

THE JANUARY, 1935

RAD IO IN **D** EX

THE ALL-WAVE RADIO MAGAZINE



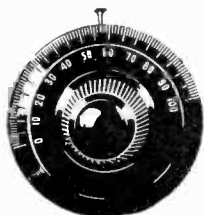
25^c

**A Study of the Power Unit
Where to Get the Day's News
An Analysis of 1935 Receivers
The Vote on Broadcasting Systems
Short Waves are the Thrill Bands**

No. 85

N. S. E.

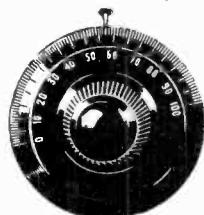
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RADIO INDEX

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PAGE TAYLOR
Short Wave Editor

ELEVENTH YEAR

NUMBER 85

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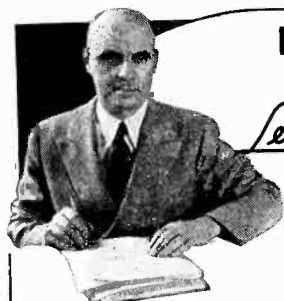
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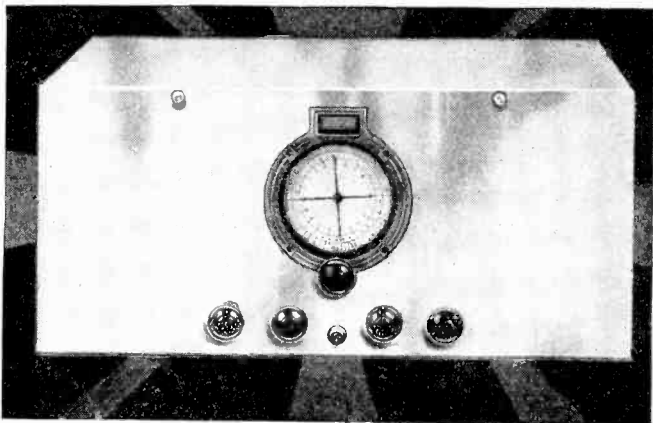
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The McMurdo Silver

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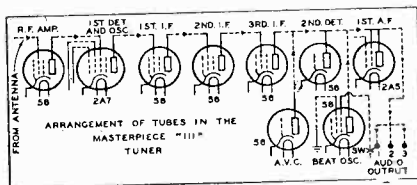
• • • By B. FRANCIS DASHIELL

THE New McMurdo Silver “Masterpiece III” all-wave receiver is essentially the same as “Masterpiece II”, of 1934. Outstanding among the improvements are its newer dial, more accurate calibration, and a simplified audio amplification system. The sensitivity, selectivity, tonal fidelity and power output remain practically the same, but “Masterpiece III” is much simpler to operate on the short waves. This newest precision receiver of the well-known McMurdo Silver line embodies everything that is modern in all-wave world-wide reception.

The “Masterpiece III” is not built into a cabinet. On the contrary, it is placed upon the cabinet that contains the speaker and combined audio and power unit. An attractive case, containing the receiver, provides a shielding cover. It is plated with chromium metal. In this way the sensitive and delicate parts within the tuner are not exposed to dirt, dust, dampness, and stray electric waves. The innovation of exposing the shielding case, instead of placing it within an open-backed wooden cabinet is, contrary to the expectations of many, a pleasing contrast. Chromium plating, as most people know, is a silver-like rustless surface that will not tarnish. It can be kept bright and new simply by rubbing lightly with a cloth.

Superheterodyne Circuit

The circuit used in “Masterpiece III” is essentially a conventional superheterodyne arrangement employing twelve tubes, all of which are new, improved types. The tube circuit, which is shown in our diagram, illustrates the positions and



functions of the tubes, as well as the flow of the various currents through the receiver.

Starting at the antenna end of the circuit, it will be seen that the first tube in a 58 triple-grid type. It is in a tuned-radio-frequency amplifier—an unusual procedure in a superheterodyne all-wave radio receiver. This tube eliminates crosstalk and other intersignal heterodyning. The output of the 58 tube feeds, through a second tuned circuit, into a 2A7 first-detector and combined electron-coupled oscillator. These three circuits—radio-frequency, first detector and oscillator—are tuned by a three-gang variable condenser controlled by a single knob on the tuning dial.

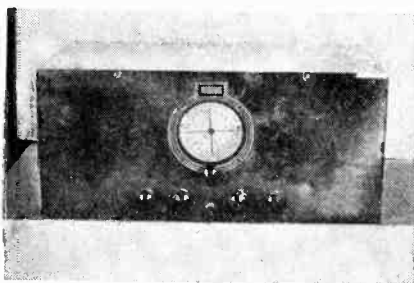
Four I. F. Transformers

Following the 2A7 first detector are three stages of dual tuned intermediate - frequency amplification. Each stage uses a 58 tube. There are four i.f. coils or transformers. This is a greater number than is normally used in such circuits. Each transformer has two tuned circuits, or a total of eight in all. Such an extensive array of tuned circuits provides close selectivity. All the transformers are tuned by small air condensers which are “peaked” permanently for constant alignment and resonance to the receiver’s intermediate frequency of 465 kilocycles.

The second or power detector is a type 56 tube. Automatic volume control is provided also by a 56 tube; it regulates the amplification of the preceding tubes to a degree where all signals will produce the same apparent output volume. In connection with the A. V. C. circuit there is a visual tuning meter which indicates when exact resonance on all signals has been found.

Tuner and Amplifier

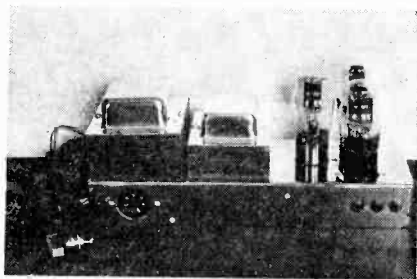
The second detector is used as a diode or two-element tube. This sharp departure from usual practice provides a capable handling of *all* the power required to operate the audio power stages. The detector feeds directly into a 2A5 first audio-power or driver stage. The last named tube terminates the tuner circuit.



The "Masterpiece III" is assembled in two individual units—the tuner, and the audio amplifier and power pack. The tuner, containing nine tubes, is assembled in its tight metal case and is placed on the top of a wooden console cabinet. The tuner case is 19" long, 11" deep and 8½" high. The audio-power unit is placed within the cabinet along with the speaker, and is connected to the tuner above by means of a plug-in cord that carries the tube filament and plate voltages from the power-pack unit.

Power Unit

The power unit utilizes three tubes. One of these, of course, is the rectifier—a 5Z3. It is fed from



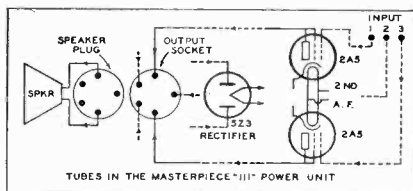
an extra large power transformer, and is followed by a filter using a large choke coil as well as the speaker field as reactors. Dry, non-leaking electrolytic condensers are used for filtering, and there is a freedom from all traces of hum. The power unit is 13" long, 5" wide and 7" high.

