anyway they like it when he praises them for any exceptional musicianship.

Oh yes, I forgot to say (as Dick did about KHJ). We’re all just one big happy family up here and to know us is to love us. (Wait a minute until I throw three people out of my office who are kicking because they haven’t been getting enough publicity lately. One of them has a knife.)

Now, who’s next? You don’t hear very much about Merle Matthews, but she is one of the powers behind the programs from the KFRC studios. She is our production manager. She is both demure and active. She’s the only one person KFRC couldn’t get along without, not only because she writes plenty of romantic continuity and provides a lot of ideas and sees that the studio function in good shape, but because she’s the only one around the shop who is always ready to go to lunch with you. The world could be turned upside down without finding another as agreeable about going to lunch. She’s a sweet girl, Merle, and if she doesn’t break Don Lee buying oil to burn at midnight KFRC will be kept on its feet.

Juanita Tennyson and Margaret O’Dea, our staff soprano and contralto respectively, belong to the traditions of Bay radio. “Dorothy” Doyle of the Oakland Post Enquirer recently gave them first string positions on his Bay radio team. Miss Tennyson on the air is Mrs. Tennyson at home—her husband is Dr. Tennyson, dentist. Miss O’Dea is still Miss O’Dea when she is at home. She lives with her mother and drives around in her car for recreation. Both Juanita and Margaret are native daughters.

I’ve written so much about “Mac,” Harry McClintock, it just isn’t funny any more. Mac is just Mac. He’s amusing off the air or on. He and his bunch of alleged cowboys are now playing country dances over the week-ends and getting away with it handsomely. The kids and the old folks come to see Mac while the young ladies come to see Cecil Wright, who plays the guitar, harmonica, sings and has a profile like a Greek God. They’re all good clean boys—which is the worst I can say about them. Mac ran away from his Tennessee home at the age of 14 with Gerty’s Dog and Pony show. He soldiered in the Philippines, sailed all over the world on two continents, mined on three and made a musical vagabond of himself for a good many years before he settled down with radio.

Dick Rickard is now mastering the ceremonies on Feminine Fancies and reports everything under control. Dick was turned out on an unsuspecting world by the University of Washington—he is the epitome of agreeableness, and his eagerness to see life from all angles and positions has led him to harge around the world as a sailor and to pursue other and less dignified pursuits. Young, honest, good-looking, intelligent and recently married. That’s all I can say about HIM.

Now let’s have a look at the tenor department. Robert Olsen, Norman Nielsen, Charles Bulotti and Elbert Bellows are occupying the pedestals. The first two provide the ballads and popular songs, the last two the classics and semi-classics. Robert Olsen is our prize recording artist. He is also our prize Nordic. Tall and slender, blonde and serious, he only melts when he approaches a microwave phone. He is a proud and devoted family man, with two interesting children and a lovely wife. He was married long before radio came along and was in the wholesale grocery business. Norman reveals the innermost secrets of his...
soul when he clowns daily on the Happy-Go-Lucky Hour. The young ladies like him because of his good looks, the old ladies because they would like to mother him, and both because of his voice. Charles Bulotta, president of the Machinery Dealers' Association and his magnificent voice is just a side line with him. We only use him on the Sunday night Cadillac-La Salle and on the General Paint program one Tuesday nights. Elbert Bellows was on four sectors of the Western front during the war with the light artillery and was initiated into the show business with one of the American army shows that entertained the soldiers in France after the Armistice. He has been studying and working hard ever since. He worked as a blacksmith for a year and a half to build up his physique. Although he is new to the KFRC staff his well trained and splendid voice is rapidly gaining him a following. The two Ednas! Edna O'Keefe and Edna Fischer! We wrote about these two talented young ladies for RADIO DOINGS a couple of months ago so we shall pass over them at present.

The Pearce Brothers are next. Al and Cal aren't at all alike. Al is blonde, inclined to be a bit stout, has boundless energy and likes to be at the head of things. Cal is dark complexioned, slender, enjoys taking it easy and doesn't care at all about being at the tiller. The Happy-Go-Lucky-Hour is a testimonial to the powers of Al. He has raised it from a tenor solo.

Speaking of Happy-Go-Lucky, there is Tommy Harris and Charles Cartier, a couple of lads who have come a long way in radio in a comparatively short time. Tommy has that something it takes to make the ladies feel sentimental, Charley intrigues their fancy. Tommy is the senior of the two; he's nineteen. The age of Charley has been variously estimated at from 15 to 17. Just a couple of kids who have made good in a big way—along with Happy-Go-Lucky.

I find I have neglected our announcers. Walter Bunker, Jr., is the chief. Walter is a "good guy" raised to the 10th power. Nothing ever bothers him very much. Life is a sort of a casual proposition to him. He is one of the few persons who can have a good time while having a good time. His announcing is popular because he is natural, he doesn't try to say more than he feels like he was "speaking a piece." However, he isn't our only popular announcer. There's Lin Church and Fred Lane. Lin attended Harvard, likes to collect old books, and is a student with an appreciation of the artistic aspects of existence. He was selected from a large group of candidates for the job. Fred Lane belongs to the school of the American radio history.
WHO among you has not heard of Dec-tee-a-tives Black and Blue, mighty crime crushers of the air, whose feet are not flatter than their skulls; those elastic supporters of law and order whose fame has, in the past few months, stretched from one of the Don Lee chain to the other; and whose myriad daily followers, if placed end to end, would find it difficult to sit down?

That is a rhetorical question, my friends. And there is only one thing to do with one of those things—ignore it. Censors please note.

But who are these slick sleuths, Black and Blue, whose blundering triumphs in the practically unlimited field of crime, aroused such envy and admiration in the heart of William J. Burns that, several weeks ago, he came all the way from Florida to meet them in the studios of KHJ?

This is not a rhetorical question and must be answered.

Blue is none other but only Len Wright, trap drummer in Raymond Paige's KHJ staff orchestra. One day, Mr. Paige (the boys call him, Mr. Paige) sent out a telephone call for orchestra reinforcements. He was chewing salted peanuts at the time and the only intelligible words that came over the phone were, "Trap Drummer." Mr. Wright was immediately trapped. And hereby hangs a tale:


Beer is thicker than water. Came to California in 1922. Played at KHJ in the old days. Directed cafeteria band here. Organized KEJK orchestra. Disorganized it. Played with Black (Charles Forsythe) at both cafeteria and KEJK. Trapped by KHJ.

Black's biography includes:

Birth in Kansas corn fields. Named Charles Forsythe (if we are to believe him.) Father a theater trap drummer. Minstrel Male Quartet at 16. Stock roles while voice was changing. This gave rise to the term: The Squeaking Stage. Ran motion picture machines in the nickelodean days and specialized in sound effects. Vaudeville. Manager small theater near Los Angeles. Imitated sea lion in first big stage band in motion picture house. Paul Ash so pleased he made Charlie director of comedy and sound effects. Played with big stage presentations in both Oakland and San Francisco. First radio work over KUO on roof of the Examiner building in San Francisco in 1923. Played character roles in movies (Ben Hur) and directed orchestra in Monte Bell's first picture, "Pretty Ladies." Worked for Raymond Paige at the Met. Conductor for Fanchon & Marco. KEJK, KHJ, KMTR and KHJ again. Considered final authority on radio sound effects.

How it all happened:

Earnshaw & Morgan decided to write a small comedy part into "Forgeria" for two dumb detectives, Black and Blue. The dumb nature of the characters was described at a conference in the KHJ studios. Raymond Paige immediately rubbed his hands together three times and pronounced the magic phrase, "Charlie Forsythe." Instantly Charles appeared on the carpet. Just like Aladdin. Only
Charlie had two lamps. One of them was black. Messrs. Earnshaw & Morgan (incorporated, we believe, no doubt) took one look and said, "Read it!"

Mr. Forsythe read his lines.

"Terrible," said the assembled conference.

"Awful," agreed Messrs. E. & M., "Just what we want! You're Black!" Charlie looked at himself in the mirror and disagreed. At the instant, the conference was interrupted by the intrusion of a mild voice and a decollete head.

"What's the matter, Len," asked Mr. Paige.

"Aw, I'm blue. Some guy swiped my pet drum whacker again."

"You're what?"

"I'm blue."

Messrs. Earnshaw and Morgan raised their eyes to Heaven and in voices hushed with awe, whispered, "He's Blue. A sign. A portent. ... Here! Read this!"

And it happened that in the year 1930, in the studios of KHJ, in the City of Los Angeles, that the minor roles of Black and Blue did assume immense proportions—did steal the show and role them in the aisles throughout the length and breadth of California. And it further happened, that the Folger Coffee Company and Messrs. Earnshaw & Morgan (still incorporated, we have no doubt) saw opportunity before she knocked; and put Black & Blue, the two dumb sleuths, in a series of daily mystery-comedy-adventure skits which are broadcast over the Don Lee chain five days each week from 5:30 to 7:45 p.m., not to mention o'clock. And, if in passing down the street, you should see small boys with checkered Sherlock Holmes caps on their heads, you may feel certain that they are following the checkered fortunes of Black & Blue and want to grow up to be great detectives, themselves.

NOTE: Information contained in this story has been obtained from sources which we do not believe to be reliable—from Black & Blue, themselves. EDITOR’S NOTE: Much as we'd like to, we can't take credit for this outburst. You doubtless trace the Dick Greedon influence.

* * *

For a long time we have wanted to show you some pictures of the Empire Builders and this month we are happy to show you the whole cast as it goes into rehearsal for one of the absorbing dramas of the building of the Empire. About twenty hours of rehearsing are required for each of the playlets which are released by the National Broadcasting Company each Monday night at 7:30 o'clock. KGW, KECA, KFSD, KTAR, KOMO, KGÖ, KHQ. Harvey Hays, known and loved for his portrayal of the "Old Timer" is seen at the microphone. Joseph Koestner, musical director, is seated at the piano. Behind him is Bernardine Flynn, one of the principals and at her right is Don Bernard, the director. Don Ameche, juvenile lead is seen at the extreme right.

* * *

This is the first picture we have ever had of Jay the Jingle Man and we have been quite curious about him for many long years. We have wondered what manner of man could dash off the amusing line of chatter in verse day after day and month after month and still keep it from triteness. (We once tried for days to write one single jingle.) Jay the Jingle Man at KNX every day in the week except Sunday is the big man with the little job as he puts it. He only has to write 660 lines of rhymed continuity for ads which he supplements with a philosophic rhyme as a sort of garnish (like parsley.) Then in his spare time he turns out an average of three song lyrics weekly as well as a few theme songs for special programs. In other words Jay writes 2 million lines a year or 20 million words. He deserves the title of the One and Only Jingle Man in America. And we thought our job was a hard one!

* * *

Quite often it is exceedingly disappointing to see pictures of your favorite radio stars, but in the case of Rose Dirmann and Winnie Fields, Moore, no illusions are shattered. Miss Moore, whose fascinating Nomad Novelist sketches are a feature of KFI-KECA looks exactly as she should ... romantic. Rose Dirmann, lyric soprano of KFI-KECA is almost to pretty to be true and, perhaps, that's one good reason she is so popular with immediate audiences as well as radio listeners. MMiss Dirmann's schedule has included concerts before the Friday Morning Club in addition to her regular KFI-KECA recitals. She is also the soloist at the First Church of Christ, Scientists.

* * *

With the addition to the Columbia Chain of Station KOH in Reno, Nevada, on February 15th, the Silver-State may now hear its own silver-throated song bird, Ted White, who warbles from the Don Lee-Columbia Key Stations. KHJ. Let us romance a bit. Nevada has had two beloved singers; one for each era of the state's colorful history. During the famous Gold Strike at the end of the last Century when the eyes of the world were turned to Virginia City, Nevada, a young musician by the name of Ricardo Jose was melting the hearts of the bold fellows who battled for the treasures mother-earth was offering so lavishly. When this young Spaniard's phenomenally lyrical voice rang over the purple hills on a clear Nevada night, strong men shed briney tears and vowed to return to the girls they had left behind them: such was the sentiment of the songs of that period. And they say, no one sang them like Dick

(Continued on Following Page)
(Continued from Preceding Page)

Jose, Nevada's own. Perhaps you have heard him—now a silvery-haired old gentleman—sing "Silver Threads Among the Gold."

But those days are history now, the gold which mounted into billions, and which enriched the port of San Francisco and established the fortunes of many of the leading families of the West, suddenly disappeared as mysteriously as it came, and Virginia City became a deserted village—a ghost town—a name. The adventurous inhabitants moved on and Dick Jose with them—he singing his sweet melodies in almost every county of the world.

Nevada sat back for a few years to figure it all out then came the famous divorce law which again drew the eyes of the world to the romantic Silver-State. And it grew and it grew. Disillusioned partners in wedlock came by the hundreds to go "united." Many of them eschewed a yearly stay in Paris, for three months of typical Western living in Reno. The distinguished, the wealthy, the learned, all came to this gay little city to "take the cure" as divorce is facetiously called there. Great musicians, journalists, statesmen, social leaders, financial wizards, or their wives (most often their wives) came with misgiving only to grow to love the free and easy spirit of the old West which seems to have found a last frontier in this region.

Dude Ranches, estates, lodges for hunting, winter sports, yacht clubs, gambling casinos, racing tracks, and Night Clubs, grew rapidly around Reno and Lake Tahoe under pressure; the distinguished visitors must be entertained.

And for this purpose, Ted White was imported, actually imported, from the famous "Little Club of the Orient" in Shanghai, China, to which he had gone from New York City. Going to Reno was like going home to him; for at "The Willows," where the ritz is put on most heavily, Ted encountered old friends from New York almost nightly. But the atmospheres of 1890 and 1930 had a decided difference—as different as the music of these periods. The sentimentality of Gold-boom days had become the heavy romanticism of an age of freedom. Ted sang songs which mixed love and laughter—songs which amused, songs which quieted and rested, or pulsed with romance and passion, and occasionally, when one of the old timers appeared, some of the old songs which they loved, some of the songs which their beloved Dick Jose had sung to them.

Millionaires, actresses, gamblers, novelists, social leaders, senators, governors, pioneers, they all came to know Ted White and to love him for himself as well as for the melodies which he sang to suit their moods.

Since Ted has been singing from the Los Angeles Studios of the Columbia Chain, he receives word almost daily that some of these Nevada friends have heard his songs of the night before. As one person's letter expressed it—"I wonder if you realize, Ted, that practically the entire town of Reno is listening for you each night now that our local station KOH has become part of the Columbia System."

"Warning! . . . Unless you deliver to my radio set every Tuesday night your Memory Lane program, I will KILL every NBC program on my set and will hang crepe on the dial where KGO comes in . . . Now 'tall that off'. You truly, Ray D. O'Phan, alias Thomas H. Krebs, San Carlos." In such violent words did one listener express his outrage at the threatened discontinuance of the Memory Lane program. 9,808 other persons bombarded the studios of the National Broadcasting Company with similar protests. Results? The Memory Lane program, on the air for four years, is re-instated a SPONSORED program of the first water. The new time is 8:15 to 8:45 every Tuesday night over KGO, KHQ, KOMO, KGW, KFI, KFSD and KTAR. Who says the public can't get what they want over the air?

* * *

The eleven-to-twelve hour on Sundays is put to excellent purposes over at the 24-hour station, KGFI. At a time when the dial is concerned mostly with broadcasting of church services, KGFI gives the music lover a concert program of orchestral classics.

* * *

Bill Sharples Fans Please Note—KNX has cornered the popular Bill Sharples and his gang for an unlimited engagement and you may hear them every morning from 7:00 to 8:00 over the Hollywood stations (What a lot of telephone calls this is going to spare our telephone girls!)

Raymond Paige's classic, "Vignettes in Symphony," has been shifted to Thursday evenings from 9:30 until 10:00. It is now available to the entire Coast chain of the Don Lee system. Don't make the fatal mistake of missing any of these programs. (We think they are the finest offerings of their type on the air today.)

To Joe Venutti of Paul Whitman's band goes the credit for introducing a new arrangement of instruments to form a novelty quintet, featuring piano, baritone saxophone, violin, guitar and string bass. Aaron Gonzales modeled his organization after this idea and now has one of the most unique orchestras on the coast. KMPC presents Aaron Gonzales and his Novelty Quintet every Saturday from 9:30 to 10:00 p.m. on the Junior Chamber of Commerce program.

* * *

A series of twelve weekly concerts featuring artists of the Metropolitan and Chicago Opera Companies and a 32-piece symphony orchestra composed of members of the New York Philharmonic will be inaugurated over the Columbia network on March 2nd. The new programs will present a different internationally known opera star as guest artist each week. KJH, KOIN, KOL, KFPP and KDYL will bring this program to the west coast.

* * *

And now you Doubters and Skeptics! Here is positive proof that the Little Pig of Pig 'n' Whistle fame is NOT a myth. We have always been able to visualize him perfectly, but we have met some who didn't believe there was a Little Pig at all. Anyway, Harry Jackson, Keeper of the Pig, has the ability to make the Little Pig live so vividly by his tender and indulgent conversations every night at the Pig 'n' Whistle, that we really don't care whether there's a pig in the flesh or not. Get acquainted with Harry Jackson's organization on the air every night from 6:00 to 6:30 over KFWB and we know you'll be as concerned over the Little Pig as we are.
United Broadcasting Co., Ltd., Expands

Satisfying all rumors as to expansion plans of the United Broadcasting Company, Ltd., an announcement was released on February 27th by Louis L. Davis, Jr., chairman of the board of directors, that the new Pacific Coast chain of radio stations had acquired additional outlets which will make the United the most powerful network on the West Coast. Under the new arrangement just completed the UBC, The Silver Network of the Golden West, will comprise the following eleven radio stations: KGB, San Diego, Calif.; KGER, Long Beach, Calif.; KFWB, Los Angeles, Calif.; KYA, San Francisco, Calif.; KMED, Medford, Ore.; KORE, Eugene, Ore.; KEX, Portland, Ore.; KJR, Seattle, Wash.; KVOS, Bellingham, Wash.; KPQ, Wenatchee, Wash.; KGA, Spokane, Wash.

Officials of the United Broadcasting Company are: Louis L. Davis, Jr., chairman of the board; Maurice Cleary, president; Fred C. Dahlquist, vice-president and general manager; Lyndol L. Young, secretary, and Rush Hughes, production manager.

"Bringing into the network the four Northwest stations which are among the most outstanding in importance and power in the country, and the San Francisco station KYA, places the United network in the possession of more power than that of the other two existing chains combined," said Mr. Davis. "The entire Pacific slope will be indisputably blanketed thoroughly from Mexico to Canada."

Headquarters of the chain are located at 2614 W. 7th street, Los Angeles.

That much beloved San Francisco contralto, Hazel Warner, long known to the West through the Blue Monday Jamboree and other KFRC programs is now a member of the KFRC staff. San Francisco can still hear its favorite contralto voice croon the simple melodies of today and yesterday; while Hazel herself can shake the fog of the Bay City from her hair and enjoy some sun-kissed life in the wide open air pockets of Southern California.

Glen Eaton, KJR’s popular tenor, came out of the East in a covered wagon and one of his greatest talents is to relate in a fascinating way the adventures which beset his family on the trail. During his years of singing over KJR, Glen has accumulated thousands of fan letters and his duet work with Marjorie Robillard has made the Eaton-Robillard team one of the most popular fixtures on the air.

J. Newton Yates, capable young organist of KFVD, is a local product, having studied here in Los Angeles since early boyhood. Mr. Yates came to KFVD after a series of successful engagements in Chicago and other eastern cities. His playing is characterized by a splendid technique, and real feeling for the type of music suitable to the organ. If you can stay awake until 12:00 midnight, you will enjoy Mr. Yates’ organ recital immensely.

And what more can be said about Tom Breneman? He’s getting to be like Amos ‘n’ Andy. We have exhausted all our superlatives and will be short out for a month or so. But maybe you didn’t know that the creator of Tom and Wash, a noon-day feature over KFWB was so nice looking!

Dr. Ralph L. Power, radio editor for the Los Angeles Record and the Long Beach Sun, and western editorial representative for Radio Digest magazine, again picks out an All-Southern California radio team. His choice for 1930, arrived at with the help of a committee of three, follows:

Announcer: Bob Swan, KHJ
Continuities: Tom Breneman, KFWB
Violinist: Calmon Lobovoski, KNX
Bands: Long Beach Municipal, KGER
Sports announcers: Zeph Fitzgerald, KGER-KFWB
Speakers: most scholarly, Rabbi Edgar Magnin, KHJ; most sincere, Rev. Charles E. Fuller, KGER; most inspirational, Burr McIntosh, KFWB; most popular, Hugh Dobbs, NBC
Vocalists: soprano, Virginia Flohri, KFI; tenor, Carl Omeron, KHJ; contralto, Claire Van Nostrand, KHJ; baritone, Arthur Lang, KFI; crooner, Ted White, KHJ; ballads, Helen Guest, KECA; quartet, Hallelisha's Quartet
Pianist: Claire Meltonino, KNX
Cellist: Misha Gega, KMPC
Humorist: John P. Medbury, KHJ
Drama: Georgia Fifield, KNX
Organist: Dick Dixon, KGER
Old-Time music: Original Hill Billies
Orchestra: Concert, Raymond Paige’s, KHJ: dance, Gus Arnold, KHJ: KFWB: philarmonic, Los Angeles, KFI

Robert Hurd, Recovered, Promises Quick Return

Still very pale and decidedly thin, but with a fresened spirit and mischievous smile, Robert Hurd, program director and featured tenor of KFI-KECA, Los Angeles, has returned to his office after a long siege in the hospital, where his death was averted by an operation to relieve a mastoiditis.

Hurd will resume his microphone appearances within a fortnight, it is assured by physicians. Details of the operation, graphically described by the patient, include following: "They had to cut my ear off and paste it back on, you know. I’m the only tenor living who has bit his own ear."

Lily Pons, latest sensation in the world of music, who in two months has made operatic history at the Metropolitan Opera House and who will go down in the annals of that famous institution as the most significant operatic "find" of the decade, will make her radio debut on Easter Sunday.

The dazzling new coloratura will bring her voice to an NBC network, including KGW, KGO, KQO, KFI, KPSD and KTSR, Sunday, April 5, during a program sponsored by the Victor Division of the RCA-Victor Company. The broadcast will be heard from 4:30 to 5:00 o’clock.

One afternoon less than two months ago Pons sang “Lucia di Lammermoor” at New York’s Metropolitan. Box-holders and galleryites liked her better than any newcomer in years and Pons left the stage that day famous. Still little was known about her. Metropolitan debuts have been dull lately; coloraturas seemed out of vogue. Newspapermen had not thought investigation of this one worth while. Pons in “Lucia” changed their minds.
The Technique of Sound Effects

By CHARLES FORSYTHE

An epidemic of dramatic and musical plays is with us, and threatens to become chronic. The radio audience throughout the country has shown, very definitely, its preference for this new type of program. In presenting radio plays, the most essential element seems to be atmosphere which, until television arrives, must of necessity be produced by sound effects. Naturally, the stations producing these plays are forced to use sound effects and, in nearly every case, grope in the dark for means of producing the necessary sounds to lend the desired atmosphere to their productions. It is with that thought in mind that I offer several suggestions which may help various radio producers to help themselves, and by so doing, I feel sure that better radio drama will be the result. I offer the following "don'ts" for sound effect technicians and radio producers:

DON'T use metal sheet for imitating thunder. As you know, or will learn by experimenting, a sheet of metal reaches the loud speaker exactly like a sheet of metal, and is one of the poorest methods of producing an imitation of thunder. A large thunder or cannon drum is the only manner in which this effect can be obtained. It will prove a valuable asset to all studies going in for dramatics in a big way. The cost is between forty and sixty dollars, depending, of course, upon the size of the skin used for the head. I cannot spare space here to describe the design and specifications, but will cover the matter thoroughly in a later issue of this magazine.

DON'T use the imitation of footfalls at any time except for eerie situations, for thrills, mystery scenes and such as creeping down stairs, or loose squeaking boards in the attic, etc. Footfalls are very seldom practical in foregrounds; never very effective except for distant sounds or someone supposed to be in the next room, or overhead.

DON'T use a bell for European trains. They do not have bells. The whistles should be single tone similar to the compressed air whistles used on an American interurban electric train.

The chug, or exhaust, of a European locomotive should never be strong and thunderous—like American trains. You will get a very accurate example of the sound of a European locomotive by copying the sound of our donkey engines in this country which we use in logging camps and construction camps.

The rail clicks should be in pairs, not in triplets, as is the case with American trains. European coaches have the car wheels, two in the front and two in the rear. Enough for European train effects.

Last month I promised something regarding signal whistles for trains in the United States. One long whistle for a train arriving at yard limits of a station; two long and two short whistles for a train approaching a crossing outside of the yard limits of a station; a series of short blasts of a whistle for all emergencies such as some obstruction on the track or danger ahead.

When a train departs from a station, be sure that the whistle precedes all other sounds.

DON'T use coconuts shells on a marble slab or similar substance for horse hoof effects, except when imitating hoof beats on the pavement.

DON'T use a single electric door bell for a telephone bell. Have TWO electric door bells connected so that they will ring simultaneously; then you will get the correct effect. Be sure to have the bell edgewise to the mike, as they are very directional and when used at the wrong angle the microphone will pick up the hammering, and not the bell tone, itself. In ringing a bell for telephone, always remember that modern telephone equipment provides a mechanical device for ringing that bell, and that the impulse of that device is just as rhythmic and methodical as the ticking of a clock.

It might be well to remember . . . getting down to the fine points of it . . . if the locale of your action is in poverty or medium circumstances, it seems highly probable that the telephone would be a party line. In this case, ring the bell in pairs: two bells and a slight pause, and then repeat two bells. In ordinary circumstances, or where your action is in the home of a person of importance, naturally this would be out of place and the ordinary single ring would be in order.

In closing, it is highly advantageous when planning an important program, that sound effects should accompany dialogue. This should be rehearsed just as it is going to be done on the broadcast. This will enable you to accurately balance your sound with your voices, giving it the naturalness which is next to impossible to attain at all times without monitoring. Sound effects very often overload, and in this case when your technician cuts down his gain to protect against that overload, he will fade your voices with it, thereby spoiling your dramatic action. Hence, the obvious necessity of perfectly balancing sound effects with dialogue.

* * *

Military bands, comparatively rare in the concert field, are returning to public favor via radio, according to Pryan Moore, conductor of a brass-and-woodwind ensemble which has recently been signed for a year's contract with KFI-KECA, Los Angeles.

Programs of the new feature will start with a series of concerts over KECA Mondays at 7:00 p. m. (P. S. T.)

* * *

KMTR broadcasts "Strange Facts You Should Know" every Thursday night at 7:30—not to be outdone by the newspaper's "Ripley" drawings and stories — radio must needs have its hand in the enlightening business of unearthing "unusual stories." Listeners are asked to write the strange facts that they have come upon from time to time and these, with the work of the research department of the station make up the most interesting of programs. For instance: in Glasgow, Scotland, the newspapers use their front page to print the classified advertising, whether for convenience or for profit is not told.
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The March of Radio

LAFOUNT SEES ADVERTISING RAP

The recent KFKB decision of the District of Columbia Court of Appeals is interpreted by Commissioner Harold A. Lafount as giving the Federal Radio Commission authority to supervise and restrict advertising over the radio despite its lack of censorship power. By interpreting the "public interest" clause broadly, the court has indicated that the Commission should step in whenever a station goes beyond certain limits either in the amount or character of the advertising it sponsors.

The court, in upholding the denial of a license renewal to Dr. John R. Brinkley, operator of the Milford, Kans., station, stated that Congress, in enacting the Radio Law, "very evidently had in mind that broadcasting should not be but must be adjunct of a particular business, but should be of a public character."

Station KFKB was put off the air by the Commission because of a "Medical Question Box," conducted by Dr. Brinkley. The court in its opinion, denied that such action was an exercise of censorship authority by the Federal body.

Commissioner Lafount explains as follows: "Section 29 of the Radio Act of 1927 expressly prohibits the Commission from exercising any power of censorship over radio broadcasting stations consequently no restrictions have been made on radio broadcasting by the Commission. "Broadcasting stations are, however, licensed to serve the public and not for the furthering of private or selfish interest of individuals. The standard of 'public interest, convenience, and necessity' prescribed by the Radio Act of 1927 means nothing if it does not mean this thing. "Advertising is a public service and broadcasters are bound to serve a station renders and makes it possible, it must necessarily be an exception to the rule. However, the amount and character of advertising must be rigidly confined within limits consistent with the public service expected of the stations.

* * *

YOST REPORT SEEN AS COMPROMISE

The Federal Radio Commission is expected to adopt the secondary report of Chief Examiner Ellis A. Yost on applications of cleared channel stations for 50,000 watts as a compromise measure with the high power broadcasting advocates. The whole report, in fact, seems designed to appease even the broadcasters who were not among the eight selected for maximum power by recommending that they be granted 25,000 watts.

While not officially announced, it was learned that the recommendations had been reviewed by each of the Commissioners individually before the report was made public. As twenty days were allowed for the filing of objections, the Commission will probably not announce its decision until the expiration of that period.

The Yost report was obviously intended to forestall injunctions and prolonged litigation that had been threatened after the Commission turned down the Chief Examiner's first recommendation to open all 40 cleared channels to 50,000 watt stations.

Granting of 25,000 watts to all stations on the 20 cleared channels not designated for the maximum power is permitted under General Order 42, which established the limitation policy. This order stated that 50,000 watt stations would be permitted to operate on 20 cleared channels while stations on the other 20 cleared channels would be limited to 25,000 watts power.

Some objections and probably some court action are expected even if the report is adopted, but there will not be such a general uprising as would have occurred if the half-maximum power had not been recommended for those applicants who are not among the eight chosen to fill vacancies under the limitation order.

The eight stations selected by the Commission for maximum power are: WJZ, New York, now operating with 30,000 watts; WCAU, Philadelphia, Pa., 10,000 watts; WSM, Nashville, Tenn., 5,000 watts; WSH, Atlanta, Ga., 5,000 watts; WCCO, Minneapolis, Minn., 7,500 watts; WGN, Chicago, 25,000 watts; KPO, San Francisco, Calif., 4,000 watts, and KOA, Denver, 12,500 watts.

* * *

TWO LOGS MUST BE KEPT BY BROADCASTERS

Under the terms of a new general order adopted by the Federal Radio Commission, two accurate logs, one of programs and the other of technical operations, must be kept by broadcasters. The effective date has not been set, but it was said it would probably be March 1st.

The logs, which shall be open at all times to inspection by Radio Supervisors, shall include a use of phonographs, both records and electrical transcriptions, together with the announcement made in this connection. The operating log shall contain a chronological account of the station's operation.

CONGRESS MAY REVISE RADIO LAW

Possibility that the White bill for the revision of the Radio Act in several particulars may be passed by Congress before adjournment loomed when the Senate Committee on Interstate Commerce favorably reported the measure after hearings on several amendments.

The basic bill was passed by the House of Representatives last year, but only recently Representative White added on several amendments. These various revisions will have to be adjusted at a conference if the Senate adopts the measure in its present form.

One of the controversial amendments, passed last year by the Senate, but tabled by the House, provides for the transfer of the Radio Division of the Department of Commerce to the Federal Radio Commission. Senator C. C. Dill, of Washington, has been sponsoring the proposal, but friends of W. D. Terrell, Chief of the Radio Division, have been seeking to block it in the House because it fails to place the Department on a par with the Legal, Engineering, and other Divisions of the Commission offices.

Three recommendations of the Radio Commission are embodied in the revisions proposed by both branches of Congress. These give the Federal body authority to suspend a delinquent broadcasting station for a period not to exceed 30 days, exclude territorial possessions from the Five Radio Zones of the United States, and require the illumination and painting of radio towers.

The license period of broadcasters would be reduced from three years to one year under another amendment. The Radio Commission, however, has never taken advantage of the present law in this respect, having issued licenses for only three months.

* * *

NBC MOVES TO ACQUIRE STATION WENR

The National Broadcasting Company has filed an application with the Federal Radio Commission for the transfer of the operation of Station WENR, Chicago, from the Great Lakes Broadcasting Company to the NBC network.

The Chicago station, which is acquired under a lease arrangement, operates with 10,000 watts on the 870 kilocycle channel, which is shared with WLS, also of Chicago.

An agreement has been reached between NBC and the Prairie Farmer, owner of WLS, whereby the latter will use the WENR facilities during its time on the air. WLS will use its own call letters, however.

* * *

RADIO RULES MADE MORE STRINGENT

A general tightening up of radio regulations affecting broadcasting stations, intended to eliminate waste time, has been ordered by the Federal Radio Commission to become effective March 1st. A number of violations for this purpose has been issued.

One of the principal provisions states that stations which are authorized to operate without any time limit must maintain, after May 1st, a regular operating schedule of 12 hours each "broadcasting day," at least three of which shall be between 6 a.m. and midnight. Violation of this rule will entail a reduction in the license hours of operation.

* * *

STATIONS DEVIATING LESS, REPORT SHOWS

One reason for improved reception within the last few months has been traced to better mechanical operation of broadcasting stations by W. D. Terrell, Director of the Radio Division of the Department of Commerce.

Excessive frequency deviation, or "wobbling," which until recently was one of the primary causes of interference, has decreased considerably, a check-up by the radio police reveals. Broadcasters are striving more than ever before, according to Mr. Terrell, to stay within their assigned wave lengths.

Out of 339 stations checked during December, 101 showed deviations under 200 kilocycles, while 338 deviated more than 200 kilocycles. Under regulations of the Federal Radio Commission, deviations up to 5000 kilocycles are permitted.

Radio station operators are co-operating with the Radio Supervisors very satisfactorily, Mr. Terrell said, and are striving to adhere as closely as possible to their assigned frequencies.
DX PRIZE CONTEST

Here is another RADIO DOINGS DX Contest with a Grand Prize well worth working for. A great nine-tube super-heterodyne receiver will be awarded to the winner—complete with tubes; all ready to plug in and amaze you with the kind of performance you have always wanted in a radio. So much sensitivity that you cannot use all of it, even on the quietest winter night, real 10 kilocycle selectivity, a wallop that will rattle the windows if you’re careless with the volume control, and a tonal fidelity that will probably make your present set blush with shame. Possibly the fortunate DX enthusiast who wins this prize may intend to use it as a secondary set in the home or give to a poor relation, but we rather imagine it will speedily take first place in his (or her) affections. For while this super-heterodyne retails for only $69.50 it does not have to take a back seat in favor of any of the high-priced receivers from the standpoint of performance. The Angelus super is manufactured in Los Angeles by Davison-Haynes Manufacturing Company, and it is through the courtesy of that company that we are able to offer one of these receivers as the Grand Prize in our March Contest.

Now for the details of the Contest. The time will be Saturday night, March 14th from 8 p.m. until 1 a.m. Five hours of intensive DX-ing. The contest is open to everybody everywhere. The idea is to log as many DX stations during this time as possible, listening to each one long enough to identify it and logging the name of the musical selection heard or exact words of the announcer or other speaker. List the time heard, the call letters, frequency, and name of selection or other identifying information. Logs must be mailed not later than Monday, March 16. The winner will be announced and log published in our next issue.

In judging the logs, all things will be considered as heretofore. The prize winner will not necessarily have the longest log. It is only fair that contestants in isolated sections, removed from local interference should be handicapped. Bringing in 50 stations in one location with set A may well be a greater accomplishment than logging 65 stations in another location with set B, etc. The judges will try to take all of these things into consideration, therefore it is important that you give the address where you operated your set, and make and model of receiver used. You will find the new RADIO DOINGS CALL BOOK (blue cover) invaluable in this contest.