The audio amplifier section of the unit employs two 2A5 tubes in push-pull action. The tone quality is free from distortion as the tubes turn out much power with little signal input. This undistorted power output is about eighteen watts. The audio and rectifier tubes and connecting wires are not shielded, for they carry only low-frequency currents.

Uses All Antennas

The receiver has a separate antenna-primary coil that can be used on all wave bands. It permits connection to any regular antenna and ground, noise reducing antenna, doublet type of antenna, transposed leads or tuned lead-in systems. The whole chassis is supported on rubber, which eliminates any microphonic howl that might be set up between the speaker and cabinet beneath, and receiver case on top.

The new "Masterpiece III" is tuned by the new "watch" dial. The



set tunes from 13 to 570 meters, with a special European long-wave band (150 to 400 kilocycles). All of the wave bands are controlled by a four-position switch which silently and automatically selects such of the separate and distinct coils required to cover each of the frequency ranges. The short-wave band can be opened by a band-spread dial. This makes tuning less sharp on the critical short waves coming from great distances.

The Control Knobs

Looking at the front of the receiver one will see five knobs and a switch. The upper, center knob controls the "watch" tuning dial with its large, airplane-dial face. The lower, left knob controls the amount of volume. It should be set at the volume desired, and further change is not necessary. The upper tuning knob can be pushed *in or out* to control band spreading.

To tune to the short waves the wave-change knob is turned to indicate the desired short-wave band. Different colors are displayed on the dial—yellow, red and green, for the several wave bands. The long hand or pointer is set to the top of the 16, 19, 25, 31, 49, or other short-wave band desired. The tuning knob is pushed in at the time. Pulling out this knob will spread all stations in that particular band evenly over the 0-100 degree scale of the dial. This method eliminates the excessively sharp tuning found in short-wave reception. The band-spread method makes possible easy finding of distant stations.

Station Finder

The switch in the center turns on a beat oscillator. This oscillator is a 58 type tube, and is shown in the diagram. It is an aid in locating weak stations for, whenever the tuning dial passes a signal, a slight whistle will be heard. This faint "squeal" is instantly checked by
(Continued on page 47)

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WORLD-WIDE
**ANTENNA
SYSTEM**

The Short Waves are the Thrill Bands

• • • By PAGE TAYLOR

A FEW days ago the Editor of this magazine said:

"Could you prepare a story covering One Night on the Short Waves, just as though you were to sit at the radio for a session, and the things you hear?"

"Sure," we said, looking for a cinch, "how about writing up the Thousand and One Nights when we didn't hear anything but static? Or maybe we can use that poem:

*The señoritas sing, and, as they sing,
Fade out; for all you try you'll never
bring*

*Them back again in time to get the
call*

*So you can know from where you heard
the thing."*

"It has to be something good," he said.

So, typewriter before us, a sheet of virgin paper inserted therein, we commenced to stare blankly into space searching for an inspiration. During this seance there appeared before us ghosts, hundreds of them, the spectres of all the stations that got away. We can still hear a gong solemnly striking eleven times, and there was the station that sent the letters M O in Morse between each selection, interval signals of some stations which still haunt us. Then there was the station that signed off at 5 a. m. with a recording of a train starting, increasing its momentum and leaving us with a clang of its bell and a long shriek of its whistle. We never learned where this train came from nor where it went, but we will remember it long after we have forgotten Daventry and Zeesen.

Be warned, therefore, fans and prospective fans! For every good night on the shortwaves there will be

a bad one and for nearly every station identified there will be an elusive stranger.

Taking for granted strangers and static, we will choose an evening when the shortwave gods are in a gracious mood.

Taking Doubters for a Ride

There are still some people who doubt that enjoyable reception can be had on the s.w. and there are many who deny that there are any thrills left for the new comers. We will take these doubters along with us on our little tour of the thrill bands and perhaps before we shut down our receivers for the night they will decide there are many pleasant hours in store for them if they will cast aside their doubts and do some tuning.

We believe we can safely say that nearly every oldtime shortwave fan considers as his greatest radio thrill his first hearing of Big Ben striking midnight over G5SW at Chelmsford; and most of these veterans continue to thrill to the peals of Big Ben over the Daventry station. The pleasure of hearing this famous clock striking increases, rather than diminishes, with time. Those of you who have never twirled a s.w. dial should try for Daventry some night between 6 and 8 p. m., EST. The clearly enunciated English announcements are of themselves worth listening to and offer a relief from the high pressure, rapid fire talk we have become accustomed to over here. The British viewpoint on American news is always interesting and often refreshing. Dance orchestras are featured often and many American fans enjoy dancing to the British music. Although popular American selections

are played at times, original music is also presented and sometimes the British songs of today are the American "hits" of tomorrow. They are singing a song over there now called "Good Night Everybody" which we feel sure will find its way across the Atlantic. It should, anyway. GSA in the 49 meter band (6050 kcs.) is easily heard and during the winter months is a regular visitor.

Yuba from Cuba

The rhythm of the rhumba was heard on shortwaves long before that song made it famous. The station that introduced the rhumba to American high frequency listeners left the air ways long ago but two very fine stations can be heard now, featuring good, typical Cuban orchestras. COH on 9500 kcs. transmits a program for the Cuban National Lottery between 5 and 6 p. m. and COC works on 6000 kcs. from 4 to 6 and 8 to 9 p. m. COH is found at the top of the 31 meter band and is easily identified by Spanish and English announcements, "Estacion COH, Vedado, Havana, Cuba." In English the announcer nearly always reminds listeners that Cuba is the Paradise of the Americas and that it was discovered by Columbus in 1492. COC is at the top of the 49 meter band and comes in on the dials very close to DJC. This station also announces in two languages, and never fails to give its address, thus: "This is short wave station COC, P. O. Box 98, Havana, Cuba."

The Music Box Stations

As Cuban reception may not appeal to the thrill-seekers who are listening in on this DX party, we will tune further. When COC leaves the air at 6 p. m. we move the dial very slowly to a higher frequency, and at about a quarter of a dial division from COC, find a station sending, over and over again, a little tune, played, ostensibly, on a music box. It is not really a music box but an



Pretty Doris Sharp used to be a hostess in the CBS headquarters until the gents who put on the programs found out she could sing. Now Doris is a regular member of the Columbia singing staff and will soon be heard in her own occasional programs.

electrical device equipped with vibrating reeds to produce the characteristic sound. The tune played is called "Ever Be True and Honest," and if there is a piano handy, try these notes: D, G, G, A, A, B, A, G. They are all quarter notes except the B, which is a dotted quarter. This tune identifies any of the Zeesen, Germany, stations, so our station, being next to COC, is DJC. If one happens to tune in the station during a program, the good English announcements identify it, as well as the two national anthems which close the programs. One of these anthems is the familiar "Watch on the Rhine," the other, the Nazi Hymn. The German slant on world-wide news is always interesting, especially when compared with the comments of American and British commentators, and lovers of fine music, splendidly executed, always find the Zeesen programs highly interesting.