** KMTR to Move and Install New Transmitter

Mr. Frank Doherty, owner of radio station KMTR, recently returned from Washington, where he presented a case before the Federal Radio Commission in connection with KMTR’s application for removal to a new site, the installment of a new transmitter and an increase in power. Permission to move the station and install new equipment was granted, while the power increase application is still under consideration.

KMTR is to move to Cahuenga and Romaine in Hollywood, the site of the old Buster Keaton studio, where a new 1000 watt RCA screen-grid transmitter, crystal controlled and with 100 per cent modulation is to be installed. The station will operate with 500 watts power, however, unless the increase is granted. The difficulty of securing a power increase is due to the fact that California is slightly over its quota in the commission’s unit system of rating.

Very elaborate and modern broadcast studios are to be built in the grounds of the United Artists film studios, for the bigger and better KMTR.

** KTBI Sold to Auburn-Fuller Company

Radio station KTBI has been sold to the owners of KFVD, all that is lacking being the approval of the Federal Radio Commission. The new owners also have requested permission to use all of the time on the 1350 kilocycle channel not used by the sharing station KGEF. KTBI is assigned to use half-time, and KGEF half-time. This purchase gives the Auburn-Fuller people 1000 watts and probably a good split with Shuler on the time division.

** Mexican Stations Interfere With KWKH

"Old Man" Henderson will have to direct his invectives henceforth at Mexican and Cuban stations for interfering with the broadcasting by Station KWKH, of Shreveport, La., as a report of Dr. C. B. Jolliffe, Chief Engineer of the Federal Radio Commission, has reported that they, and not stations in this country, are largely responsible for interfering with KWKH.

Henderson has made an unsuccessful application to have the power of his station increased to 30,000 watts in order to overcome this interference, which he blamed, however on United States stations. Dr. Jolliffe’s analysis of the complaints "show that the cause is in general outside the jurisdiction of the Federal Radio Commission and not due to improper allocation."
LINES AND ANGLES
...by...
TED OSBORNE ... KHJ

Th' feller who borrows money borrows trouble. Th' feller who lends money don't have t' borrow trouble he has it already.

There was a young fellow from Ga.
Who was taken to court as a fa.
The judge gave him ten.
In the San Quentin pen;
"Where," he said, "they will lodge you and ba."

Opportunity knocks at least once at every man's door, but sometimes th' man is such a knocker himself that Opportunity can't make itself heard.

***

The Four Ages of Hair:
Bald,
Fuzz,
Is,
Was.

Too much o' somethin' is nearly as bad as not enough of it. I know a woman who cleans her house so much that it's nearly allus in a mess.

***

A satirist is a feller who discovers a lot o' things about hisself, an' says 'em about somebody else.

***

Most people think a rabbit
Is cowardly and frail.
And yet, though he is timid,
No cook can make him quail.

***

It'd be easy enough t' be content with little—if nobody hadn't no more.

***

Bachelors
Are
Chaps
Having
Enough
Luck
Or brains to
Remain
Single.

Ev'rybody in th' world has his faults, but th' main difference in folks is whether they're ashamed of 'em or proud of 'em.

***

Th' word "Save" simply knocks the "L" out of "Slave."

***

Love is a good deal like philosophy. Th' more a feller has of it, an' th' less he talks about it, th' better off he is.

High Power Distribution

In the Fifth Zone, Examiner Yost has recommended to the Commission that KOA and KPO be granted increase in power to 50,000 watts, in addition to the construction permits already issued to KNX and KFI. He further recommends that KGO and KSL be allowed to increase power to 25,000 watts.

In a summary to his report to the Federal Radio Commission, Mr. Yost, chief examiner, submitted the following tabulation, showing the distribution of all 50,000 watt stations, should his recommendations be adopted:

First Zone

<table>
<thead>
<tr>
<th>Station</th>
<th>City</th>
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<tbody>
<tr>
<td>WTIC</td>
<td>Hartford, Conn.</td>
</tr>
<tr>
<td>WEAF</td>
<td>New York, N. Y.</td>
</tr>
<tr>
<td>WABC (C. P.)</td>
<td>New York, N. Y.</td>
</tr>
<tr>
<td>WJZ*</td>
<td>New York, N. Y.</td>
</tr>
</tbody>
</table>

Second Zone

<table>
<thead>
<tr>
<th>Station</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>KDKA</td>
<td>Pittsburgh, Pa.</td>
</tr>
<tr>
<td>WLOI</td>
<td>San Antonio, Tex.</td>
</tr>
<tr>
<td>WSBE*</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>WSM*</td>
<td>Cleveland, O.</td>
</tr>
</tbody>
</table>

Third Zone

<table>
<thead>
<tr>
<th>Station</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBAP</td>
<td>(Fort Worth, Tex.</td>
</tr>
<tr>
<td>WFAA</td>
<td>(Dallas, Tex.</td>
</tr>
<tr>
<td>WOAI</td>
<td>San Antonio, Tex.</td>
</tr>
<tr>
<td>WSBJ*</td>
<td>Atlanta, Ga.</td>
</tr>
<tr>
<td>WSM*</td>
<td>Nashville, Tenn.</td>
</tr>
</tbody>
</table>

Fourth Zone

<table>
<thead>
<tr>
<th>Station</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>WENR</td>
<td>(Chicago, Ill.</td>
</tr>
<tr>
<td>WLS</td>
<td>(Chicago, Ill.</td>
</tr>
<tr>
<td>WGN*</td>
<td>(Chicago, Ill.</td>
</tr>
<tr>
<td>KMOX</td>
<td>St. Louis, Mo.</td>
</tr>
<tr>
<td>WCCO*</td>
<td>Minneapolis, Minn.</td>
</tr>
</tbody>
</table>

Fifth Zone

<table>
<thead>
<tr>
<th>Station</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>KFI (C. P.)</td>
<td>Los Angeles, Calif.</td>
</tr>
<tr>
<td>KNX (C. P.)</td>
<td>Hollywood, Calif.</td>
</tr>
<tr>
<td>KPO*</td>
<td>San Francisco, Calif.</td>
</tr>
<tr>
<td>KOA*</td>
<td>Denver, Colo.</td>
</tr>
</tbody>
</table>

*—Recommended for 50 K.W.

If the recommendations made are followed, clear channel stations operating with a power output of 25 kilowatts would be as follows:

First Zone

<table>
<thead>
<tr>
<th>Station</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBZ†</td>
<td>Boston, Mass.</td>
</tr>
<tr>
<td>WHAM†</td>
<td>Rochester, N. Y.</td>
</tr>
<tr>
<td>WOR†</td>
<td>Newark, N. J.</td>
</tr>
</tbody>
</table>

Second Zone

<table>
<thead>
<tr>
<th>Station</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHAS†</td>
<td>Louisville, Ky.</td>
</tr>
</tbody>
</table>

Third Zone

<table>
<thead>
<tr>
<th>Station</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBT†</td>
<td>Charlotte N. C.</td>
</tr>
<tr>
<td>WAPI†</td>
<td>(Birmingham, Ala.</td>
</tr>
<tr>
<td>KVOC†</td>
<td>(Tulsa, Okla.</td>
</tr>
</tbody>
</table>

Fourth Zone

<table>
<thead>
<tr>
<th>Station</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBBM-WJBT</td>
<td>Chicago, Ill.</td>
</tr>
<tr>
<td>WMAQ†</td>
<td>Chicago, Ill.</td>
</tr>
<tr>
<td>WHO-WOC†</td>
<td>Des Moines, Iowa</td>
</tr>
<tr>
<td>KFAB</td>
<td>Lincoln, Nebr.</td>
</tr>
</tbody>
</table>

(Recommended for 25 kw. in Examiners' Report No. 42)

Fifth Zone

<table>
<thead>
<tr>
<th>Station</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSL†</td>
<td>Salt Lake City, Utah</td>
</tr>
<tr>
<td>KGO†</td>
<td>San Francisco, Calif.</td>
</tr>
</tbody>
</table>

† Recommended for 25 K.W.
(C.P.) Construction permit already issued.
Through the kindness of a friend I have been privileged to read some copies of your magazine, and I must say I have enjoyed its DX columns, together with the short wave notes. I am very interested in short wave reception, and I thought you may like to know of some of my experiences. My receiver is home constructed, being a two-tube unit, coupled to a two-stage transformer-coupled amplifier. The aerial is a type, triple wire about 30 feet high, and badly screened by trees.

Stations I have logged are W6XN, W2XAF, W8XK, W3XAL, W2XE, W9XF, CJRX, L5X, VQ7LO, PCJ, 3LO, 2KO, Zeesen, besides many ship and land phone stations. I have received verifications from all these stations. My biggest thrill was when I heard W6XN, Oakland. This was on the 9th of March, 1930, when I enjoyed a very fine two-hour program. I am sorry to hear the station has closed down. Hoping these few words will interest your readers, I remain, yours faithfully,

A. E. BEAR

Last Sunday at 1 a.m. I picked up WTIC. He was broadcasting a test program on WEAF's channel, 660 Kc. I listened to him until 1:30 p.m. on Wednesday. Twenty minutes later I picked him up again, this time on his regular frequency of 1060 Kc. He was coming in like a public address system. KWWJ was on 1060 Kc so I tried the 660 channel and instead of WTIC I got WEAF, although I did not know it at the time. He played three phonograph records without making an announcement and I took it for granted it was WTIC, but later, thanks to our good friend George Schmidt, I identified the station as WEAF.

By the way, this is my first contribution to "Round the Dial," although I have been a constant reader of RADIO DOINGS for the past six years.

—L. G. Chavez, 1263 W. 51st Place, Los Angeles, Calif.

I picked up XEGY Saturday night, February 14th, and they gave their address as P.O. Box 464 or 1087, Mexico City. This station was formerly XEG and broadcasts on 829 Kc. XEN has been broadcasting during the last few weeks on 705 Kc.

CKLC broadcasts a Canadian National Railway program, using the call letters CNRD, on Tuesday from 6 to 7 p.m. and on Thursday and Saturday from 7 to 8 p.m.

WSMB may be had beginning at 5:30 a.m. on Sunday mornings KORE until 1:30 or 2 a.m., and KGR 6 broadcasts an early morning DX program on the second and fourth Sunday of each month. I just received information from the East to the effect that every Saturday and Sunday morning on 1310 Kc various stations follow each other at half hour intervals broadcasting DX programs for the Newark News Radio Club.

Who can tell me when to get CMW? They seem to be quite an elusive station.

Where are some of our old friends like C. E. Holloway, J. Stanley Lynch, D. M. Boozer and others that wrote into this column last year? We would like to hear from them, wouldn't we, Gang?
—Stuart Walmsley, Los Angeles.

I was interested in Mr. Love's letter in the December issue of RADIO DOINGS. I read where he has been playing SAR, Mel bourne, and he states he heard more stations on 665 and 760 Kc. with a broad English accent. These stations are 2FC, Sydney, 1000 watts and 4QQ, Brisbane, respectively, operated by the Australian Broadcasting Company and owned by the Government.

Good scalp-hunting, Mr. Love, and hope to see you hear more of our Southern hemisphere stations.
—S. Ellis, Okato, Taranaki, New Zealand.

JFAK, Taihoku, Taiwan, radio station, regularly having been on the air with 1 kilowatt, increased the power to 10 kilowatts January 15th. JOKK, well known Japanese radio station to the Coast DXers, has commenced the "nijusho," what is called "Dual" or double broadcasting service since December 10th last. The second JOAK is being on the air on 490 meters with the power of 10 kilowatts, while the first JOAK is on the air on 345 meters, as usual. This experimentation, if good results are experienced, other wave-lengths will be used. JOKK, Okayama, is off the air now. He was on the air last Autumn. JOLK is operating regularly now.

—Minoru Nakamura, Yamate, Osumachi, Kanagawa-ken, Japan.

After waiting some three or four weeks I finally received a verification from radio station KGBU in Ketchikan, Alaska. It is an exceptionally nice verification and I shall try to tell the readers all that it contains. KGBU maintains a regular schedule of the following: daily from 10:00 a.m. to 2:00 p.m. and nightly from 5:00 p.m. to 10:00 p.m. (P.S.T.) They are having regular DX programs every Thursday morning from 1:00 a.m. to 3:00 a.m. (P.S.T.) This program has been broadcast during the months of January and February and will continue on through March. After the last Thursday in March they will no longer have this very interesting program. Their slogan is "The Voice of Alaska." They operate on a frequency of 900 Kc. and have a power of 500 watts. This station is undoubtedly very much willing to answer all letters received.

From KSBO in Sioux Falls, South Dakota, I have received another nice verification and in it they state they are on the air daily from 6:30 a.m. to their local sunset and on Sundays from 9:00 a.m. to 6:00—8:00 p.m. to 1:00 a.m. (C.S.T.) They have 2,000 watts and operate on 1110 Kc. This is another very good morning catch. Station CHYC in Montreal, Canada, is on the air on Sundays from 4:30 to 8:00 p.m. (P.S.T.) They are on 730 Kc. and have 5,000 watts. It is really the same transmitter as CKAC of the same city, power and frequency. However, most DX fans class it as a separate station.

It may be interesting to know that WWJ, the station that comes on so well in the early morning from 3:00 a.m. on 'til KPPRC or KFEL comes on, is an associated station with the well known Canadian National Railway Network.

—George Schmidt, 1642 West 82nd St., Los Angeles, Calif.

Here's a little first-hand information that should help some one. At least, I hope it does, as it always pleases me to know that I have helped a brother DXer to enlarge his log.

CHWK, Chilliwack, British Columbia, is now on 665 Kc., or 45 meters, with 50 watts power, soon to be increased to 100 watts or more. He is on the air every evening except Wednesday from 5 to 7 p.m.

CJRW, Fleming, Saskatchewan, is another Canadian who is on 665 Kc., with 1000 watts. He may be heard Mondays 7 to 7:30 and 8 to 9 p.m., also on Wednesdays and Fridays and Saturdays till 9 p.m. I do not know whether its sister station, CJRM, Moose Jaw, Sask., is on 665 Kc. now or not, but if he is, he should be heard, easily.

KUJ up here in Washington, has moved from Longview to Walla Walla. In southeastern Wash. time they start. I don't know, but I should think at midnight. This means that KUJA can be picked up here on the Coast every Thursday night from 10 to 11:30.

Here is a tip on a station that is a remarkably good catch. I refer to WCAP, Asbury Park, New Jersey, on 1280 Kc. I picked this station up Sunday night, February 7th, just around 11 and played it off and on until 22 minutes past 12. Whether or not it is a regular thing for this station to broadcast at this time I do not know, but it is certainly worth trying for as it is only 100 watts in power.

I was very much surprised to find KRGV in Harlingen, Texas, on this channel, 1280 Kc., about half past 12 the same night. Previously, the same evening, I had played this station on the regular frequency of 1260 Kc. WTCI had another test program on 660 Kc. and came in even louder than the week before. I was interested in listening for a minute or two to ZYA in Wellington. They were broadcasting names of people who were safe and wanted their friends to know they had not been injured by the earthquake.

—A. E. Armstrong, 2021 Bonita Drive, Glendale, Calif.
"ROUND THE DIAL (Continued)

Below I hope to have listed information which will be found of interest by readers of this column.

CJCA, Edmonton, Alta., is now on 930 Kc.; not 580 Kc.
COMK, Mouden, China, is on 420 meters; not 425 meters.
JFAX, Takau, Japan, is on 900 Kc., and uses 10,000 watts.
CPRY, Toronto, Ont., can be logged on Monday, Tuesday, Wednesday, Thursday and Saturday at 7:30-8:00 p.m.
CHNS, Halifax, Nova Scotia, is now on 910 Kc. I have a verification from them.
WMMN, Fairmont, W. Va., 890 Kc, can be logged on Tuesday mornings at 2 o'clock.
WKRC, Cincinnati, Ohio, 550 Kc., is on every morning at 3:45 o'clock, with church services.
KIRC, Enid, Oklahoma, 1370 Kc., is on the air on Wednesday and Saturday at 12:01-4:30 a.m. (C.S.T.)
KGSC, Wolf Point, Montana, 1310 Kc., is on with a DX program on Sunday mornings from 1 to 4:00 o'clock. (M.S.T.)
WCLF, Chicago, Ill., 970 Kc., can be logged after 4 a.m.
WCHI also in Chicago and on 1490 Kc., can be picked up at 9 p.m. on Sunday.
WJJD, Mooseheill, Ill., 1130 Kc., is on after 5 a.m.
KTSA, San Antonio, 1290 Kc., signs on the air on Tuesday at 3:48 a.m. (P.S.T.)
WBEN, Buffalo, 9000 Kc., can be had at 4:00 a.m.
CFCA, Toronto, Ont., 840 Kc., is on the air at 7:15 a.m. (E.S.T.)

On January 13, 1931, I succeeded in logging WRC in Washington, D. C. They came in at 3:48 a.m.
KFUO, St. Louis, Mo., 550 Kc., is on at 12:12-30 a.m. (C.S.T.)

On Saturday.
WFBR, Baltimore, Md., signs on the air at 7:00 a.m. (E.S.T.)
I have some interesting information on the airport stations:
KCJU, Fresno, Calif., 1040 Kc.
KCAE, Winslow, Ariz., 800 Kc.
KQV, Oakley, Calif., 800 Kc.
They are on every hour for about 15 minutes.
---Constantino Stefani, Rt. 1, Box 165, Merced, Calif.

It has been some time since I have seen any one's complete log appear in RADIO DOINGS. I'll try to start the ball rolling and the rest of you fellows come on in with your logs.

I have received 200 stations in 33 states, Cuba, Canada, Mexico, New Zealand, Australia, and Japan. 135 of these are verified in writing, 277 of them are verified by stamps only. And 38 are not verified at all. My verifications are coming in, received 17 in one week. I have logged every channel except 630 Kc., 910 Kc., and 990 Kc.