With the Mussolini Stations

A slight twirl of the dial through about a half a degree is sufficient to transport us from Berlin to Rome. The new Italian station IRA on 6070 kcs. transmits the American Hour from 6:30 until 8 p. m., EST, and of course, announcements are in English as well as Italian. If good music

is your weakness you will want to linger long in Rome. Contrary to popular belief, the Italian programs are not devoted wholly to opera; jazz is even heard sometimes, light orchestral music, or drama, but operas, concerti and symphonies take up a large portion of the program time. If one prefers to hear symphonies or other long selections in their entirety rather than in the abbreviated forms we have to accept on our own stations, IRA should be his favorite station. The announcers never break in during the middle of the Second Movement of the Moonlight Sonata nor do they cut off the final act of Rigoletto because their allotted time is up. I2RO, IRA's predecessor, like nearly all foreign stations, has been heard transmitting overtime many times rather than cut short a good program.

The Italian stations employ lady announcers who advise us that our station is "Radio Roma-Napoli," and a man tells us in good English the call letters and the address, which is EIAR (Ente Italiano per le Audizioni Radiofoniche), Via Montello 5, Rome.

The Venezuelan Fandango

Continuing down the dials further we cannot miss YV3RC in Caracas, Venezuela, which broadcasts at the bottom of the 48 meter band, on 6150 kcs. English is seldom used but the Spanish announcement "Radiodifusora Venezuela Yay Vay Tres Erray Say en Caracas" is quite easy to get. Three notes struck on differently pitched gongs usually precede this announcement.

The rhythm of the music from this station will be new to our friends who have not heard a South American station. We know the fox trot and the waltz, the tango and the rhumba, but the Joropo, the Jota and the Castillian fandango will be unfamiliar but altogether pleasing. The native instruments, the cuatro and

the maracas, will fascinate us, and those who failed to thrill to British fox trots, German chamber music or Italian concerts, most certainly will enjoy the tantalizing rhythm of these native Venezuelan dances and love songs. The Jaropa is sung by two male singers (originally "llaneros"), one twanging the cuatro, a crude harp standing four feet high, the other shaking and producing a very agreeable sound from the maraca, an instrument made from the hardened outer shell of a tropical fruit called the "totumo", and filled with small seeds.

We would like to linger longer in the city which is called, in full, Santiago de Leon de Caracas, but we have determined to demonstrate all the types of entertainment which await those who tune the genuine thrill bands. The evening is young and we have just commenced.

The West Indian Dances

Very close to YV3RC we come upon a West Indian station located in Santiago de los Caballeros in the Dominican Republic, known as HI1A. The Spanish announcements sound like "Estacion Achay Ee Uno Ah, La Voz del Yaque," and if we waited for them to sign off we would hear "Anchors Aweigh" played to terminate the program. This station generally plays American phonograph recordings, but sometimes typical West Indian dance tunes are heard in the rhythm of the merangue, the danzon, the son or the criolla. HI1A is now on 48 meters or 6240 kcs.

After leaving Santo Domingo we find ourselves in Caracas again. On 6375 kcs. is a very good station known as YV4RC or Estacion SAR. Announcements sound like "Estacion Essay Ah Erray" or "Estacion Yay Vay Cuatro Erray Say." Having already become familiar with Venezuelan music we will stay here just long enough to marvel at the good signal strength and perfect clarity of the transmission.

Music from Barranquilla

One dial division away from YV4RC we find HJ1ABB, which is the first Colombian station we have heard this night. This is one of the oldest South American shortwave stations, celebrating its fifth year of broadcasting last December 5th, with a 24-hour program. Sr. Pellet features good orchestras and bands; the combination of piano, saxophone, marimba and guitar makes pleasing music, whether the selections are American dance tunes or South American music. The typical Colombian dance, the pasillo, is heard, as well as Spanish fandangos and boleros or Mexican paso-dobles. HJ1ABB is known as "La Voz de Barranquilla" and frequent English announcements facilitate identification.

One more dial division separates HJ1ABB from HJ5ABD in Cali, Colombia. Cali announces as "Achay

Hota Sinko Ah Bay Day, La Voz del Valle," and at various times during the program the crowing of a rooster is heard. We do not know what it is the rooster has to crow about unless it is the excellence of this station's quality and the ease with which it is picked up.

Next to Cali on the dials we are able to hear another station in Santo Domingo, HI4D, "La Voz de Quisqueya." This is a low-powered, home-made station and, while we cannot feel elated over the quality or volume of its transmission, there is a thrilling sense of triumph in knowing that we can bring in this hard-to-get station intelligibly. HI4D is heard on 6500 kcs. and about one dial degree separates it from Cali.

From the Equator

Below HI4D are two Ecuadorian stations, El Prado on 6620 kcs. and HC2RL on 6660 kcs. Prado in Riobamba plays South American music and fox trots almost exclusively while HC2RL, in Guayaquil, features classical music and operatic adaptations.

It is now nearing 11 p. m., EST, and all the other stations, particularly North American stations, are beginning to fade badly, but these Ecuadorians continue to improve right up until the time when they leave the air. Although they are supposed to sign off at 11 o'clock, both Prado and HC2RL have remained on the air as much as an hour overtime. Dr. Levi of Guayaquil never cuts short a good program. On the termination of the musical portion of their broadcasts, these stations acknowledge letters they have received from their listeners during the past week and it takes them nearly a half hour just to read the names of their correspondents. Shortwave's critics should listen just once to this letter-box transmission from 150-watt HC2RL on a Tuesday night. Letters are acknowledged from listeners in

(Continued on page 30)

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Turning Our Readers' Dials

• • • Logs are Growing

THE peculiarities of radio are many and varied. It is this which makes it so intriguing a hobby. If we could sit down at the receiver and turn to a certain number and get Melbourne, turn to another number and get Tokyo, there would be little lure to it. It is the uncertainty that lends excitement. What is "best" for one listener may be the worst for another but a short distance away.

R. W. Schofield, 300 Evans Ave., Missoula, Mon., submits several Japanese stations for singletons. All have, however, been reported by others. He says: "DX this season is by far the best it has ever been in my 12 years of DX. I have logged 425 stations since September 1, 1934, when I start a new log each year. I have heard so far this season: 8 from New Zealand, 24 from Australia, all six in Manchuria, both Koreans, all 28 Nipponese, both in Formosa, five Chinese, 13 Mexicans, one Guatemalan, two Cubans, one Puerto Rican, two from Newfoundland, 26 in Canada, both Alaskans, KZRM, two Hawaiians, and the balance of the 425 in the U. S. So far this season I have heard no European or SA signals."

On the Other Hand

While Mr. Schofield in Montana, reports the best season in 12 years, Chas. H. Hesterman, 2214 Herman Ave., Saskatoon, Sask., less than 500 miles distant, reports: "DX here in Saskatoon has not been anything like the DX of last season. We have experienced over two consecutive months of fierce atmospherics. I have spent an average of 30 hours weekly at the radio and have not had more than one hour of noise-free reception per week. I have managed to obtain sufficient material to send

away reports to 30 foreign stations. The veries are beginning to arrive now and one of them is, I think, an innovation in this verification business, being nothing less than a verification from JOJK, Kanazawa, written in Esperanto. I had the very dickens of a time getting it translated but it proved to be really worth while as it is one of the finest verifications I have ever had, very friendly and appreciative. Have you ever heard of a verification being written in Esperanto before?"

This is the first use of the "universal language" in the way of a verification of which we have heard. It would be a wonderful thing, however, if the use of Esperanto became generally used as a "second tongue." It is the simplest and least confusing of "languages" and may be learned sufficiently well to talk, read and write in just a few weeks. In Europe one may hear many programs in Esperanto. Some time ago we suggested publishing a short course in this magazine if enough readers were interested to warrant it. The response, however, was too small.

A Peculiar Verification

"I have been hearing three new Japs," announces Warren E. Winkley, Hughson, Calif. "The best received of these three is on 560 kc. and relays the regular Japanese b. c. chain. This station is QSA4, R5-6 mostly and is heard best from 2 to 4:30 PST. The other ones are on 885 and 1001. Has anyone else picked up these stations? Tell the gentleman in Connecticut that the station he heard on 855 on October 14, broadcasting a church service was my standby, VK2BL in Sydney, Australia." Warren has a verification—if it is a verification—covering his

reception of XOST. It reads: "We had the pleasure at receiving your favour of the 25 March and 31 March and gladly to know that you have been receiving us. We also had the verification from New Zealand. They had received us by a four valves screen grid home receiver. But none at United States except you. Though you have received us, but we still doubt for several place only few hundred miles depart us can't hear our broadcasting. Hope you can give us another verification if you can. (Signed) Lieh Fu Chang." So we ask you, is this a veri or is this a veri?

Wants European Skeds

An old reader but a new writer is Harry Bowley, 10039 87th Ave., Edmonton, Alta. "I am 16 years old and just commencing my second year of DX. The set is a Marconi 36, 13 tubes all-wave, and it sure brings 'em in. Unlike most DXers I get more kick out of the b. c. b. than the s. w. My b. c. b. log totals 352 including KGBU, CMCQ, CMQ, WKAQ, TGW, KFPM (15 watts, Greenville, Tex.) KGU, KGMB, KZRM, 2YA, 3YA, 5CK, 2FC, 3LO, 2BL, 2GB, 4BC and 21 Japs. I find 2BL the most consistent of the Aussies. 2FC, for some reason or other is seldom heard, in spite of greater power. I haven't had much luck yet with the SA's although I have heard a Spanish-speaking station several times coming right through WBZ on 990, which I am sure must be LR4. I can't seem to get the announcement. Haven't heard any TA's yet but am hoping. Would it be possible for you to publish the time schedules of some of the most powerful European stations such as PP?" The time on the air of the Europeans, with a few exceptions, seems to change almost from day to day. We suggest that our readers when reporting reception of the principal foreign stations give the time of day when they were received. This will help others who are anxious to log them.



The Maple City Four, novelty and harmony foursome. On the north-west, Al Rice; n. e., Leroy Petterson; s. w., Art Janes; and s. e. Fritz Clark. They are heard each week on the Sinclair Minstrels program, Mondays at 9 p. m. EST, over an NBC-WJZ network.

Mystery on 1285

"I have been hearing a station with R9 volume testing on 1285 kc. most every morning," states Jack Watrous, La Canada Road, San Mateo, Calif. "I have an idea it is a Mexican as they play recordings of a decidedly Spanish nature. This is my first DX year at this location and it certainly is the berries. My best catch this season, 4BC, a 85-watter; WHEF also runs in for the title. Other excellent catches this season have been CMCA, WTJS, WIBA, KGKL, KRKO, WKAQ, KGBY and numerous 100-watters in Texas, Oregon, Washington, Nebraska and Montana. I get the 10-kw. J stations but for some reason, I get hardly any ZL or VK. XGOA, 665, kc., comes in very well here, up to as late as 6:15 a. m." Jack postscripts that he has just brought in WNEL, the new Puerto

Rican, WEXL, 50 watts, and WEDC, 100 watts.

Better Than Promised

"There was an interesting incident happened to me two months ago," narrates Barton Dowdy, 2903 Warsaw Ave., Cincinnati, Ohio. "I bought a Stewart-Warner model 1107, 10-tube super and a Stewart-Warner S. W. converter. The serviceman who connected the converter said that I should not expect to get off the continent. The next morning I was listening to some s. w. station. When I heard him announce 'VK2ME, Sydney, Australia' I went wild. Since then I have identified 13 foreign countries on an outfit that would 'not get off the continent.' I was using only about 30 feet of single strand wire stretched between two nails in the attic. I would be glad to receive letters from any user of a similar outfit."

"I have a total of 838 stations on the b. c. b. with all except about a hundred verified," proclaims Robert Slosson, 2822 S. Shore Drive, Milwaukee, Wis. "I have also logged 985 s. w. stations. I operate a Scott all-wave, a Postal s. w., a Philco 16-tube and have a Star s. w. to use when I wish. Here are two verified stations which I challenge any other DXer in N. A. to cancel. I received veries from these two stations about six months ago. I know they are still on the air as a correspondent in the Philippines wrote me that he heard them less than a month before. Here they are: VSIAM, Johore, British Malay, 7375 kc. 500 watts. VUG, Delhi, India, 933 kc., 1000 watts."

The LR5 Specials

E. O. Cutler, 36 West 44th St., New York, N. Y., calls attention to the coming broadcasts of LR5, "Radio Excelsior" of Buenos Aires, Argentina, that are due on January 6th and February 3rd, 2:05 to 3:05 EST. "Their program on November



Isham Jones, pioneer in modern music, both as conductor and composer, heads the 20-piece Chevrolet Orchestra and a mixed chorus of 12 voices under the direction of Leith Stevens. On the Columbia from 9:30 to 10:00 p. m. EST, Tuesdays.

4th was received in good shape all over the U. S. Announcements are made in English, musical selections are of high calibre and are numbered consecutively. They are ideal DX programs and start a few minutes after KOA, Denver, signs off."

"My log has now reached 614 stations," computes David M. Walton, P. O. Box 87, Picton, Ont. "Recent veries are LS-2, TGW, KFBK, CFCT and reports are out to YVIRC and XEK. YVIRC is heard regularly in the evenings between 6:30 and 8 on 960. This morning, Nov. 4, I heard LR5, Buenos Aires, on 830 at 2:45 EST. They signed off at 3:00. Announcements were in English as well as Spanish."