Stations received and verified in writing by the broadcasting stations by card or letter:
CMOM, Borkok, KFJF, KSOO, KTSF, CGMK, KGCE, WJW, KFYR, KMA, KGQ, KFBF, XLI, XNAX, KVEP, KOR, KGJ, KMIC, KHJ, WPJ, KTSJ, XED, KGCH, KFQU, KOA, KFEX, KFCR, KTM, WGN, KGJ, KL, WMAQ, CFCN, KPO, WHB, WREN, CHLS, WDAY, KDO, WMSB, KSCJ, 2YA, WOI, KMBG, KIOIT, WJW, KRE, WKL, WKB, KRC, KXO, KSO, KNGF, KGBZ, KROW, WOAI, KYA, KCA, KEN, KCKX, KOY, KOMO, CNRV, KTHS, KFBK, KGG, WOC, WHD, KGDM, KZM, KFM, KPA, KAT, WJW, WRJ, WOCJ, KGW, WBAP, WJAF, KFBS, KFXG, KREG, KFOX, KNX, KFSI, KGBF, KXG, KOW, KMM, KOB, WLJ, WKFJ, KJBR, KDFY, KFXM, WKM, KTM, KAT, WYK, KMO, KLX, KMTR, KMY, W2XAG (WGY), KFEL, KTR, WSB, KGEE, KMEC, KBTI, KBG, KOAC, WLS, WMBI, KVOO, KPC, KPOF, KFX, KORE, KDDA, WCBD, WIBW, KFI, KEC, KGKY, WSAI, WHK, KLG, KFKB, KFDY, KFI, KGOS, WSK, AQG, KTB, WCHI.

Stations received and verified by the broadcasting stations, by stamps only:
WFAA, KMOX, WHAS, WCCO, KDB, KEX, WEAR, KGA, KELW, WDAF, KFOW, KWKB, KQ, KPSN, KRLD, KFAB, WBBM, KQ, WSM, WMT, KPRC, KSFN, WHAM, WOW, WRHM, KST.

Stations received but not verified:
WMG, KRGV, KIT, CMK, KGIR, KOH, KVI, XEN, KOL, IOAR, JOCK, XEJ, KGHL, JOGK, JOIK, JOIF, JOH, KFPM, WEAH, WP, WOR, OKO, KFXF, WJZ, WRC, WGR, WKBW, CKGW, WABC, WTFI, KNTT, WMBD, KS, WS, KUSD, WDA, KFDM, KFKA.

--- A. R. Van Compernolle, 618 North Baker, Santa Ana, Calif.

"ROUND THE WORLD DX CLUB NEWS"

By EDWARD C. ROTH, President

Another month has passed and DXers are certainly "doing their stuff." From the way the mail is coming in, we feel very proud of the progress of our club.
The club wishes to express its appreciation to George Villani, our efficient treasurer, for his letter to all members giving us "hot" tips on special broadcasts and on stations that are really DX.

Before we forget, let us welcome a new member whom we are very happy to have with us. We speak of Mrs. I. C. Healy, of Ocean Beach, at San Diego. Mrs. Healy has 233 stations logged since October 45th, 1930. This fine DXer uses a General Electric set. Welcome, Mrs. Healy!

For some reason that we are unable to explain, we are having considerable bad luck in our club DX contests. We have now held two such contests and we regret to say that we cannot give out the names of the winners. This may appear strange, but it remains a fact. However we are not trying to "pull any fast ones" as the saying goes—and we certainly appreciate the patience of the members in this matter. We sincerely hope we can soon announce the winners and award the prizes.

At this time, we wish to make an announcement to clear up a misunderstanding regarding our Round the World DX contests. We have received several letters and logs from DX fans submitting logs for our club contests. The prize DX contest sponsored by the Round the World DX Club is open to club members only. The club contests are in no way related to the DX contests sponsored by RADIO DOINGS. We trust we have made this clear in order that DX fans who are not members of our club will not be disappointed in future contests sponsored by the club. All we can say to non-members who wish to try their skill in our contests is to join our club and share the fun with club members in these prize contests.

We are in receipt of a letter from John F. Doherty, of Brooklyn, N. Y., which contains many DX tips and we certainly appreciate the interest shown by our friends in other parts of the United States. We receive many of these letters and only wish that we had the time to answer each and every one.

At this time we have an important announcement to make. We are holding a membership contest during the month of March. This contest is open to all members of the Round the World DX Club only. As a prize for the winner who enrolls the most new members we will give a year's paid dues. Second prize, six months' paid dues and third prize, three months' dues.

Now let's see how many new members we can have in our club before March 31st. There are plenty of fans who would like to join and all they need is some one to suggest the idea to them.

Round the World DX Club Visits Wm. MacDonald

By GEORGE VILLANI, Treasurer

Before going into the details of the visit, may this opportunity be taken in behalf of the Club, to thank Miss Stelter, Mr. MacDonald and his lovely mother for the very genial time enjoyed by all.

The night, January 31st, according to Mac, was not such a quiet one. However, what is termed a fair night at Chula Vista, is certainly a well worth while one for the fan who lives around Los Angeles. Getting down to what happened, in going up and down the different channels, Mac would say, "this is WOWO, Ft. Wayne: this is WAMA, Rochester: this is WCAU, Philadelphia." Just about then it would be the quarter-hour, and out would come an announcement of WCAU, which, by the volume, would have meant more to our thinking, KQO.

The "Patrol March," from 2YA, Wellington, was played with more volume than could be used at 1:30 a.m. as were a number of Japanese stations.

Looking through Mac's verifications is just like going through the Call Book. One reads, "we don't see how you can play our station from California, but no one knew of the program in advance up here in Iceland, so we must confirm your report, which is correct in detail." All I can say is, we hope for another visit.

"ROUND THE WORLD DX CLUB

314 East 12th Street, Los Angeles, Calif."
THE Imminence of the Super-Heterodyne Receiver as an Important Factor in Radio Merchandising This Year, and for Some Time to Come Makes It Important at This Time for Those Engaged in the Design of Commercial Receivers to Apply Themselves Closely to the Design Problems and Fundamental Theory Associated with This Type of Receiver.

In presenting this paper to this group, the writer has in mind rather than the exposition of new theories and facts, a review of the principles involved, with which you gentlemen are familiar, but such a resume is considered timely, as design problems will be considered in the order of their importance.

GENERAL PROBLEMS OF DESIGN

The transformer alone must be considered as a part of a complete radio frequency amplifier from which certain predetermined results are to be obtained. The performance of the amplifier, as a whole may be classified under three general headings: overall voltage amplification to be obtained, selectivity required, and method of control. These will be treated in the order mentioned.

In order to obtain sensitivity of the order of one microvolt per meter, which is necessary to make the Super-Heterodyne Receiver worthy of its name and reputation, voltage amplification in the intermediate frequency amplifier should be from 4000 to 7000. This can be accomplished easily with two cascade stages, each having a gain of from 65 to 85. Some receivers are being built with but one I.F. stage, and the lack of gain in the low frequency amplifier is partly compensated by additional audio or signal frequency amplification or both. However, the two stage I.F. amplifier is almost universal at the present time, and will be considered as the accepted standard. The same general theory of design, of course, will apply to any number of stages.

SELECTIVITY

Selectivity in this type of amplifier, as well as all other types, operating at high frequency, in order to meet the ideal standard, would be such that the interference ratio would be infinite at ten kilocycles off resonance, and zero over a band exactly ten kilocycles wide. This, of course, has never actually been accomplished, but in a low frequency amplifier for use as the I.F. unit of a Super-Heterodyne Receiver it can be more nearly approached than in any other type of receiver circuit. For reasons that become more apparent as the discussion proceeds, the best form of transformers for the purpose is one in which both primary and secondary are tuned. The frequency of resonance for either one of the tuned circuits will be

\[ f = \frac{1}{2 \pi \sqrt{LC}} \]  

When circuit one, whose frequency we will designate as \( w_s \), is coupled to circuit two, whose frequency we will designate as \( w_m \), magnetically, due to mutual inductance, the system will respond to two frequencies which will hereafter be designated as \( w' \) for the lower frequency and \( w'' \) for the higher frequency. The solutions for these frequencies will be

\[ \omega' = \sqrt{\frac{w_m^2 + \frac{w_s^2}{(1 + \frac{w_m^2}{w_s^2})}}{L}} \]  

and

\[ \omega'' = \sqrt{\frac{w_m^2 - \frac{w_s^2}{(1 + \frac{w_m^2}{w_s^2})}}{L}} \]  

Equations (2) and (3) apply to cases where \( w_s \) and \( w_m \) are tuned alike. Since we are interested only in cases where they are tuned alike when \( w_s \) equals \( w_m \) equals \( w \), we may use the greatly simplified forms

\[ W' = \sqrt{\frac{w}{1 + K}} \]  

and

\[ W'' = \sqrt{\frac{w}{3 + K}} \]  

Figure 1 shows how these peaks, widely separated for large values of \( K \), gradually merge into one as \( K \) is reduced, the value of \( w' - w'' \) varying between zero and infinity. The value of \( 1 + K \) between peaks rises less sharply than 1. With a fixed current in the primary, the value of \( 1 + K \) rises slightly as \( K \) is reduced since energy in the circuit becomes more nearly confined to one frequency. A critical value of \( K \) will be found where the two peaks will be so spaced that a fairly uniform flat top response will be observed. The steepness of the sides of the response may be controlled more easily than any other way by the shielding material introduced into the fields of the coils as illustrated in some of the accompanying curves. Let us assume now that a band width of 5 kilocycles is desired for maximum selectivity (This may be broadened in favor of fidelity for local reception by the introduction of resistance.) We first select two peaks about 3 kilocycles apart. Then, for 174 kilocycles as the center of the band we get from (4) and (5).

\[ W = W' - W'' \]

and a value of \( K \) in the neighborhood of .02.

For the determination of \( K \), we have

\[ K = \frac{M}{\sqrt{L_1 L_2}} \]

Or

\[ M = K \sqrt{L_1 L_2} \]

where \( L_1 \) equals \( L_2 \) which is the usual case, then

\[ M = KL_1 \]

To measure \( M \) first measure \( L_1 \), then \( L_2 \), then connect \( L_1 \) and \( L_2 \) in series, and call this \( L_1 \). Then

\[ M = L_1 - L_1 - L_2 \]

Or where \( L_1 \) equals \( L_2 \)

\[ M = 2L_1 - 2L_2 \]

The band width may then be predicted by

\[ W'' - W' = K \]

Figure 2 shows coupling too loose. This transformer would attenuate high frequencies and be extremely critical to tune. Figure 3 shows the same transformer with coupling slightly increased. Note the flat top, not quite wide enough in this case for good fidelity. Figure 4 shows the same transformer with even adjustments, but with a copper shield in place. The band width has been slightly increased, and the sides of the resonance curve are more uniform. Figure 5 shows the transformer with slightly increased coupling again, and with one of the circuits slightly mistuned. Figure 6 shows the result of correct alignment under the same conditions as Figure 5. Figure 7 shows the effect of adding an iron shield with the circuit adjusted as in Figure 6. Figure 8 shows the effect of further increasing the coupling with the same shielding as Figure 7. In this Fig. K is too large, and we find \( w' \) and \( w'' \) beginning to spread, destroying the band pass effect obtained in Figure 7. In the case of two stages operating in cascade, great care must be exercised in properly shielding all portions of the amplifier carrying high frequency current. The presence of regeneration may easily change the shape of the overall response curve of the I.F. amplifier from the solid curve of Figure 7 to the dotted curve shown in the same figure.

SELECTIVITY OF SINGLE CIRCUIT

In a series resonance circuit maximum selectivity, that is the sharpest resonance curve, is obtained when

\[ \frac{1}{WLC} \]

When \( R \) is small

By maintaining \( R \) and LC constant and increasing \( L \) with respect to \( C \), then \( W \) increases in value at this type of amplifier becomes broad.
In a parallel resonance circuit these expressions become $wL$ and $R/wC$ so that the variation of these ratios has the opposite effect. Since we are dealing in this case with parallel resonance, greater selectivity will be obtained with small values of $L$ and larger values of $C$. Incidentally, as $L$ is reduced, $R$ automatically drops due to the lower DC resistance and also reduced distributed capacity.

At 175 kilocycles the high frequency resistance does not climb nearly as rapidly as at the broadcast signal frequencies. The principal increase in resistance is due to the distributed capacity of concentrated inductances. In a layer wound coil the distributed capacity is actually lower when the coil is wound in many layers than if the same number of turns were wound in two layers, due to the fact that the capacities of the individual layers may be considered in series. Thus, when the number of layers is increased for a given number of turns, the coil approaches a single layer solenoid. The exact ratio of width to number of layers will vary in individual cases and can best be determined by experiment for any given set of conditions.

The New KFI

Interesting details of the 50-kilowatt transmitter being constructed by Earle C. Anthony, Inc., under authority of a federal permit authorizing that power for KFI have been released by the broadcaster in an official announcement.

The giant station will be located in a 30-acre tract in the vicinity of Northham, Los Angeles county, near the Orange county line at an approximate distance of twenty miles. This location was decided upon after exhaustive field strength tests by engineers, which proved that a perfect "circular pattern" was obtained at that point, insuring equal radiation in all directions.

The exterior, visible features of the new station consist mainly of the two towers and the building that houses the transmitter. The towers will be 400 feet high, placed 700 feet apart, and placed so that they form, with the building, an almost equilateral triangle, the building being 495 feet from the middle point between the towers. Double insulation is a feature of the towers which have been purchased from and will be erected by the Pacific Iron and Steel Company at a cost of $17,600.

The towers will be lighted in compliance with the Department of Commerce regulation for air traffic.

The ground system, elaborate and advanced in design, includes the feature of having 20 miles of copper wire plowed into the ground.

The transmitter itself, costing $153,000 is built by the RCA Victor Corporation and will be installed by them. It is of 50-kilowatt power with 100 per cent modulation. The electrical contract is handled by the General Electric Company.

The prices quoted above for building, transmitter and towers do not represent the total investment. Costs of the property, telephone installation, equipment, housing facilities for employees will appreciably increase the total.

When television becomes a practical factor in broadcasting, the new KFI transmitter can accommodate the new art by the addition of a minor unit. These plans do not include studio facilities which will be handled separately. Programs will continue to originate in the Earle C. Anthony building at Tenth and Hope streets, telephone cables taking the programs to the transmitter in the same manner that KECA programs are now handled to the transmitter at Eighth and Beacon streets.

According to engineering tests completed, the most appreciable result of KFI's increase of power will result in a much more refined and clear tuning, due to the difference between "noise level" and "signal level." At 5000 watts, for instance, the "signal level" is high enough over the "noise level" so that tuning is only rarely affected with extraneous noise. But with the 10,000 watts the "signal level" is so high above the noise level that it is possible to tune down without receiving noise to an extent impossible with the smaller wattage. This will be specially noted during daylight reception which will be materially improved.
Directory of Western Stations

KBPS—Portland, Ore.—1420 Kc., 211.1 mtrs., 100 w.—Benson Polytechnic School.

KDB—Salt Lake City, Utah—1320 Kc., 235.5 mtrs., 1000 w.—L. S. Fowling, owner; Eddie Conner, Studio-Mgr.

KDBL—Bakersfield, Calif.—1320 Kc., 235.5 mtrs., 1000 w.—Broadcasting Corp., 823 S. Fowling Ave., Mgr.

KECA—Los Angeles, Calif.—1430 Kc., 209.7 mtrs., 1000 w.—Telev. Broadcast Co., 6900 E. Haverlin, Mgr.

KEW—Spokane, Wash.—740 Kc., 244.4 mtrs., 500 w.—Union Bank & Trust Co., 1063 and GR 3193.

KEX—Portland, Ore.—1100 Kc., 254.1 mtrs., 500 w.—Western Broadcasting Co., William Norvell, Mgr. Tel. AT 3111.

KFBK—Sacramento, Calif.—1310 Kc., 228.9 mtrs., 100 w.—James McIntyre Company.

KFI—Los Angeles, Calif.—620 Kc., 485.5 mtrs., 5000 w.—Earl C. Anthony, Inc., Carl Haverlin, Mgr. Tel. WE 0331.

KFIIO—Spokane, Wash.—1290 Kc., 267.7 mtrs., 100 w.—Spokane Broadcasting Company.

KFJ—Astoria, Ore.—1370 Kc., 314.8 mtrs., 100 w.—KFJ Broadcasting, Inc.

KFRO—Long Beach, Calif.—1250 Kc., 239.9 mtrs., 1000 w.—Nichols & Wariner, Inc., H. U. Nichols, Mgr. Tel. 672-81.

KFJR—Portland, Ore.—1360 Kc., 230.6 mtrs., 500 w.—Ashley C. Dixon & Son.

KFQU—Holy City, Calif.—1420 Kc., 211.1 mtrs., 100 w.—W. E. Hiker, owner.

KFPY—Spokane, Wash.—1310 Kc., 223.7 mtrs., 1000 w.—Symons Broadcasting Company.

KFRC—San Francisco, Calif.—610 Kc., 491.5 mtrs., 1000 w.—Don Lee, Inc., Harrison Hilliway, Tel. Prospect 0100.

KFS—San Diego, Calif.—600 Kc., 499.7 mtrs., 1000 w.—Airfair Radio Corp., Leslie Adams, Mgr. Tel. Franklin 6353.

KFSG—Los Angeles, Calif.—1120 Kc., 267.7 mtrs., 500 w.—ECHO Park Broadcasting Co., Airplane McParson, Pres. EX 1114.

KFCV—Culver City, Calif.—1000 Kc., 299.6 mtrs., 250 w.—Auburn-Fuller Co., J. W. Swallow, Mgr. Tel. Empire 1171.


KFXM—San Bernardino, Calif.—1210 Kc., 247.4 mtrs., 100 w.—J. C. and K. W. Lee, owners, Tel. 4761.

KGA—Spokane, Wash.—1470 Kc., 264.1 mtrs., 5000 w.—Northwest Broadcasting Station, H. H. Stedaker, Mgr.