Uses One-Lungers

"If you would like a good story of a one-tube radio, I've got one," announces Elmer Wall, RFD 1, Box 116, Mountain Lake, Minn. "I have a one-tube battery radio with which I do my DXing. My best catch is

WKAQ, San Juan, Puerto Rico, 2600 miles. I have also logged stations in Mexico City and Havana, Cuba. When I use my 250-foot aerial, the b. c. stations are thrown further up the dial and this enables me to get the 160-meter amateur band. I have logged 612 amateurs which all check in the Amateur Call Book. I have also logged 42 police stations and 375 b. c. stations, a grand total of 1029."

"I have two single-tube receivers. one for b. c. and one for s. w.," relates Allan Ford, Portneuf Station, P. Q., "and thought you might be interested in my log. Since June first my best catches are (b. c.) KFXJ, KGCX, KGIW, KONO, WKAQ, WNEL, WEXL, WNRA, WBNO, VE9EK, CHNC and TGW. (s. w.) GSA-B-C-D, DJC-D, COH, HJ1ABB, PRADO, HC2RL, LSX, KNRA, etc. I would like to correspond with any DXer in any part of the world. I am 16 years of age. I find the one-tubers are great distance getters."

His Best Bet

"VK2ME has been my one best bet once or twice a week on my Midwest radio," contributes Herman C. Webb, P. O. Box 72, Baker, Ore. "GSB and GSD also come in more than OK most any time. EAQ came in very good last Sunday. JOAK on the s. w. is also most generally a good bet. I've been working all summer and haven't had much time to listen in for many of the foreign stations. I'll be out of a job in a few days and perhaps will be able to log a number, at least I'll stay with some of those foreigners until they make an announcement I can understand."

"I have a singleton that should stand a long time," thinks Marvin D. Dixon, R 4, Ora Mill, Shelby, N. C. "I have a verification from CX-18, Montivideo, Uruguay. This program was received on the morning of December 14, 1932. About three months later I received a letter thanking me for the report and saying that they had been testing when I received

them. I also have verifications from 2CO, 2YA, HJN, 4QG, CX-26, LR5 and Frankfurt-am-Main, Germany. I have reports out to TGW, JOHK, JOCK, JOIK, JOAK-1, 2BL and 4BC."

Ernest Lockyer Wills, 138 Lelievre Street, Montreal E., P. Q., doesn't tell us what receiver he is using but submits a fine list of stations, both b. c. and s. w., which he has heard. He picked up PRF-1 on about 8.300 megs. several times. He says it comes in between 5 and 5:45 p. m. Fridays.

Wholesale Static

"My DX is Darned Xasperating," puns Milo E. Smith, 538 High St., Fairport Harbor, O. "I live right along the river and every night they are either loading or unloading a boat and all the machinery is electrical. To top it off I have a printing shop, three dairies and two bakeries within a stone's throw of my house and all use electrical equipment and none of it filtered. My set is a Stewart-Warner ten-tube superhet. I have increased my log from about 250 when I wrote you last to 346 so, all in all, I haven't done badly."

"You may be interested to learn that WNEL went on the air October 27 testing and continued their program to 3 a. m. Oct. 28," informs Manuel Albert Cadilla, Box 337, San Juan, Puerto Rico, "Their antenna is of the single-tower, vertical, non-directional type and their equipment is the most modern available. They will relay their programs by short wave but I do not know the wavelength as yet. During the month of October, DXing after 5 o'clock mornings, I logged 70 stations. These include KYA, KFAC and KADA. The last is a singleton so far as Puerto Rico is concerned."

Prefers S. W.

"Until I purchased my new GE all-wave about two weeks ago, I was without s. w. experience but now

I think that is the best part of radio," exclaims Drexel Peterson, 615 Seventh St., Boone, Iowa. I picked up KNRA on Oct. 29 at 7:45 p. m. QSA-4, R7. I also have GSB-D-E, DJB, EAQ, HJ1ABB, HJ5ABD, PRADO and a number of stations in the U. S. The GE is also good on b. c. I can get stations almost anywhere in the U. S. and Canada. I would like to hear from other listeners using GE radios or any DXers in Iowa and I'll answer them."

"May I point out that CKCW, Moncton, N. B., has not been built as yet although we hear that there may be some action soon? I doubt very much if CJCB, Sydney, N. S., is using 1000 watts power as we cannot get them here. I use a Northern Electric No. 81 all-wave set. When I was in the studios of CHSJ, St. John, N. B., I was informed that they were not operating their VE9BJ s. w. transmitter. Of course they may have it going now but I have never heard it. Strangely enough I have never heard CE9HX at Halifax." Thus writes Watson Baird, 20 Shirley Ave., Moncton, N. B.

"In two years, using a six-tube Fada and a six-tube Kolster, both battery sets, I have logged 587 stations and still going strong," relates Earl Reichman, 329 South Water St., Uhrichsville, Ohio. "My best are 10-BP, 10-BQ, KGU, WKAW, HHK, KPPC, TIGP, VOGY, XEFB, and LR5. I just got a new RCA-Radiola 80 and hope to land some real DX. Would like to hear from others using this type of radio. I take my exam for a ham ticket on Nov. 24."

Logging Long-Wavers

"Would like some tips on the European long-wave stations," requests Leo Lacroix, Stanhope, P. Q. "I have logged quite a few of them but they are hard to identify as they use foreign languages most of the time. Here are some of them: RW1-9-11-49-58 in USSR, Tunis, Oslo,

Alger, some French and some German stations. The best time to tune these stations in is after dark between 5:00 and 6:30 p. m., some nights up to 7:00. Last winter I used to get them, too, between 3 and 4:30 a. m. I am using a Midwest 1934 16-tube."

From away up in Whitehorse, Yukon Territory, W. D. MacBride writes: "We have a lot of fun up here getting European stations on long waves. They have been in about a dozen times this fall around noon Yukon time or 1 to 2 p. m. PST. We get all the big English stations, Germany, France, Sweden, etc."

"Today, after three years of DXing with my eight-year-old Browning-Drake relic, my log has reached 500 odd stations in eleven countries; U. S. A., 399; Canada, 40; Japan, 25; Mexico, 17; Australia, 9; Argentina, Cuba, China and N. Z., two each; Guatemala and Venezuela, one each. Among my veries are 7UV, Tasmania (first Canadian report); LR8, Buenos Aires; 4TO, Queensland; WOCL, KPFM, WEXL and WTRC. My season's log after nine weeks is at 250." This is the report of Murray D. Bryce, Route 1, Royal Oak, B. C.

Connecticut Logs Aussies

"My present set is a Midwest and it is OK," admits Fred Burleigh, 142 Converse Ave., Meriden, Conn. "My log of active stations is now around the 600 mark, the best being: PP, Normandie, 4RK, 2CO, 3AR, 5CK, 2FC, 4QG, 3LO, 2BL, 2GB, 2UW, 4BC, TGW, LR5, LS2, HJN, YV1RC, CMJH, XEFB, HIX and 3YA. I have heard all the Aussies mentioned, this year. 2BL and 4BC seem to be the best at present. Would like to hear from DX fans anywhere and will answer all letters promptly."

Don W. Reynolds, 34 Chambers St., Newburg, N. Y., reports on his new 1935 Crosley 6H2, six-tubes. "My log is now 665 and veries total

212. Latest are TGW, LS-2, CMQ, CKWX, XEAF. Those in my log that I am rather proud of are JOAK-1, KZRM, LR2, 3YA, 4QG, 5CK, 5CL, 2UE, 2NC, 2BL, 2CO, 2YA, LR8, JOAK-2 JOCK-1, JOIK, JFAK, LR4, 4RK, 2FC, 3LO and Toulouse. I would like to have a correspondent outside of the U. S. and Canada."

"Reception very poor here for the past month," observes Margaret Hamilton, Coopersville, Mich. "Two weeks were lost when there was interference from some electrical appliance here. It was so bad only WLW could cut through it. Best b. c. station logged in the month, CKBI, total since May 19th when I got the new Atwater Kent, 342. Haven't counted s. w. stations heard. New ones logged since last report, 2RO, COH and VK3ME. Watch between COH and PRF5 for a new Italian."

"How can I get Australia?" queries H. C. Beaupre, Portsmouth, Ont. "I already have Europe, South America and Hawaii but am unable to bring in the Aussies. I have a Marconi 51 and my log this month shows 95 bc. stations and the following s. w.: Canadian, five; Russian, one; U. S., ten; English, 8; Cuban, three; Venezuela, two; Swiss, two; German, three; Mexican, two; Portugal, one; Spain, two; Costa Rica, one; Peru, one; Hawaii, one; Ecuador, one; Colombia, two."

"In the Singleton contest, I can eliminate HAL, Budapest. My possible singletons are LR5, XGOA, HHK, FQN, CMC, YC1RC, EAJ1, OKP, Leipsig, Copenhagen, Rabat, Algiers, HJN, Beromunster, Sottens, Turin, Trieste, Rome, Milan, PP, Lyons, Athlone, Frankfurt, 2YA, 4QG, 2UE, TGW, Breslau, Langenburg, Hamburg, Konigsberg and Hilversum." This entry is from P. H. Robinson, Shelburne, N. S. All of these are excellent catches and make a wonderful record but we fear there are no singletons among them.

Kenneth Albrecht, Roxbury School, Cheshire, Conn., is interested in the



Here we have Father and Mother and the Baby—George Burns, Gracie Allen and Little Miss Sandra, the newly adopted daughter. The new addition to the Burns and Allen family cast is four months old. She's no joke to Gracie.

McMurdo Silver Masterpiece III and would like to correspond with anyone having one. Kenneth is using a Philco 16B at the present time and submits a fine log of low-powered stations most of the way to the Pacific. He also has received many of the 100 Best on the s. w.

"I have had my Midwest 10 for three months," notes Lincoln A. Wood, 36 Rock Ave., East Lynn, Mass., "and have logged a total of 601 stations in that time. I have 403 s. w., 195 medium wave and 3 long wave. I have heard from every state but New Mexico, Washington and Oregon and would be glad for any tips on these states. I have received 27 countries, 8 ships, 55 police and 66 aircraft ground stations."

The New KYW

"I am celebrating my passing the 300 mark," exults Benj. Genung, 340 Arch St., Philadelphia, Pa. "My best catches include TGW and WNEL also KPSD, KHQ, KGW, KJR and KEX. I use an Atwater Kent 84 which I think gives very good reception. I joined the National Radio Club about Sept. 1. KYW, Philadelphia, started testing this morning before 2 a. m. The music was very strong but the announcements were weak. They are scheduled to start Dec. 3."

"Ever since I bought my Philco 16-B five months ago, I have had quite a good record especially in tuning in short wave stations," reports Alfred Cachia, 2037 Fifth St., Detroit, Mich. "I have logged LSX, PRF-5, PHI, EAQ, CT1AA, FYA, HVJ, VK2ME, VK3ME, RNE, CMCY, COH and the British and German stations. Would like to hear from others w. fans, especially owners of the same model Philco."

"I have 365 stations on my Crosley Bandbox," postcards Vane Jones, 1115 W. 31st St., Indianapolis, Ind. "I have verbs from WMMN, WSVS, WPTB, CKTB, KFPM, KOOS, CMC, WGNV, KGHF and TGW. I'm planning to get a new Midwest 16-tube and would like to hear from users of that receiver. I'll answer all letters."

Like Their Adapters

"I received my Perfect Phone Adapter and it is just what I wanted and, boy, what reception I am getting now. Since I received the Adapter, I have logged VK2ME, WSE, WOOD, KNX, KPO, GSD, GSB, KOA, FYA, KNRA, EAQ and CT1AA. These stations, it seems, are hard to pick up in this town but they all came in very clearly." This report comes from Forney C. Sprenkle, 345 S. Penn St., York, Penna.

"I just received my Perfect Phone Adapter and it really is perfect," contributes Robert Nestor, Route 3,

Sayre, Okla. "I picked up KGPC, KIEM, WJTL, WJBW, WAML, KRE, KCRJ and WSGN which I had never received before. Also picked up WBNS, KGDM and XEBC which I had logged before. XEJ has been coming through fine since installing their new 1000-watt transmitter."

"I have been using my Perfect Phone Adapter for some time and with its help I have run my log well above three hundred," says R. H. Helton, P. O. Box 23, Belmont, N. C. "I intend to do some real DX this winter and you will hear more from me later."

Some Brief Reports

"I have been able to pull in several of the TP stations including XGOA, KZRM, 2YA, KGMB and I can raise KGU as soon as WJR goes off the air," states D. R. Lewis, 11525 129th Ave., Edmonton, Alberta. "My big object in life now is to pull in a TA. I have an eight-tube Northern Electric and I am sure satisfied with it. On selectivity it is a hum-dinger."

"From an automobile radio, Northern Electric 61. I have received the best in my experience, bar none," submits Berkeley W. B. Hutchinson, North Galiano Island, B. C. He gives a list of stations from Minneapolis to Mexico and as far east as Philadelphia, all of which came in clearly. "I can recommend this set to people like myself who have to go out to the way places three or four months of the year," he adds.

"As I write this I am listening to RV59, Moscow, USSR," nonchalantly remarks D. L. Aborta, 1017 Virginia Place, Glendale, Calif. "In addition to stations all the way to the East coast, I have heard RV15, six or eight Japs, two Australians, France, China, England, and South America. I have recently bought a new 1935 model 118 Philco all-wave and had very good reception."