KGB—San Diego, Calif.—1330 Kc., 224.2 mtrs., 250 w.—Pickwick Broadcasting Co., Tel. Franklin 61512.

KGDM—Stockton, Calif.—1100 Kc., 272.6 mtrs., 250 w.—E. P. Pfeffer.

KGDF—Los Angeles, Calif.—1300 Kc., 230.6 mtrs., 100 w.—Trinity Methodist Church, Bob Schuler, Pres. WE 8887.

KGFC—San Francisco, Calif.—1421 Kc., 211.1 mtrs., 100 w.—The Golden Gate Broadcasting Company.

KGER—Long Beach, Calif.—1360 Kc., 226.4 mtrs., 1000 w.—C. Merryn Dobins, owner; Bill Ray, Mgr. Tel. 632-75.

KGJF—Los Angeles, Calif.—1200 Kc., 249.9 mtrs., 1000 w.—Ben S. Mossashan, owner and manager. Tel. WE 7748.

KGO—San Francisco, Calif.—790 Kc., 379.5 mtrs., 750 w.—National Broadcasting Co., Inc., Tel. Nutter 1620.

KGW—Portland, Oregon—620 Kc., 483.6 mtrs., 1000 w.—The Morning Oregonian, Paul R. Hightower, Mgr.


KHK—Spokane, Wash.—590 Kc., 592.3 mtrs., 2000 w.—Louis Wamer, Inc. Tel. Main 5853.

KJC—San Francisco, Calif.—1670 Kc., 249.2 mtrs., 100 w.—Julius Brunton and Sons Co. Tel. Ordway 4116.


KLCX—Oakland, Calif.—940 Kc., 310.7 mtrs., 500 w.—The Tribune Publishing Company.

KLS—Portland, Ore.—1440 Kc., 238.2 mtrs., 250 w.—Warner Brothers, Tel. Lakeside 6223.

KMC—Hollywood, Calif.—1120 Kc., 267.7 mtrs., 500 w.—Dalton, Inc., Metropolitan Studios, Tel. VA 2466 (Temporary Plant).
For The Service Man

**TO MAKE A D.C. VOLTOMETER A MULTI-RANGE VOLTOMETER.**

\[ R_v = \text{resistance of voltmeter in ohms, or, if } \]
\[ \text{ohms per volt is given, then } \]
\[ R_v = \text{ohms per volt } \times \text{maximum reading, in volts.} \]
\[ V_1 = \text{original maximum reading, in volts.} \]
\[ V_2 = \text{desired new maximum reading, in volts.} \]
\[ \frac{V_2}{V_1} = N = \text{multiplying factor.} \]
\[ R_m = \text{resistance of multiplier needed, in ohms.} \]

Then

\[ R_m = (N - 1) \times R_v \]

**TO MAKE A D.C. MILLISEMETER A D.C. VOLTOMETER.**

\[ I = \text{original maximum reading, in milliamperes.} \]
\[ V = \text{desired maximum reading, in volts.} \]
\[ R_m = \text{resistance of multiplier required, in ohms.} \]

Then

\[ R_m = 1,000 \times \frac{V}{I} \]

**TO FIND THE SHUNT REQUIRED TO MAKE ANY D.C. MILLIAMMETER A HIGHER RANGE MILLIAMMETER.**

\[ R_m = \text{resistance of meter, in ohms.} \]
\[ I_m = \text{original maximum reading, in milliamperes.} \]
\[ I = \text{desired new maximum reading, in milliamperes.} \]
\[ \frac{I}{I_m} = N = \text{multiplying factor.} \]
\[ R_s = \text{resistance of shunt required, in ohms.} \]

Then

\[ R_s = \frac{R_m}{N - 1} \]

If the meter resistance is not accurately known, greater accuracy in scale conversion may be had by the use of two Precision Wire Wound Resistors, as shown in Fig. 4.

\[ R_m = \text{approximate meter resistance, as from manufacturer's catalog.} \]
\[ R_k = \text{a resistor, equal, in ohms, to 9 times } R_m. \]

Then

\[ R_s = \frac{R_k + R_m}{N - 1} = \frac{10 \times R_m}{N - 1} \]

**Note:** For intermittent use, it is recommended that the load on any Precision Wire Wound Resistor should not exceed 2 watts.

Courtesy International Resistance Co.
Delinquent Broadcasters Warned

Broadcasting stations which fail to comply with the engineering regulations requiring 75 per cent modulation have been warned by the Federal Radio Commission that their power will be arbitrarily reduced unless the order is complied with.

The step was taken because of the interference caused by these stations whose equipment is not up to standard.

To Record "Bad" Station Programs

Broadcasters who are summoned to hearings on charges of violations of regulations or failure to operate in the public interest, will be confronted in the near future with phonograph records of their programs.

The Federal Radio Commission is making inquiries among manufacturers to find the best recording device for the purpose of taking down verbatim reports of stations under investigation. Ordinary home models are not adaptable to this sort of work, it was said, and something like the standard unit used in making master phonograph records is needed.

Heretofore, the Commission has relied upon stenographic transcripts of certain portions of broadcasts, but this method has been found cumbersome and not unquestionable.
Telephony's Part in Broadcasting

Despite the popular impression that radio programs are carried long distances, say from New York to a small city in the Midwest, through the ether, the truth is that broadcasting, strictly speaking, plays only a small part in bringing the entertainment to its listeners.


"Most of the long-range work of broadcasting is done, not by radio or wireless at all, but by wired telephony," he says.

"Broadcasting, or radio in the popular sense of the term, is really nothing but a very economical and moderately efficient means of local distribution. The long-distance listener, the 'radio fan' of earlier days, is happily, almost extinct. Most people will tell you that long-distance listening, like the old gray mare, is not what it used to be, and will lay the blame at the door of the Federal Radio Commission, or sun spots, or the tariff. The real fact is that listeners will no longer tolerate the hodge-podge of squawks and squawks which used to delight them. They demand quality, day and night, at least comparable to that of a first-class phonograph record, and such quality is not dependably deliverable by any broadcasting station in the world over a radius of more than a couple of hundred miles."

"In the broadcast studio you will find no radio equipment whatsoever, except perhaps a receiving set for use in checking the transmitter output. Microphones, amplifiers, controls, rectifiers, speakers, all belong to the domain of telephony, not to radio. The microphone translates sound waves into electrical impulses, much as the ordinary telephone transmitter does; wires convey these impulses to the amplifier, and thence to the radio transmitter, generally miles away from the studio. It is to the telephone, not to radio that we owe the development of the equipment whereby speech and music are made available for broadcasting."

"More than this, it is the telephone wire, not radio, which carries programs the length and breadth of the country. John Smith, in San Francisco, listens to the New York Philharmonic Orchestra playing in Carnegie Hall. For 3,200 miles the telephone wire carries the program so faithfully that scarcely an overtone is lost; for perhaps fifteen miles it travels by radio to enter John Smith's house. And then he marvels at the wonders of radio."

"But what of programs from overseas? Here, indeed, wireless telephony steps in, but not broadcasting in the ordinary sense. The program from London is telephoned across the Atlantic by radio, but on frequencies entirely outside of the broadcast band. And the time may be near at hand when even this service will come over the wire, eliminating the interference which so far has imperilled all long-distance use of wireless telephony."

"Broadcasting, then, is the child of the telephone: in America it is certainly the child of the American Telephone and Telegraph Company. The whole structure of commercial chain broadcasting as we know it today has grown out of the pioneer work done prior to 1926 at 195 Broadway, New York; the commercial policies adopted in those early days, when chain broadcasting was regarded merely as a means for utilizing telephone wires after the peak load was off, still influence, both for good and for evil, the whole structure of broadcasting, although the conditions which produced those policies have been revolutionized."

"For better or worse, American broadcasting has entered the advertising field. The broadcasters in general are fully aware of the perils of too much advertising, but they feel that the situation will automatically correct itself. No advertiser, and above all, no advertising agent, will knowingly create public ill-will and disapproval by broadcasting programs the sole purpose of which is to create exactly the opposite."

"The unanswerable argument is that broadcasting on its present advertising basis has been responsible for the fact that 13½ million radio receiving sets are now in use in the United States. In no other country in the world does broadcasting play so large a part in the national life; in no other country is there such a wide variety of broadcasting service."

"It is impossible to estimate accurately the total amount of money spent by advertisers on broadcasting, but a guess of between 80 and 100 million dollars for 1930 would probably not be far wrong. In 1924, this business was absolutely non-existent; most of its present volume has been the creation of the past three years."

* * *

U. S. Scientists to Study Fading

Some of the most baffling problems of radio, among them static and fading, will be tackled with new equipment with the erection of two new experimental stations for the use of the United States Bureau of Standards. A bill authorizing the expenditure of $147,000 for their erection has just been passed by Congress and signed by President Hoover. Efforts are now being made to put through an appropriation at the current session.

The authorization covers the purchase of additional land and equipment for the setting up of a special Radio Research Laboratory and the erection of a transmitting and receiving station at some distance from each other.

Detailed study will be made of the variations which radio waves undergo between the transmitter and receiver, according to Dr. George K. Burgess, Director of the Bureau of Standards. The work will be under the direction of Dr. J. H. Dellinger, Chief of the Radio Section.

"The studies most urgently needed on radio waves have to do with fading, one of the most serious limitations on broadcasting; changes in direction, of great importance in navigation of ships and aircraft; and the behavior of short waves or high frequencies," Dr. Burgess said.

Research will thus be conducted in both the communication and the broadcasting fields.

Two additional transmitters will be made available by the fund, also for extending the standard frequency service, by which broadcasters may check their frequency stability and prevent "wobbling," to make it continuous.

This service would do much to eliminate much of the present interference, according to Dr. Dellinger, and would serve to improve the technical operation of broadcasting stations.

* * *

Congressman Asked to Ban "Stadick"

The high mark of faith in the omnipotence of Congress was expressed in a letter received recently by a Representative from a village in his district. While declining to permit his name to be used for political reasons, the congressman revealed the following letter:

"Dear Congressman: We, the citizens of , have a little radio and we have so much trouble with Stadick, it is no pleasure for anyone so we wish you would use your influence and see if you can clear the air for us."
## Classified Directory of Western Programs

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### United Broadcasting Co.

- **8:00 PM**: Jack Denny’s Orch. KOL KFPY KOLY KLZ KWMJ KPDK
- **9:00 PM**: Don Candido’s Orch. KFOX KOLY KLZ KFPY KBAY KAMK
- **10:00 PM**: Rudy Valente’s Orch. KOLY KLZ KFPY KBAY KAMK
- **11:00 PM**: Earl Burtinnett’s Orch. KOLY KLZ KFPY KBAY KAMK

### March 1931

#### Radio Doings

- **8:00 PM**: Jack Denny’s Orch. KOL KFPY KOLY KLZ KWMJ KPDK
- **9:00 PM**: Don Candido’s Orch. KFOX KOLY KLZ KFPY KBAY KAMK
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**Favoriters**

- Arizona Wranglers
- Kansas City Scouts
- Los Angeles Dodgers
- Phoenix Five
- Portland Blazers
- San Francisco Rangers

**Recommended Programmes**

- Arizona Wranglers
- Kansas City Scouts
- Los Angeles Dodgers
- Phoenix Five
- Portland Blazers
- San Francisco Rangers

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**Programmes**

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**Programmes**

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- Kansas City Scouts
- Los Angeles Dodgers
- Phoenix Five
- Portland Bla
Programs for the Housewife

SOUTHERN CALIFORNIA (Daily Ex. Sun. unless Indicated)

KTHX—9:00 AM. Mildred Kitchen Home Economics Expert.

KYPD—9:15 AM. Amy Louis' Shopping Hour.

10:30 AM. NBC Woman's Magazine of the Air. (Thurs. & Fri.) 10:00 AM.

9:00 AM. Mary H. Murray. (Mon.)

KFI—9:00 AM. Helpful Hints to Housewives, Iles Kilmer.

10:30 AM. NBC Woman's Magazine of the Air. (Thurs. & Fri. only.) 10:00 AM.

10:15 AM. Mary Hale Martin. (Wed. only.)

10:15 AM. Phoebe Gibson Food Talks. (Monday and Fri. only.) 10:00 AM.

10:00 AM. Color Harmony NBC. (Tuesday only.)

KMPC—10:10 AM. Violet Schramm, Shopping hour.

KTD—2:00 PM. Over the Tea Cups with Nell Cleary.

KHJ—5:15 AM. Kathleen Clifford Beauty Talks. 5:30 AM. Feminine Fancies. (Ex. Saturday.)

6:00 PM. Pegney Hamilton, Romance of Fashion. (Tuesday only.)

KFWH—10:00 AM. Prudence Penny.

KPYD—10:30 AM. Hints to Housewives.

KXN—9:00 AM. Radio Shopping News. C. P. R. 10:30 AM.

10:30 AM. Home Economics Talk by Kate Brew Vauhns. (Ex. Sun.)

KFOX—9:00 AM. Beauty Talk.

KHC—10:30 AM. Polly and Gen. 10:45 AM. Beauty Chat.

KICL—10:45 AM. Blanch Wade's Shopping Tour.

KBCA—11:30 AM. California Federation of Women's Clubs. 11:00 AM.

9:15 AM. Grace Hale, speaker. (Ex. Wed. and Thurs.)

9:15 AM. Mary Murray Recipes. (Mon.)

NORTHERN CALIFORNIA

KTAW—10:00 AM. Household Hour with Alma La Mar.

KPCF—9:30 AM. Feminine Fancies. (Ex. Saturday.)

9:30 AM. Mildred Kitchen's Household Talk. (Thurs. & Fri. only.) 9:00 AM.

3:00 PM. Colonial Dames Beauty Talk. (Monday only.)

10:45 AM. Barbara Gould Talk. (Thurs.) 1:00 PM. Julia Hayes' Helpful Hints. (Tues. and Thurs.)

KPO—10:30 AM. NBC Woman's Magazine of the Air. (Thursday only.)

11:30 AM. Julia Hayes' Helpful Hints to Housewives. (Saturday only.)

KHOW—3:00 PM. Shopping Hour.

KQW—10:00 AM. Helpful Hints.

KVA—12:15 PM. Parent-Teachers’ Association. (Monday only.)

NORTHWEST

KHQQ—10:30 AM. Woman's Magazine of the Air. Thursday at 10:00 AM.

9:30 AM. Betty Crocker Talks. (Wed.)

10:15 AM. Josephine Gibson’s Food Talk. (Monday and Friday only.)

10:15 AM. Mary Hale Martin. (Wednesday only.)

12 Noon. Edna Wallace Hopper Beauty Talks. (Wed. & Fri.)

KJGW—9:15 AM. Cooking School.

9:30 AM. Betty Crocker. (Wed.)

10:15 AM. Josephine Gibson's Food Talk. (Monday & Wednesday only.)

10:30 AM. Woman's Magazine of the Air. (Thursday at 10:00 AM.)

11:30 AM. Julia Hayes Talk. (Monday and Tuesday only.)

KV—9:30 AM. Feminine Fancies. (Ex. Saturday.)

KMOO—10:30 AM. Woman's Magazine of the Air. (Thursday at 10:00 AM.)

11:45 AM. Barbara Gould. (Thurs.)

10:00 AM. Color Harmony. (Tues.)

12 Noon. Prudence Penny.

9:45 AM. Way to a Man’s Heart.

KJR—8:30 AM. Thrift Home of the Air.

9:15 AM. Mary From Proctors.

KEX—9:15 AM. Julia Hayes Talk. (Ex. Saturday.)

KOL—9:30 AM. Feminine Fancies. (Ex. Sat.)

KGA—9:15 AM. Mary.

MOUNTAIN STATES (Pacific Standard Time)

KOA—10:30 AM. Woman's Magazine of the Air. (Thursday at 10:00 AM.)

8:00 AM. Your Child. (Tuesday only.)

8:15 AM. Radio Household Institute. (Wed.)

10:15 AM. Mary Hale Martin. (Wednesday only.)

2:30 PM. A Recipe & a Day. (Monday only.)

KLY—9:00 AM. Home Economics Program.

9:30 AM. Housewives Program.

10:00 AM. A Visit with Mrs. Jennie Lee.

9:45 AM. Dietary Discussions. (Monday and Thursday only.)

10:00 AM. Helen Webster. (Monday and Wednesday only.)

10:50 AM. Ann Holden. (Monday and Thursday only.)

10:15 AM. Favorite Recipes of Mary Hale Martin. (Wednesday only.)

Foreign Language Lessons

KPD—2:30 PM. French Lessons. (Mon. & Wed.)


KF1—9:15 AM. Spanish Lessons. (Thurs. 11:45 AM. Sat.)

KF1—9:30 AM. Spanish Lessons. (Thurs. 11:45 AM. Sat.)

KBA—4:15 PM. German Lessons, by Annette Doherty. Thurs. only.

4:00 PM. Alexander Bevan. on the Italian language.

(Mon.)

See Page 26 for Western Station Directory
**Educational Features**

(National and International Events)

**National Broadcasting Co.**—5:15 PM. 15 Minutes in the Nation's capital. KGQ, KHQ, KOLO, KECA, KFSD. (Mon.)

8:15 PM. This America. KJL.(Mon.)

3:15 PM. John F. Kennedy Talk. KG0, KGW. (Wed.)

4:15 PM. Science Talk. KG0, KOLO, KPM, KECA. KFSD. KTSR. (Wed.)

4:45 PM. Back of the News in Washington. KG0, KOLO, KECA. KFSD. KTSR. (Thurs.)

1:30 PM. Pacific Coast School of the Air. KOLO, KECA. KG, KGW. KFSD. KTAR. (Mon. & Wed.)

12:15 PM. Western Farm and Home Hour. KG0, KECA. KG, KF0, KPSL. (Tues. & Wed.)

11:30 AM. Standard School Broadcast. KG0, KHQ, KOLO, KECA, KFSD. KTSR. (Ex. Sat. and Sun.)