(Continued on page 47)

From Stenography to Stardom

• • • By "BETTY"



BEAUTY helped titian-haired, brown-eyed Dorothy Page to fame but it was her mellow contralto voice that made her a radio star and featured soloist with Jan Garber's Supper Club over NBC networks.

From her 'teens Dorothy trained for a career in music. Financial reverses cut short her studies and she had to help support her family. So she turned to secretarial training and landed a job with the Curtis Publishing Company in Philadelphia, little realizing it would serve as a stepping stone to radio stardom.

Curtis employees were staging a beauty contest not long after Dorothy's name was added to the payroll. She did not plan to enter because she couldn't afford to buy an outfit nice enough for the exclusive country club at which the contest was being held.

But her friends had the idea that

Dorothy was good looking enough to win. They threw an outfit together. The judges didn't mind the borrowed costume. They pinned the blue ribbon on Dorothy Page.

One of the judges was Neysa Mc-Mein, noted American illustrator. A couple of days later she sauntered by as Dorothy pecked at her typewriter in the Curtis offices.

"Miss Page," she asked, "will you pose for me?" Dorothy snapped shut her typewriter and went with Miss Mc-Mein to pose for a Saturday Evening Post cover portrait.

Other artists also liked her youthful beauty and soon Miss Page looked at America not only from magazine covers, but also from Red Cross and Tuberculosis League posters.

Ready for Opportunity

But Dorothy was not satisfied with just being admired. She kept doggedly at her singing, now that her income was augmented by posing, and she trained her contralto voice for an opportunity the future might bring. It came in 1932 when she took an audition, conducted by Paul Whiteman in Detroit with 700 other contestants.

America's "King of Jazz" proclaimed her the winner. When she sang the winning number, a leader of a nationally-known dance orchestra was in the audience. He was so impressed that a week later, when Miss Page was appearing with Paul Whiteman in Buffalo, he handed her a contract to sing with his band as featured soloist.

It was the beginning of the most important chapter in the story-book life of Dorothy Page. For two years she toured the country with the orchestra, singing as many as three times a day and rehearsing. It was hard, grueling work. In May, 1934, she stepped into an engagement as sustaining soloist for NBC in Chicago.

Three months after Miss Page joined

the NBC, a sponsor gave her an audition and liked her so well that he signed her to appear with Jan Garber on his Monday night Supper Club.

Dorothy is only 24 years old. Page is her professional name. Her family name is Stofflett and her full name is Dorothy Lillian Stofflett. Northampton, Pa., is her home town and she spent most of her life there.

Dorothy is single and lives alone in a North Side apartment in Chicago. Swimming is her greatest diversion. She also loves tennis, bicycle riding and horseback riding. She is also fond of football and of flying, and her favorite dish is sauerbraten with potato pancakes.

Played Sax to Fame

Joey Nash, youthful tenor who sings with Richard Himber's orchestra over the Columbia network on Saturday nights and over the NBC (Red) network Monday nights, says his chief ambition is "to be a fellow who never works." Yet Joey has been earning his living since he was sixteen years old when he started playing the saxophone with bands. And when asked if his professional duties absorb most of his interest, he answers "Yes."

Joey's interest in his job was demonstrated recently when he followed the first principle of the show world and carried on while suffering acute pain. Enduring the agony of ear trouble and almost totally deaf, the young tenor stepped before the microphone and sang, receiving his cue from the two vibraphone notes which introduced the orchestra, and which were just barely audible to him.

Joey was born in Brooklyn, N. Y., 26 years ago. After he had passed his final exams at high school, Vincent Lopez engaged him to play first saxophone. Later young Nash toured with Ben Bernie, Guy Lombardo, George Olsen and Rudy Vallee. When in New York he studied music at the Damrosch School. After a few years of his playing up and down the coun-



Joey Nash

tryside, Richard Himber discovered that the youth could really sing and converted him into a vocal soloist.

Joey would rather play baseball with the neighborhood lads than play golf—although he can do that too. He likes to swim and lie on the beach and talk to pretty gals, and all these diversions he enjoyed while in Miami two years ago (broadcasting over station WQAM in between times). He likes to read Mark Twain and Nick Carter . . . weighs 150 pounds . . . is five feet eight inches tall . . . has reddish brown hair and blue eyes.

* * *

Did you know . . . THAT Jimmy Melton, radio's golden voice, not content with a radio career and a recent contract to make pictures, is turning a speculative eye on the Metropolitan Grand Opera . . . ? THAT Lawrence Tibbett entertains musicians at rehearsals with swell Bing Crosby imitations . . . ? THAT Freddy Martin, the maestro, and Budd Hulick (Stoopnagle's pal) were a song team with a New Jersey orchestra a few years ago . . . ?

The BEGINNERS' STORY of RADIO

PART FOURTEEN

The Power Unit — Filter and Voltage Divider

● ● ● By B. FRANCIS DASHIELL

IN THE preceding chapter we learned that alternating currents can be converted into direct currents by means of rectification. But it was shown, however, that a rectified current, while possessing constant positive and negative terminals, consists of a rapid succession of tiny impulses of electric current.

These little pulsations cause fluctuations of voltage in the circuit through which they flow. Because of this action the "pulsating" current produces an audible vibration or hum in the sound reproducing unit. Such current is perfectly satisfactory for charging storage batteries or operating certain electrical devices, but it is of no use whatever in connection with the direct-current plate circuits of a radio receiver. The current used in these circuits must be as smooth and steady as that obtained from a battery.

But it is possible to smooth out these tiny pulsations; fill in the gaps between the moments when they occur, and eliminate the voltage fluctuations that create hum and noise. A rectifier-tube circuit was shown at "C", in Chapter 13. From

the output of the rectifier tube we can feed an uni-directional pulsating current into a *filter* system. The impulses will be smoothed out so as to provide a steady, non-fluctuating direct current for the plates of the tubes and the speaker of the receiver.

A Typical Filter

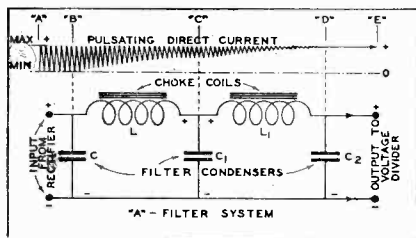
A typical filter circuit is shown at "A". It is a part of the complete power unit. The input is connected to the output of the rectifier circuit mentioned above. This filter system is, in fact, quite simple to understand, for it consists of but two units—fixed condensers and choke coils.

The wave forms of the current flowing through the filter are graphically pictured at "A". To the left, between points A and B, will be seen the characteristic undulations or voltage fluctuations of the rectified current flowing from the output of the rectifier circuit. Each of the undulations or curves, between points A and B, is a *maximum rise* in current or voltage fluctuation. The filter apparatus is utilized to smooth out and reduce entirely these rapid pulsations.

Fixed condensers and large inductances (iron-core choke coils) or *reactors* are connected in the filter circuit. The coils present high resistances to the passage of any currents that constantly fluctuate in voltage. This resistance is known as *impedance*.