**Columbia Broadcasting Co.**—

7:50 AM. Columbia Educational Series. (Sun.) KTVL. (See NRC List)

11:30 AM. Columbia Educational Series. (Ex. Sat. and Sun.) KTVL. (See NRC List)

KMPY—2:00 PM. USC Lectures. (Mon. and Wed.)

3:00 PM. USC Lectures. (Mon. and Wed.)

5:00 PM. Norbert Savoy, author, lecturer. (Sun.)

KJH—11:30 PM. The Times Forum. (Daily.)

1:15 PM. University of the West. (Fri. only.)

3:15 PM. Dr. Walter Hertzog's School Program. (Fri. only.)

3:45 PM. Council of International Relations. (Fri. only.)

6:30 PM. National Radio Forum. (Sat. only.)

11:30 AM. American School of the Air. (Ex. Sun., Thurs., and Sat.) See CBS List.

KNX—7:30 PM. Federation of Women's Clubs. (Fri. only.)

KGFJ—8:30 AM. Dr. Wiseman's Talk.

KEA—11:30 AM. California Federation of Women's Clubs. (Mon. only.)

4:15 PM. James G. McDonald, "The World Today." (Mon. only.)

5:15 PM. Fifteen Minutes in the Nation's Capital. (Mon. only.)

4:15 PM. Science National Research Council. (Wed.)

4:15 PM. Laws That Safeguard Society. NRC. (Sat.)

KGH—9:30 AM. Ninth Dist. Parent-Teachers Association. (Tues.)

**NORTHERN CALIFORNIA**

KTRH—6:00 PM. The Voice of Psychology. (Sun.)

1:20 PM. Short Story Course. Samuel H. Dickson. (Mon., Tues., and Fri.)

1:10 PM. Dr. Heady, Psychologist. (Mon. and Fri.)

KQW—6:10 PM. Farm Topic Conferences. (Ex. Sat.)

KYA—10:15 AM. R. R. Sunday Educational Talk. (Sun., only.)

8:00 PM. Judge Mathew Brady. (Fri. only.)

8:00 PM. Mr. Brunson. Psycho-Analyst. (Mon. and Wed.)

9:45 PM. The Political Situation in Washington Tonight. (Tues. only.)

6:30 PM. National Radio Forum from Washington. (Sat. only.) See CBS List.

KPO—4:15 PM. California State Chamber of Commerce Talk. (Mon. only.)

5:15 PM. Federal Business Association Talk. (Tues. only.)

KFWL—7:00 PM. Judge Matthew Brady on Crime Prevention. (Mon. only.)

1:00 PM. Dr. Heady, Psychologist. (Mon., Tues., and Fri.)

KQW—6:10 PM. Farm Topic Conferences. (Ex. Sat.)

KAY—10:15 AM. R. R. Sunday Educational Talk. (Sun., only.)

8:00 PM. Judge Mathew Brady. (Fri. only.)

8:00 PM. Mr. Brunson. Psycho-Analyst. (Mon. and Wed.)

9:45 PM. The Political Situation in Washington Tonight. (Tues. only.)

KOMO—4:00 PM. Laws That Safeguard Society. NRC. (Tues. only.)

11:00 AM. Standard School Broadcast. (Thurs. only.)

**MOI MAIN STATES**

KOA—10:00 AM. National Oratorio Society. (Sun., only.)

12:00 PM. National Youth Conference. (Sun., only.)

4:15 PM. The World Today. (Mon. only.)

KSL—12:15 PM. National Youth Conference. (Mon. only.)

**Symphony, Concert and Salon Orchestras**

**National Broadcasting Co.**—5:00 PM. Sunday Concert. KGQ.

6:15 PM. Atwater Kent concert. (Sun.) KHQ, KOMO, KFBK, KFSD, KFRC, KOIN.

1:00 PM. Concert Jewels. (Sun.) KGQ.

2:30 PM. NBC Matinee. (Mon.) KGQ, KFWL.

8:00 PM. Rudy Neighbors Shell Symphony. (Mon.) KGQ, KOMO.

**United Broadcasting Co.**—7:30 PM. Sunday Serenade.

8:00 PM. Boris Kramarenko and Orms. (Mon.) UBC affiliated stations.

**NGH—8:30 AM. Concert Orchest. (Sun.)

KFSD—4:00 PM. Sunday Concert NRC. (Sun.)

KFI—10:15 PM. Sunday Concert. (Mon.)

KPO—4:00 PM. Concert Orchest. (Mon.)

KFWS—9:00 AM. "Home, Sweet Home." (Mon.)

2:30 PM. Pacific Coast Orchest. (Tues.)

12:00 Noon. KnX. (Mon.)

9:00 AM. Calman Luboviski and Claire Mellonino. (Sun. and Thurs.)

9:00 AM. Calman Luboviski Violin Choir. (Mon.)

7:30 PM. Pacific Coast Orchest. (Tues.)

12:00 Noon. KnX. (Sun.)

9:00 AM. Calman Luboviski Violin Choir. (Mon.)

7:30 PM. Pacific Coast Orchest. (Tues.)

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9:00 AM. Calman Luboviski Violin Choir. (Mon.)

7:30 PM. Pacific Coast Orchest. (Tues.)

12:00 Noon. KnX. (Sun.)
March, 1931

**RADIO DOINGS**

**plays, Stories, Dramatic Readings**

(United Broadcasting Company)

8:30 PM. Dramatic Program. (Mon., Tues. & Thurs.)
KOFE XXL KXMD KXN KXV.

8:00 PM—Detective Stories. (Fri.) KJF KFWD KTM KTAR.
KOFE XXL KXMD KXN KXV.

Columbus Broadcasting Company

5:30 PM—Arabesque, a Desert Play. (Mon.) KLZ KLYL.
7:00 PM—"Jo and Vi." KLZ KLYL, KOL. KFPH.
6:00 PM. Hank Simmons' Show Boat. (Sat.) KLZ KLYL, KOL.
KFPH KTFI KFPH.

1:30 PM—Don Amazio. (Mon.) KLZ KLYL, KOL. KFPH KFPH, KXN.

Salt Lake Broadcasting Company

7:30 PM. Empire Builders. (Mon.) KG0 TPFG KOMO KGW KFPH KTAI.
8:15 PM. Memory Lane. KG0 KXNG KGK KGW KFPH KTAI.
9:00 PM—Mystery Serial. (Fri.) KG0 KXNG KGK KGW KFPH.
9:30 PM—Adventures of Sherlock Holmes. (Mon.) KG0 KXNG KGK KGW KFPH KTAI.
9:30 PM. Jack and Kithy. KG0 KXNG KGK KGW KFPH.

KFMR—8:45 PM. Dramatic Play. (Mon. & Thurs.)

KROSS—8:00 PM. Radio Guild. (Fri.)


8:15 PM. Memory Lane. (Tues.)
8:15 PM. Adventures of Sherlock Holmes. (Tues. and Sat. Serv.)
10:00 PM—Tom Terriss, "Vagabond Movie Director." (Mon.)

KTN—1:00 PM. Dramatic Readings. (Sun.)
4:30 PM. Dramatic Reading. (Daily Ex. Sat. & Sun.)

KIJJ—6:00 PM. Prof. Lindley and Leigh Harline, Reading with Organ. (Thurs.)
7:00 PM. Jo and Vi. (Tues.)
9:00 PM. "Folgeria," Serial Comic Opera of the Air. (Thurs.)
6:30 PM. Times Preehing Program. (Fri.)
7:00 PM. Hank Simmons' Show Boat. (Sat.)
7:30 PM. Don Amazio. (Mon.)
5:30 PM. Black and Blue. (Daily Ex. Sat.)

KFWB—6:45 PM. Cecil and Salley. (Daily Ex. Sun.)

KXX—1:30 PM. Eddie Albright's Reading of Late Fiction. (Daily.)
9:00 PM. KXX Players directed by Georgia Fifield.

KFON—9:30 PM. Ghost House.

KS'A—5:00 PM. Nick Harris Detective Story Program. (Sun.)
7:30 PM. NBC Empire Builders, Dramatization of the West. (Mon.)
9:30 PM. NBC Memory Lane. (Tues.)

**Northern California**

KTAH—8:30 PM. Dramatic Sketch from NBC. (Mon., Tues., Thurs.)

KTRANS—5:30 PM. Fred Benioff Players. (Sun.)
7:00 PM. "Jo and Vi." (Tues.)
9:00 PM. "Folgeria." Comic Opera of the Air. (Thurs.)
7:00 PM. Hank Simmons' Show Boat. (Sat.)

KQVW—4:30 PM. Story Time. (Daily Ex. Sun.)

KPO—6:15 PM. Cecil and Salley. (Daily Ex. Sat.)
4:30 PM. KPO Drama Guild. (Tues.)

8:00 PM. KPO Drama Guild. (Fri.)

KHIJ—7:30 PM. Empire Builders. (Mon.)

KFVI—1:30 PM. Drama Period. (Sat.)

KVA—9:15 PM. KVA Players. (Tues.)

8:00 PM. KVA Players. (Tues.)

**Northwestern States**

KGW—9:00 PM. "On to Oregon," Dramatization. (Fri.)
7:30 PM. Empire Builder's Program, NBC. (Mon.)
11:15 PM. Memory Lane. (Tues.)

KOMO—7:30 PM. Empire Builder's Program, NBC. (Mon.)
KVX—5:00 PM. "Folgeria," Comic Opera of the Air. (Thurs.)
KOL—9:00 PM. "Folgeria," Comic Opera of the Air. (Thurs.)
7:00 PM. Hank Simmons' Show Boat. (Sat.)
7:00 PM. Jo and Vi. (Tues.)
7:30 PM. Don Amazio's Adventures. (Mon.)

**Interstate Stations**

KOA—9:30 PM. Empire Builders. (Mon.)

KNE—9:00 PM. "Mystery Serial. (Fri.)

KLU—2:00 PM. Radio Matinee. (Daily Ex. Sun.)
7:30 PM. Empire Builders, NBC. (Mon.)
7:30 PM. Don Amazio. (Mon.)
7:00 PM. CLX Gracies' "Mr. and Mrs." (Tues.)
9:00 PM. "Folgeria." (Thurs.)
7:00 PM. Hank Simmons' Show Boat. (Sat.)

SEE PAGE 28 FOR WESTERN STATION DIRECTORY
Religious Services and Talks for Sunday

National Broadcasting Company—12:00 Noon. National Youth Concert. KGQ KHQ KOMO KGW KPO
1:00 PM. Dr. S. Parkes Cadman KGQ KHQ KOMO KGW KPO.
2:00 PM. National Vespers KGQ KHQ KOMO KGW KPO.
3:00 PM. Catholic Hour KGQ KOMO KGW KEC.
Columbia Broadcasting Co.—11:00 AM. Cathedral Hour KLZ KVI KFY KDL.
7:00 PM. Lutheran Hour. (Thurs.) KOL KFY KON.
KFY KDL KLZ KFY.
8:00 PM. Back Home Hour KFY KFBK.
KFY KDL KLZ KFY.
7:45 PM. Sunday Evenings at Seth Parker’s.
KFY KDL KLZ KFY.
10:00 AM. Third Church of Christ, Scientist. KGQ KHQ KOMO KGW KPO.
4:00 PM. Leila Castberg. “Advanced Thoughts.” KGQ KHQ KOMO KGW KPO.
KFY KDL KLZ KFY.
3:00 PM. Church of the Latter Day Saints. KGQ KHQ KOMO KGW KPO.
KTN—9:00 AM. I. B. S. A. Watch Tower.
KJH—11:00 AM. First M. E. Church of Los Angeles.
5:30 PM. Rabbi Haas.
KXY—10:00 AM. Religious Lecture.
11:00 AM. First Presbyterian Church of Hollywood.
1:00 PM. Watchtower I. B. S. A. Program.
5:00 PM. Dr. John Mathews; First Radio Church of the Air.
6:30 PM. Dr. Thee Curtis Abel of Hollywood Humanist Society.
7:00 PM. Dr. Aked, All Soul’s Church.
8:00 PM. First Presbyterian Church of Hollywood.
8:00 AM Daily Except Sunday—Inspirational Talk and Morning Prayer.
6:30 PM. Announcement of leading Los Angeles Church Services. KGQ KHQ KOMO KGW KPO.
11:30 AM. First Radio Church of the Air. (Mon.) KGZ.
KFW—8:00 AM. Sabbath Sunrise Service.
10:00 AM. Sunday Morning.
2:30 PM. Dispersational Message.
6:30 PM. Evangelistic Service.
7:00 AM. Daily Ex. Sunday. Family Altar Service.
2:30 PM. Wednesday and 7:30 Saturday. Divine Healing.
5:30 PM. Thurs. Baptismal Service.
9:00 PM. Thurs. and Fri. Pentecost Hour.
KGEP—9:30 AM. Radio Sunday School.
10:00 AM. Bible Study.
10:45 AM Trinity Church Service.
5:00 PM. Vesper Hour.
7:00 PM. Trinity Church Service.
9:00 PM. Tues. South Park Christian Church Bereans.
9:30 PM. Tues. Torrance Methodist Church.
7:00 PM. Wed. Convrey Bible Class.
7:00 PM. Radio Revival. (Thurs.)
KTHI—8:00 AM. Daily Ex. Sunday. Gospel Song Requests.
8:45 AM. Gospel Message. (Daily Ex. Sun.)
2:00 PM. Visiting Pastors.
1:00 PM. Devotional Bible Study. (Ex. Mon. and Sun.)
10:30 AM. Bible Study. (Daily.)
KGR—5:30 AM. Bible Class.
11:00 AM. Calvary Church.
5:30 PM. Catholic Church.
7:00 PM. Calvary Church.
KFOX—11:00 AM. St. Luke’s Episcopal Church.
2:30 PM. Liberation Army Program.
6:00 PM. First Church of Christ, Scientist.
KFWM—8:00 AM. Church Hour. (Wed. only.)
1:00 PM. Rev. Olsen’s Bible Class.
KGR—6:00 PM. L. D. S. Service.
6:30 PM. L. D. S. Service. (Tues.)
10:00 AM. Watch Tower Service.
KGFA—10:00 AM. National Oratorio Society.
11:00 AM. Bible Stories.
3:00 PM. Catholic Hour.
NORTHERN CALIFORNIA
KTHB—10:00 AM. Bible Class from 10th Ave. Baptist Church.
11:00 AM. Church Services from 10th Ave. Baptist Church.
1:00 PM. Church of the Latter Day Saints.
7:30 PM Church Services.
9:00 AM. Daily-Morning Prayers.
KPO—10:45 AM. Interdenominational and Non-sectarian Church Services.
1:00 PM. S. Parkes Cadman Cathedral Hour.
2:00 PM. Catholic Hour.
12:00 AM. Daily Except Sunday. Scripture Readings.
KFWM—8:00 PM. Second Church of Christ, Scientist.
KHOW—10:00 AM. Watchtower Program.
1:00 PM. Watchtower Program.
6:00 PM. Watchtower Program.
9:00 PM. Watchtower Service.
6:30 PM. Watchtower Service. (Thur. and Thurs.)
2:30 PM. Watchtower Afternoon Program.
11:00 AM. Morning Services, First Baptist Church.
7:30 PM. Evening Services.
KVA—10:45 AM. Old St. Mary’s Church.
8:00 PM. Old St. Mary’s Church.
NORTHERN WESTERNS
KHQ—10:00 AM. Bible Students.
12:00 PM. National Youth Conference.
1:00 PM. National Sunday School.
3:00 PM. Catholic Hour.
9:00 PM. New Episcopal Church.

KFW—10:00 AM. International Bible Students.
12:00 Noon. National Youth Conference.
3:00 PM. Catholic Hour.
4:45 PM. Seth Parker’s Program.
KOMO—11:00 AM. First Unitarian Church.
11:15 AM. Plymouth Congregational Church.
12:15 PM. National Youth Conference.
1:00 PM. S. Parkes Cadman.
2:00 PM. National Religious Service.
3:00 PM. Catholic Service.
KJR—10:00 AM. International Bible Students Association.
KFX—1:00 PM. Family Altar Church.
4:30 PM. Radio Gospel School.

INTERMOUNTAIN STATES
KSL—9:15 AM. International Bible Students.
12:00 Noon. National Youth Conference.
1:00 PM. L. D. S. Service with Great Mormon Organ.
KOA—12:00 Noon. National Youth Conference.
1:00 PM. Dr. S. Parkes Cadman.
3:00 PM. Catholic Hour.
7:45 PM. Sunday Evening at Seth Parker’s.
KLZ—9:00 AM. L. B. S. A. Watchtower School.
KDYI—11:30 AM. Cathedral Hour.

Sports Talks, Athletic Events

National Broadcasting Co.—5:00 PM. Bobby Jones Golf Talks. KGQ KHQ KOMO KGW KPO.
Columbia Broadcasting Co.—3:00 PM. Ted Husing Sportslants. (Sat.) KOL KFY KFRK KJH KDL KLF KOMO KEC.
KJH—3:00 PM. Ted Husing Sportslants. (Sat.)
5:00 PM. Bobby Jones. (Wed.)
KFSP—7:30 PM. NIC, Grantland Rice. (Wed. only.)
KFWH—7:30 PM. R. W. Shively’s Sport Talks. (Mon.)
9:30 PM. Olympic Auditions. (Thurs. only.)
KXX—9:45 PM. Broadcasting Main Events from Hollywood Legion Stadium. (Fri.)
KGHR—9:30 PM. Olympic Auditorium event. (Tues. only.)
9:30 PM. Wilmingtom Bowl. (Wed. only.)
KCA—7:30 PM. NIC, Grantland Rice’s “Topnotchers.” (Wed.)
5:00 PM. Harold Jones. (Wed.)
KPH—9:45 PM. Dean Coopa’s Sports Authority. (Thurs. only.)
6:45 PM. Pat Payne’s Sport Talks. (Friday only.)
3:00 PM. Ted Husing Sportslants. (Sat.)
4:15 PM. Sport photos by Sportswriter Genie Smith. (Wed.)
KJH—5:00 PM. Bobby Jones. (Wed.)
7:30 PM. NIC, Grantland Rice’s “Topnotchers.” (Wed.)
5:15 PM. Sport News. (Mon. only.)
KFWL—7:30 PM. Grantland Rice’s Sport Program. NBC. (Wed. only.)
5:00 PM. Bobby Jones Chat. (Wed.)
KOMO—7:30 PM. Grantland Rice’s “Topnotchers.” (Wed.)
5:00 PM. Bobby Jones. (Wed.)
KMO—9:00 PM. Wrestling Match from Greenwich Coliseum. (Tues. only.)
KJH—5:00 PM. Ken Stuart’s Sport Talk. (Daily.)
KGA—5:00 PM. Ken Stuart’s Sport Talk. 9:30 PM. Wrestling Bouts.
KOA—7:30 PM. NIC, Grantland Rice Sport Talk. (Wed. only.)
5:00 PM. Bobby Jones. (Wed.)
KNI—7:30 PM. Grantland Rice Sportologues. (Wed. only.)
5:00 PM. Bobby Jones Chat. (Wed.)

For the Youngsters

SOUTHERN CALIFORNIA (Daily Except Where Indicated)
National Broadcasting Co. 2 PM—Junior Program. (Mon.) KGQ KOMO KGW KFWL
KPSD—2:00 PM. Maltime Story Time. (Mon.)
KFI—4:14 PM. Big Brother Don. (Ex. Sat.)
5:00 PM. Baron Keyses, The Story Man. (Ex. Sat.)
KFMP—5:30 AM. hoe Army Program. 3:45 PM. Just Kids Club. (Ex. Mon., Wed., & Sat.)
KJH—5:30 PM. Black and Blue. (Ex. Sun.)
KX—5:00 PM. Big Brother’s 6 PM. Children’s Hour.
KGS—6:00 PM. Mrs. Tom Murray, Children’s Hour. (Thurs.)
KFG—4:00 PM. KIDDIE’S HOUR. (Fri. only.)

SOUTHERN CALIFORNIA
KFWL—7:30 PM. Child Guidance Forum. (Tues.)
KPO—5:00 PM. Big Brother. (Ex. Mon.)
KLX—5:00 PM. Big Brother’s Club.
KQW—4:30 PM. Story Time.

NORTHWEST
KIN—5:30 PM. Prize KIDDEE’S Club.
KGA—5:15 PM. Uncle Frank’s Story Hour. (Sat. 3:15)
KCA—5:15 PM. Uncle Frank’s Story Hour. (Sat.)

MOUNTAIN STATES (Pacific Standard Time)
KSL—1:00 PM. Story Hour. (Mon.)
News, Stock Market Reports, Weather

Financial Reports. (Duly Ex. Sunday.)

National Broadcasting Co.—8:00 AM. Financial Service. (Daily.)
KGO—4:45 PM. News Service. KGO (Mon., Thurs. & Fri.)
5:45 PM. News Service. KG. (Tues. & Wed.)
5:00 PM. News Service. KGO (Sat.)

United Broadcasting Co.—10:00 PM. Hughespaper of the Air.

SOUTHERN CALIFORNIA

KWH—11:45 AM. Public and City Officials.
8:00 AM. Stock Quotations.
12 Noon. World in Review.
5:45 PM. Reporter of the Air.

KFSD—5:45 PM. San Diego Union News Report (Tues., Thurs., Sat.)
5:15 PM. News Report. (Mon. and Fri.)
4:30 PM. News Service. Thurs.

KFI—7:30 AM. Opening Stock Market quotations.
12 PM. U. C. & U. S Dept. of Agriculture.
12:15 PM. Federal and State Market Reports.
4 PM. KFI—KECA Editorial Review.
5:45 PM. Closing Stock Market Reports.

KTM—7:00 PM. News.

KMPV—12 PM. Livestock Report.
9:00 AM. Radio News Service.
1:15 PM. Radio News Service.
5:00 PM. Radio News Service.

KHJ—12:30 PM. World-Wide News (L.A. Times.)
12:30 PM. World-Wide News.
10:00 PM. World-Wide News.
7:00 AM. News Briefs.

KXX—3:15 PM. Monday. Lost and Found Reports.
2:25 PM. Tuesday. Lost and Found Report.
3:00 PM. Wednesday. Lost and Found Reports.
3:25 PM. Friday. Lost and Found.
3:30 PM. Thursday. Lost and Found Reports.
1:25 PM. Saturday. Lost and Found Reports.

KGFJ—3:00 PM. Market Reports.


4:00 PM. Press Telegram News Report.

KGB—2:45 PM. News Flashes.
5:00 PM. Lost and Found ads.

KGER—4:00 PM. News Brevities.
6:30 AM. News, weather, etc.

KPSN—8:30 AM. World Wide News.
12:45 PM. World Wide News.
6:00 PM. World Wide News.

KECA—10:30 PM. KFI—KECA Editorial Review.
3:00 PM. Federal and State Market Report.

NORTHERN CALIFORNIA

KFHC—7:30 AM. N. Y. Stock Quotations.
11:25 AM. S. F. Call-Bulletin News Items. (11:10 AM. Mon. & Thurs.)
1:00 PM. Closing Stock Market Reports. (11:15 PM. Mon.)
1:05 PM. S. F. Call-Bulletin News Items. (1:20 PM. Monday.)
5:50 PM. S. F. Call-Bulletin News Items. (5:45 PM. Monday.)

KPO—2:50 PM. Ye Towne Crier. (Sat. 3:00 PM.)
5:45 PM. News Digest with Scotty Mortland.

12:30 PM. Market Report.
6:00 PM. U. S. D. A. Farm Flashes.
6:30 PM. S. F. Market Place.
7:00 PM. Farm Bureau Radio News.
7:05 PM. News Dispatches.

KVA—12:45 PM. News casting.
8:45 PM. Delivery of Stock Yard Prices and Quotations.

NORTHWEST

KIQ—7:00 AM. The Towne Crier.
1:15 PM. Farm Markets.

KGW—1:00 PM. Town Crier.

KMO—10:00 AM. Town Crier.

KOMO—4:00 PM. Stock Quotations. (Fri, Wed. and Sat.)
4:45 PM. Stocks, (Mon. and Tues.)
5:30 PM. Financial Outlooks and Stock Summaries.
5:30 AM. Financial Outlooks and Stock Summaries.

KJH—7:40 AM. Stock Reports.
12 PM. World in Review.
3:30 PM. News Casting.
5:40 PM. Market Reports.

12:00 PM. Weather Reports.
11:30 PM. Police Reports.

KGA—4:45 AM. News.

MOUNTAIN STATES

KOA—11:30 AM. Monday, weather, stocks, markets, livestock (P. & T.)
10:50 AM. Tuesday, weather, stocks, markets, livestock.
11:30 AM. Wednesday, weather, stocks, markets, livestock.
11:00 AM. Thursday, weather, etc.
10:55 AM. Friday, weather, stocks, markets, livestock.
2:45 PM. Tuesday, weather, stocks, etc.
3:45 PM. Wed., Thurs., Fri. & Sat. weather, stocks, etc.
4:00 PM. Monday, weather, stocks, markets, livestock.

KSL—7:20 PM. New York Stock Market Reports.

KVDL—7:30 AM. News Flashes, Police Bulletins.

Light and Grand Opera

National Broadcasting Co.—9:00 PM. Chute and Sanborn Comic Opera program. (Sun.) KOA, KHQ, KOMO, KFI, KFSD, KTAR, KSL, KOA.
6:30 PM. Maxwell House Ensemble. KGO, KHQ, KOMO, KGW, KECA, KFSD, KTAR.
11:30 AM. Harry Kogen's Orch. KHQ KGW KIR KPO.

Columbia Broadcasting System—7:00 PM. Light Opera (Tues.) KOLK.
KJH—9:00 PM. Folgeria. (Thurs.)

KFV—1:00 PM. Light Opera Records. (Sun.)

KGB—6:00 PM. Opera Sketches. (Wed.)

KTHB—1:30 PM. Grand Opera. (Sun.)

KFHC—9:00 PM. "Folgeria." (Thurs.)

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500-Watt Station

crystal controlled, 100% modulation, screen grid, double studios, very modern, money maker. Address Box A, Radio Doings.
Chain Programs for March

National Broadcasting Co.

Saturday, March 1, 8, 15, 22, 29
8:00 AM—Marble Days KGO KECA KFSD KOMO
9:30 AM—Popular Symphony Concerts KGO KFI KFW KFI KFSD
9:00 AM—Breakfast with Sperry KHQ KOMO KGW KPO KFI KFSD
8:30 AM—Oratorio Society KGO KOMO KGW KFI KFSD
11:00 AM—Grace Cathedral Service KGO KGW KFI KFSD
11:30 AM—General Motors Family Party KGO KHQ KOMO KGW KFI KFSD KFSD KTAR
12:00 PM—National Youth Conference KGO KHQ KGW KFSD
1:00 PM—Devotional Park Church KO KHQ KOMO KGW KPO
2:00 PM—Concert Jewels KGO KGW KPO KFI KFSD
3:00 PM—Children's Hour KGO KOMO KGW KFI KFSD
5:15 PM—Collier's Radio Hour KHQ KOMO KGW KFI KFSD
6:00 PM—The Vagabonds KGO KGW KFI KFSD
6:15 PM—Victor Program KGO KHQ KOMO KGW KFI KFSD KFSD KTAR
7:30 PM—Sunday Concert KGO KGW KFI KFSD
8:15 PM—Heel Hugger Program KGO KHQ KOMO KGW KFI KFSD
8:30 PM—Gunner Johansen, pianist, alternates with Walter F. Kern KGO KFSD KGW KGW KFI KFSD KFSD KTAR
9:00 PM—Chase & Sanborn Program KHQ KOMO KFI KFSD KFSD KTAR
9:30 PM—Kenneth Jetty Melodies KHQ KOMO KGW KECA KFSD
10:15 PM—Radio's Guide KGO KHQ KOMO KGW KFI KFSD
10:45 PM—Paul Carson, organist KGO KOMO KO
11:00 PM—The Vagabonds KGO KFI KFSD KFSD KTAR
11:30 PM—Van and Doon, Two Professors KHQ KOMO KGW KPO KFI KFSD
8:00 AM—Shell Happytime KHQ KOMO KGW KPO KFI KFSD KFSD KTAR
8:30 AM—Financial Service Program KGO
9:15 AM—Morning Melodies KGO
9:45 AM—Cross-Cuts of the Day KGO
10:30 AM—Vermont Lumberjacks KGO KHQ KOMO KGW KFSD KFSD KTAR
11:15 AM—The Vagabonds KGO KGW KECA KFSD
12:00 PM—Luncheon Concert KGO KGW KFSD KFSD KTAR
12:15 PM—Western Farm Hour KGO KOMO KGW KFSD KFSD KO
1:00 PM—Pacific Vagabonds KGO KFSD KTAR KOA KGW KECA KFSD
1:00 PM—Nic Matheie KG KGW KFSD
2:00 PM—The Magazine KHQ KOMO KGW KPO KFI KFSD
3:00 PM—What's KGO KGW KFSD
3:30 PM—The World Today by James G. McDonald, KGO KECA KFSD KFSD KTAR
4:15 PM—Pine Trees in the Nation's Capital KGO KHQ KFSD KFSD KECA
4:45 PM—The Quartet KGO KPO
5:15 PM—Gipsy Strings KGO KECA KFSD
6:00 PM—Maytag Orchestra KGO KHQ KOMO KGW KFSD
6:30 PM—General Motors Family Party KGO KHQ KOMO KGW KFSD KFSD KTAR
7:00 PM—Empire Builders KHQ KOMO KGW KFSD KFSD KTAR
8:00 PM—Rudy Seiger's Shell Symphonists KFI KHQ KOMO KGW
8:30 PM—Amos and Andy KHQ KGW KFSD KFSD KTAR
9:15 PM—Tori Mitchell KGO
9:45 PM—Sparklets KGO
10:30 PM—Papa Shepherd and Sherlock Holmes KGO KGW KPO KFI KFSD
11:15 PM—Pacific National Singers KGO KSL KOA
10:45 PM—Mr. 's KOA
10:30 PM—Mr. 's KOA
11:00 PM—Laughner-Harris Hotel St. Francis Dance Orchestra KGO KFSD KFSD KTAR
Tuesday, March 3, 10, 17, 24, 31
7:30 AM—Sunrise Serenaders KGO
7:30 AM—Van and Doon KHQ KOMO KGW KPO KFI KFSD
8:00 AM—Shell Happytime KHQ KOMO KGW KPO KFI KFSD KFSD KTAR
8:30 AM—Financial Service Program KGO
9:15 AM—Morning Melodies KGO
9:45 AM—Cross-Cuts of the Day KGO
10:30 AM—Vermont Lumberjacks KGO KHQ KOMO KGW KFSD KFSD KTAR
11:15 AM—The Vagabonds KGO KGW KECA KFSD
12:00 PM—Luncheon Concert KGO KGW KFSD KFSD KTAR
12:15 PM—Western Farm Hour KGO KOMO KGW KFSD KFSD KO
1:00 PM—Pacific Vagabonds KGO KFSD KTAR KOA KGW KECA KFSD
1:00 PM—Nic Matheie KG KGW KFSD
2:00 PM—The Magazine KHQ KOMO KGW KPO KFI KFSD
3:00 PM—What's KGO KGW KFSD
3:30 PM—The World Today by James G. McDonald, KGO KECA KFSD KFSD KTAR
4:15 PM—Pine Trees in the Nation's Capital KGO KHQ KFSD KFSD KECA
4:45 PM—The Quartet KGO KPO
5:15 PM—Gipsy Strings KGO KECA KFSD
6:00 PM—Maytag Orchestra KGO KHQ KOMO KGW KFSD
6:30 PM—General Motors Family Party KGO KHQ KOMO KGW KFSD KFSD KTAR
7:00 PM—Empire Builders KHQ KOMO KGW KFSD KFSD KTAR
8:00 PM—Rudy Seiger's Shell Symphonists KFI KHQ KOMO KGW
8:30 PM—Amos and Andy KHQ KGW KFSD KFSD KTAR
9:15 PM—Tori Mitchell KGO
9:45 PM—Sparklets KGO
10:30 PM—Papa Shepherd and Sherlock Holmes KGO KGW KPO KFI KFSD
11:15 PM—Pacific National Singers KGO KSL KOA
10:45 PM—Mr. 's KOA
10:30 PM—Mr. 's KOA
11:00 PM—Laughner-Harris Hotel St. Francis Dance Orchestra KGO KFSD KFSD KTAR

The Adventures of Detectives
BLACK and BLUE
5:30 to 5:45 P.M. Daily (Except Saturday and Sunday)
KFRC—KHJ—KMJ

FOLGIERA
Every Thursday, 9 to 9:30 P.M.
KHJ
And the Columbia Chain

TAPESTRIES OF LIFE
(FOREST LAWN)
Every Tuesday, 8 to 9 P.M.
KHJ

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514 Petroleum Securities Building, Los Angeles

RADIO PROGRAMS THAT CLICK!

FOR COMPLETE STATION DIRECTORY SEE PAGE 28!
Absolutely Quiet Control of Volume with the ELECTRAD
Super-TONATROL

ELECTRAD is QUIET because it is STEPLESS. A pure silver contact slides over a resistance element permanently fused to the smooth surface of a vitreous enameled steel plate. No make-and-break controls. Dissipates a full 5 watts. Resistance element is enclosed by dust and moisture proof metal shield. 7 types for all usual requirements, $2.40 to $36.00.

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Western Representatives
UNIVERSAL AGENCIES
905 Mission St. San Francisco

SEE PAGE 28 FOR WESTERN STATION DIRECTORY
March 1931

R A D I O  D O I N G S

Columbia Broadcasting Co.—Cont.
11:00 AM—The Three Doctors KOL KFPP KFRC KJI KDYL KIY KLOH
1:30 PM—Asbury Park Casino Orch. KOL KFPP KFRC KDYL KIY KLOH
2:00 PM—Melody Magic KDYL KIY KLOH
2:30 PM—Virginia Arnold, pianist KDFY KIY KLOH
2:45 PM—Tony’s Scrap Book KDYL KIY KLOH
3:00 PM—Gordon Kibbeler’s Fulton Royal Orch. KOL KFPP KFRC KDYL KIY KLOH
3:30 PM—Fancho and His Orch. KFPP KFRC KJI KDYL KIY KLOH
4:00 PM—Morton Downey KFPP KFRC KJH KOH KMI
4:15 PM—St. Moritz Orchestra KFPP KFRC KJI KOH KFIK
6:00 PM—Lee Morse KFPP KDYL KIY KLOH KJH
6:15 PM—Old Gold Character Readings, Lorna Partin KOL KFPP KOIN KFRC KDYL KIY KDJY KFPP
7:00 PM—The Lutheran Hour KFPP KOIN KFRC KJH KDYL KIY KDJY KFPP
7:30 PM—Toscha Seidel and Concert Orch. KDYL KDYL KJH KOH KMI
8:00 PM—Ben Bern案’s School from Chicago KDYL KIY KLOH KJH KFPP
8:30 PM—Radio Roundup KFPP KIY KLOH
9:00 PM—Palmer Coffee Program KOL KFPP KOIN KFRC KJH KDYL KIY KDFY KFPP
Friday, March 6, 12, 20, 27
5:30 AM—Tony’s Scrap Book KDYL
6:00 AM—Something for Everyone KDYL
6:30 AM—Morning Moods KDYL
7:00 AM—International Mixed Quartet KDYL
9:00 AM—Paul Tremaine and His Yoeng’s Restaurant Orch. KOL KFPP KFRC KJH KOH KMI
11:45 AM—Columbia Artists Recital KOL KFPP KFRC KDIY KIY KLOH KJH KOH KMI
11:30 AM—American School of the Air and Current Events KOL KFPP KFRC KJH KDYL KIY KLOH KJH KMI KFPP
12:00 Noon—U.S. Marine Band Orch. KOL KFPP KDYL KIY KLOH
12:45 PM—Columbia Educational Features KFPP KDYL KIY KLOH
1:00 PM—Curtis Institute of Music KOL KFPP KFRC KJH KDYL KLOH KJH
1:15 PM—Swan Ramblers KOL KFPP KDYL KIY KLOH
2:00 PM—Morton Downey KFPP KFRC KJH KOH KMI
12:00 Noon—The Four Clubmen, Male Quartet KOL KFPP KJH KDYL KIY KLOH
12:30 PM—Saturday Synoptics KOL KFPP KJH KDYL KIY KLOH
1:00 PM—Ann Leaf at the Organ KOL KFPP KFRC KJH KDYL KIY KLOH
1:30 PM—Spanish Serenade KOL KFPP KJH KDYL KIY KLOH
2:00 PM—Ira Dease and His Orch. KOL KFPP KFRC KDYL KOH KMI
2:45 PM—Tony’s Scrap Book KDYL KIY KLOH
3:00 PM—Ted Husing’s Sportscasts KOL KFPP KFRC KDYL KIY KLOH KJH KMI
4:00 PM—Morton Downey with Freddie Rich's Orchestra KOL KFPP KFRC KJH KOH KMI
4:15 PM—Armand Vives and His Ritz Carlton Hotel Orch. KOL KFPP KFRC KOH KMI
5:15 PM—Ben Bernas, tenor with Ann Leaf at the organ KFPP KFRC KDIY KJH KOH KMI KFPP
5:30 PM—The Early Bookworm, Alexander Wollcutt KFPP KFRC KJH KDYL KIY KLOH
6:00 PM—Around the Sanovar KOL KFPP KJH KDYL KFPP KFPP
6:30 PM—Columbia Educational Features KOL KFPP KJH KDYL KIY KLOH KJH KOH KMI
7:00 PM—Morton Downey with Frankie Rich's Orchestra KOL KFPP KFRC KJH KDYL KLOH KJH KOH KMI
8:00 PM—Jack Denny and His Orch from Montreal KOL KDYL KJH KLOH KFPP
8:30 PM—Guy Lombardo and His Royal Canadians KFPP KDYL KIY KFPP KJH KOH KLOH KJH KOH KMI KFPP

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All Sizes and Prices for All Practical Uses. Cables and Expert Repairs.
Universal Microphone Co., Ltd.
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Hand operated by all dealers, wholesale, retail and jobbers everywhere

New Eby Products—For the New Year

Our Volume Controls

1. Are substantially built.
2. Are sealed and lubricated.
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Please send me Radio and Sound Information.
Name:__________________________
Address:_______________________
City and State:__________________
United Broadcasting Co.,

Sunday, March 1, 8, 15, 22, 29
7:00 PM—Calendar of the Air KVOS KXA KXL KORE KGB
7:30 PM—Sunday Serenade KVOS KXL KGB
8:00 PM—Brick English Orchestra KVOS KXL KTM KGB
8:30 PM—Album of Familiar Faces KVOS KXL KGB
9:00 PM—On Parade KVOS KXA KXL KMED KORE KFWB KGB
9:30 PM—Traumerei KVOS KXA KMED KORE KFWB KGB
10:00 PM—News KVOS KXA
Monday, March 2, 9, 16, 23, 30
7:00 PM—Calendar of the Air KVOS KXA KMED KORE KTB KGB
7:30 PM—Hughespaper of the Air KVOS KXA KXL KMED KORE KTB KGB
7:45 PM—Old Chestnuts Reve KYS KXA KXL KMED KORE KTB KGB
8:00 PM—Marris Kramarenko and His Bai-
salika Orchestra KVOS KXA KXL KMED KORE KTB KTM KGB
8:30 PM—"Spring Sluicing" KVOS KXA KXL KMED KORE KTB KGB
9:00 PM—Musical Gems KVOS KXA KXL KMED KOHE KTB KFVB KGB
10:00 PM—News KVOS KXL KORE
Tuesday, March 3, 10, 17, 24, 31
7:00 PM—Calendar of the Air KVOS KXA KXL KMED KORE KTB KGB
7:30 PM—Hughespaper of the Air KVOS KXA KXL KMED KORE KTB KGB
7:45 PM—Three Jacks KVOS KXA KXL KMED KORE KTB KFVB KGB
8:00 PM—Hughespaper of the Air KVOS KXA KXL KMED KORE KTB KGB
8:30 PM—Program subject to change
Radio manufacturers throughout the world are learning more and more of the profit resulting from the use of Polymet radio parts. Manufacturers, dealers and users profit by the use of Polymet quality products. The manufacturer builds a profitable and satisfied trade, the dealer's sales are more easily made and the user gets more service and value for his money.

Polymet Quality Products include:
- PAPER, ELECTROLYTIC and MICA CONDENSERS
- RESISTANCES
- COILS
- MAGNET
- WIRE
- VOLUME CONTROLS
- TRANSFORMERS and SOUND EQUIPMENT PARTS.

POLYMET MANUFACTURING CORPORATION
District Representative: THE SPECTOR COMPANY, Rialto Bldg., San Francisco

March, 1931

**RADIO DOINGS**

March, 1931

- 9:00 PM—Musical Contrasts KVOS KXA
- 9:30 PM—Tone Paintings KVOS KXA KXL KMED KORE KTB KGB KFWB KGER
- 10:00 PM—Hughespaper of the Air KVOS KXL KORE
- Friday, March 6, 13, 20, 27
- 7:00 PM—Calendar of the Air KVOS KXA KMED KORE KTB KGB
- 7:30 PM—Hughespaper of the Air KVOS KXA KXL KORE KTB KGER
- 7:45 PM—Murray and Harris KVOS KXA KXL KMED KORE KGER
- 8:00 PM—Highway Highlights KTB KGB
- 8:30 PM—Harrison Harrages KVOS KXA KXL KROM KORE KGB KTB KFVB KGER
- 9:00 PM—Venetian Nights KVOS KXA KXL KMED KORE KGER
- 9:30 PM—Ad Lib Reve KVOS KXA KXL KMED KTB KBER
- 10:00 PM—News KVOS KXL KGER
- Saturday, March 7, 14, 21, 28
- 7:00 PM—Calendar of the Air KVOS KXA KXL KMED KORE KTB KGB
- 7:30 PM—News KVOS KXA KXL KMED KORE KTB KGER
- 7:45 PM—Brick English Orchestra KVOS KXA KXL KMED KORE KTB KGER
- 8:30 PM—"Melody Madness" KVOS KXA KXL KMED KORE KTB KGER
- 8:00 PM—Brick English Orchestra KVOS KXA KXL KMED KORE KTB KGER
- 8:30 PM—Drama KVOS KXA KXL KMED KORE KTB KFVB KGER
- 10:00 PM—News KVOS KXL KORE KGER

**BOX B, RADIO DOINGS**

Ten years' experience in radio business; manufacturer, jobber, department store and chain store fields. Eight years' experience on Pacific Coast. Have established reputation as expert buyer, now employed with national organization but seeking change. All replies kept in strict confidence.

**INSURED PROFIT... if it's of Polymet Quality**

Radio manufacturers throughout the world are learning more and more of the profit resulting from the use of Polymet radio parts. Manufacturers, dealers and users profit by the use of Polymet quality products. The manufacturer builds a profitable and satisfied trade, the dealer's sales are more easily made and the user gets more service and value for his money.

*Polymet Quality Products include:
- PAPER, ELECTROLYTIC and MICA CONDENSERS
- RESISTANCES
- COILS
- MAGNET
- WIRE
- VOLUME CONTROLS
- TRANSFORMERS and SOUND EQUIPMENT PARTS.*
New Products

Webster Power Amplifiers

The Webster Electric Company of Racine, Wisconsin, is offering a complete line of high quality amplifiers for all purposes and of a wide range of power. Phonograph, radio or microphone amplification to any desired volume with uniform excellence of tonal fidelity is provided in a wide assortment of units to meet every possible requirement.

The illustration is of one of the larger rack mounted public address or theatre units. Mr. Perry Demerest is standing beside the rack and a speaker unit to illustrate the relative size of the equipment. This particular unit is installed in the new sound studio on one of the upper floors of the Radio Supply Company's building at 912-914 South Broadway, Los Angeles. This specially constructed studio has been arranged for the demonstration of sound equipment of this nature, and the line of Webster amplifiers are in operation there.

Webster Electric Company Power Amplifier for microphone, phonograph or radio amplification

A feature of the rack type of equipment is that it provides flexibility permitting changes or additions at any time. The power output may be increased by simply adding another unit to the rack, and thus the danger of the installation becoming obsolete is avoided.

Anyone interested in sound amplification for any purpose would do well to visit this studio and inspect the Webster equipment.

* * *

Tiffany-Tone Super

Herbert H. Horn Radio Manufacturing Company, Los Angeles, is now in production on the new Tiffany-Tone Midget Super-Heterodyne. An eight-tube receiver, having a sensitivity of but a small fraction of one micro-volt per meter for normal test output. Push-pull audio amplification and Magnavox dynamic speaker provide a great undistorted volume. In a recent test, 117 stations were logged in one night, including three in Australia, one in New Zealand and six in Japan. Adjacent channels to the powerful locals can be played with ease, according to those who have witnessed the tests.

Supreme Test Equipment

The Supreme Instrument Company is offering a new tube tester wherein the mutual conductance reads directly on the scale of a meter. It will test every type of tube quickly and thoroughly without necessitating any figuring. All readings are direct.

Another item of the Supreme line is the compact Ohmeter and Capacity-meter. This combination is invaluable to the service man and experimenter. It reads directly in ohms and micro-farads and thus affords a very quick check of the values of resistors and condensers. Their standard test kit, also illustrated, is another instrument which is outstanding for the reason that the five meters afford instantaneous readings of all of the vital values without pressing buttons or turning switches to make one or two meters read in all of the circuits. For example, when a 224 type of tube is transferred from the set to the tester, the meters indicate the heater voltage, plate voltage, screen-grid voltage, control grid voltage and plate current, all simultaneously.

Listeners and Gough of Los Angeles distribute the Supreme line of test equipment.

The new 48-story building of the Radio Corporation of America in New York, with a sign on it which can be read a mile away, and located at the southwest corner of 51st street and Lexington avenue, emphasizes the fact that that portion of the city will soon be the radio center of the country.

This building, which will be ready for occupancy in April, is only a couple of blocks from the Columbia Broadcasting System building at 52nd street and Madison avenue, and not a great distance from the headquarters of the National Broadcasting Company at 55th street and Fifth avenue.

* * *

Handicapped by a voice which is a little too husky for the radio, Mary Pickford made another creditable appearance the other night. Speaking in behalf of a California concern, she presented five car-loads of oranges to the drought sufferers in Arkansas and Oklahoma. However, as seemingly does most every other picture star who gets on the air, Miss Pickford detracted considerably from the presentation by injecting what seemed to be an excessive amount of advertising into the program.
The Gateway to
"Public Interest, Convenience and Necessity"

Who Will?    Who Won’t?    What Changes?

Get it all in the New

RADIO DOINGS CALL BOOK

NOW ON SALE

This is the only radio log magazine published for Western set owners. Get it today and have a reliable and remarkably complete guide to the air lanes everywhere. Obtainable at your radio or news dealer

For only 25¢

RADIO DOINGS CALL BOOK

314 EAST 12th STREET
LOS ANGELES

929-930 HEARST BLDG.
SAN FRANCISCO

To Radio Dealers: A small supply of Call Books is still available to you; Reorder Now!
ABOVE are shown two popular Crowe Tuning Units from the new series, descriptions of which appear in our new Bulletin 41.

The Number 35 unit in the upper right corner is operated by a metal belt friction drive and is very smooth in action. The scale is pyralin and graduated from 0 at the left to 100 at the right through 180 degrees unless otherwise specified. The Number 27 unit at the lower left is a direct drive dial with pyralin scale graduated as shown. Both units are well adapted for use in midget and popular-priced sets.

Send for your copy of Bulletin 41 if you have not already done so.
Mr. L. E. Taufenbach, president of Western Radio, Inc., announced this last week that they would no longer be the Southern California and Arizona distributors for Brunswick radio sets and records.

This new arrangement was apparently agreeable to both parties.

Mr. Taufenbach stated that he would at present confine his efforts to distributing Silver-Marshall super-heterodyne receivers, electric clocks, tubes, batteries and accessories.

The Electronic Clan, a society of engineers of the local manufacturers, held their regular bi-monthly meeting at the Cafe Metropole Tuesday evening, February 24th. Messrs. Miller and Patterson engaged in a debate over the relative merits of the padded oscillator condenser and the special cut plate condenser in super-heterodynes. The judges, Messrs. Howard and Garstang, called it a draw. Mr. Garstang then spoke on behalf of the truly dry electrolytic filter condenser, as compared with the wet variety.

"King Leer" from Chicago has been in our midst! He held forth in Gilfillan's laboratory and showed some of our local boys how to build super-hets with some real sensitivity and wallop. Representing the Chicago Coil and Wire Company, Bill Leer introduced intermediate couplers and RF coils wound with 10-strand Litz. These put so much performance into a midget super that it's just too bad! Anyhow, we're glad Bill came West, and hope to see him again soon.

More than two hundred Southern California radio dealers gathered at the Los Angeles Chamber of Commerce Wednesday afternoon, February eighteenth to discuss advertising and merchandising plans for the new Holbrook Electric Refrigerator which is to be distributed by Walter M. Fagan, president of Pacific Wholesale, Ltd. Fagan has long been prominent in local radio circles as distributor of the Sparton receivers, which he will continue to handle. The meeting was called by Fagan, who presided as chairman. Speakers included C. H. Merrill, president of Holbrook, Merrill and Stetson, refrigerator manufacturers; Gordon Muir, factory advertising manager; C. H. Nagel, manager of Silverwood's, and Russel Lockwood. Enthusiasm and optimism were strikingly manifested at the meeting.
Radio Goings On Around Town

Davison-Haynes Manufacturing Company announce the appointment of the following promotional sales managers:


James T. Barrett of the firm of Kumper-Barrett Corp., Ltd., of San Francisco, promotional sales manager for Northern California.

Charles G. Walters, promotional sales manager for Southern California.

Davison-Haynes are outlining an entirely new sales program which is unique, and which will, no doubt, result in a larger volume of business than ever before attained.

Mr. P. W. Bialowsky, the Pacific Coast sales manager for the Crosley Radio Corporation of Cincinnati, Ohio, spent ten days in Los Angeles last month visiting their Southern California jobber, Kierulff and Ravencroft and calling on the Crosley dealers.

Mr. Bialowsky, whose main office is in Seattle, says that there has been a very noticeable increase in demand for radio sets since the first of the year and that, while it would take some time to get back to normal, he believes that the radio dealers as a whole will enjoy a good business during the balance of the year.

Mr. David Marshank of the Marshank Sales Company, 224 East 16th street, Los Angeles, took a trip to New York the latter part of last month. He stated he would have some interesting information to give out when he returned. Now that Los Angeles is definitely the leading midget set manufacturing city in the country the makers of parts are playing to the manufacturers in this part of the country. Mr. Marshank has several popular parts lines and may have more on his return.

A very enjoyable dinner dance was given by the Radio Pioneers Thursday, February the 19th. There were over one hundred and fifty guests in attendance. Everyone seemed to enjoy the music and entertainment.

The ballroom of the Commercial Club was beautifully decorated. It made a perfect setting for a gay party.

Our old friend Bill Lane of San Francisco paid us a visit the latter part of last month. Mr. Lane is well known in Southern California, having spent several years with Kierulff and Ravencroft and John G. Rapp Corporation. He is now with the Waterhouse, Weinstock-Scovel Company, Northern California Distributors for Bosch Receivers.

The Radio and Music Trades' Association of Southern California held a dinner dance at the Los Angeles Realty building Thursday evening, February 5th. The monthly meeting of the association is usually held the first Thursday of each month at 8 a.m., at the Breakfast Club. For a little change the directors of the association decided on the evening meeting. The change was very successful as everyone enjoyed themselves.

Radio Row

THE OFFICE BOY SEZ:

Introducing two of our most interesting radio men

The Office Boy walked into the office of one of the well-known midget manufacturers the other day and was greeted with "Hello, Charlie, glad you came in. I wanted to see you about some coils." This from the midget magnate who hadn't looked up. "Beg your pardon," said the Office Boy. Whereupon the M. M. looked up with a startled expression and said, "I would have sworn that you were Charlie Wineberg." "How come?" retaliates the O. B. "Why, by the smell of that pipe! How else? It smells almost exactly like that smoke stack of Charlie's." It all came about like this. Charlie had given the Office Boy some of his odoriferous tobacco a few minutes before.

Some people are known for their elegance, some for their tact, some for their humor, etc., but Charlie is identified best by his smell (pipe). Some pipes in his collection are so old and so smelly that he has to give them an airing every day by carrying them around in his car, and the above candid camera caught him in the act of performing this rite for his pets. Here, folks, is the "Sage of Wall Street" in all his odoriferous glory!

Leigh Borden, the snappiest radio man in town! The big "Yes and No" man for Sparton on the Pacific Coast. When Leigh toots his horn folks sit up and look and listen. And why? Easy boys, because it's so musical. (That wasn't too good, was it?)

Nearly always on the move, Leigh travels thousands of miles every month, either in his snappy roadster or by train. How he keeps so scrupulously well-dressed under these hectic circumstances is something to marvel at (there's that darn little preposition with which you're not supposed to end sentences.) But anyway, Leigh looks just as though he had stepped out of the proverbial band-box. A pretty posy always adorns his lapel, his fedora sports a swanky band and a shiny cane achieves just that correct touch of elegance which we all envy.

Leigh Borden is one of the boys you want to meet if you haven't had the pleasure, for besides being a well-dressed man about town, he is an excellent salesman and knows the radio business thoroughly.
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