How It Works

Let us examine the action of the filter. When one of the fluctuations of



current reaches its full strength, as it does with each pulsation that is passed from the rectifier output, the iron core of the choke coil becomes an electro magnet. Its surrounding magnetic lines of force cut through the wires in the coil, and it is this self-inductance (explained in Chapter 5) that tends to oppose any further rise of current through the coil. A choke coil is always used to oppose current fluctuations.

Much of this opposed current will be thrown *back* into the input portion of the circuit where it is deflected to the condenser C, shown in "A". When the charging voltage of this surge decreases, as it does *between* every pulsation from the rectifier, the condenser *discharges* its accumulated voltage into the circuit. This occurs *between* peak voltage fluctuations. Thus the condenser C sends *new* voltage into the circuit and offsets the intervals between the rectified impulses of maximum voltage.

The condenser, then, works to maintain a constant voltage in the circuit. Really the condenser is a sort of reservoir. It takes in a charge when the line voltage increases (at the time of a pulsation) and releases this charge when the line voltage subsides (as it does between pulsations). The filter condenser *equalizes* the voltage fluctuations and provides a constant flow of current from the filter output.

The Entire Filter

A single condenser and choke coil, however, are not entirely sufficient completely to filter out all voltage fluctuations. The original impulses will be smoothed down to a considerable extent, as shown by the wavy line between points B and C, in "A". The current output, from L, however, will continue to show slight fluctuations. These will be heard as a purring or rippling sound in the loudspeaker.

In order further to smooth out the remaining fluctuations a second com-

bination of choke coil and filter condenser is added. The second condenser (C_1) and choke coil (L_1) are identical to C and L. A third condenser (C_2) is also added to the output of the filter system.

The graphic line between points B and C, at the top of "A", shows how the fluctuations are partially filtered out by the first choke and condenser. That portion of the line between C and D shows all remaining irregularities entirely smoothed out by the second condenser and choke coil (C_1 and L_1), and final condenser (C_2). The final section of the line, between D and E, shows a constant, non-fluctuating direct current, ready to be supplied to the plates of the tubes and speaker of the radio receiver.

Electrolytic Condensers

Large fixed condensers are used for filtering. These are usually of the direct-current *electrolytic* type. Most condensers, as explained in Chapter 4, pass alternating currents but block direct currents. The electrolytic condenser passes a direct-current charge, but in one direction only; it really is a sort of electrolytic rectifier, as explained in Part 13.

The electrolytic condenser, which usually has a capacity of four or more microfarads, must be able to receive the maximum charging current and voltage created by the reactor or choke coil. These condensers are either "wet" or "dry". The former type has a borax solution (*electrolyte*) in a sealed metallic container. The latter uses an electrolyte solution mixed with an absorbing material so as to form a paste.

The container is the negative contact of the condenser, as it must be connected in the circuit in but one way. A long strip of *aluminum* is coiled up in the container and solution. It is the positive contact of the condenser. When the aluminum is connected to a positive source of charging current a thin film of gas or oxide accumulates on the surface of

the aluminum foil and acts as the dielectric to separate the two surfaces—foil and liquid. If the voltage is too high this film might break down at some point and a noisy discharge will be heard. Defective electrolytic condensers can be a source of annoying noises and static.

Sometimes several sheets of aluminum foil are wound in a single roll so as to construct two or more condensers in one concentrically wound condenser. A common negative terminal for all sections is used, but each positive sheet has its individual positive terminal. The use of a three-section combined condenser is illustrated in the completed power unit shown in "C".

Several Voltages Required

When the rectified current has been passed through the filter system, and all variations in voltage smoothed out, it is ready to be delivered from the filter output terminals—positive and negative. A potential difference will exist across these two terminals, and the amount of voltage will depend upon the output of the power transformer. In most radio receivers this output is approximately 250 to 400 volts.

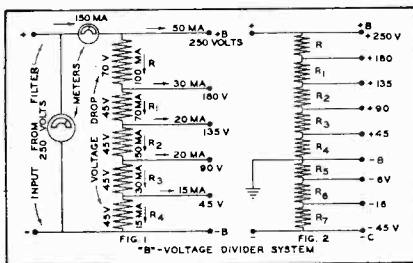
But a radio receiver demands several different voltages ranging from negative zero to 300 or more positive volts. In addition, certain negative potentials, ranging down to as much as 50 negative volts are required for grid and bias circuits. How can all these voltages be supplied by a power unit which has only two terminals—one negative and one positive—at its output?

The Voltage Divider

The system in a power unit whereby the single high voltage existing across the positive and negative terminals of the filter output can be split up into any number of different voltages, between zero and the maximum, is called the *voltage divider* system.

The design of this portion of the

power circuit requires careful calculations, which, however, are not at all difficult to make. It is only necessary that we know the voltage and amperage (in milliamperes) required by the several different tube circuits of the receiver. A simple application of Ohm's Law, which anyone can work out in a few seconds, will give the values of the various resistances needed to make a voltage divider. This will be explained later.



A typical divider system is shown at "B". In order that the reader may grasp how a divider is designed, it will be best for us to assume that we have a certain radio circuit which requires a number of different voltages for its operation. Let us assume, then, that this receiver has tubes that call for 250 volts, 180 volts, 135 volts, 90 volts and 45 volts. These are the positive "B" voltages. Also, a certain amount of current is required. This plate current is, of course, measured in *milliamperes*, or thousandths of an ampere.

The Resistors

The power transformer, in this case, will deliver a maximum voltage of 250 volts. The current rating must also be equal to or greater than the *total* plate current drawn by *all* the tubes of the receiver. This alternating current, from the transformer, is then rectified and filtered. The non-fluctuating direct-current output delivered from the filter to the voltage divider must be of the proper amount so the receiver will be sufficiently powered.

A large resistance coil is connected

across the positive and negative terminals of the voltage divider input. It really is a large *potentiometer*. Taps are taken off the resistance at different points between its two ends. Each tap will provide a different voltage, for the amount of voltage delivered by the taps depends upon the amount of resistance (in ohms) existing between the zero end of the resistance and the taps in question. The design of a voltage divider merely requires the finding of the proper resistance (in ohms) when the voltage and current drain at the tap in question is known.

The divider resistance is shown at "B". The taps and voltages to be taken off for the tubes in the receiver are indicated. And, generally speaking, the resistance in use is a fine coil of wire, wrapped around an asbestos covered copper wire. This resistance is then wound on a threaded fire-clay tube. Adjustable taps are clamped around the resistance tube at points where the proper "B" voltages will be supplied.

Dividing The Voltage

Let us return to the divider circuit shown in Fig. 1, at "B". We see a *voltmeter* connected across the terminals. This is not done in practice, however, but simply for the purposes of explaining this text. It indicates 250 volts as the output of the rectifier and the filter systems. Also, a *milliammeter* is shown in series with the high-voltage output. It indicates a current of 150 milliamperes passing through the circuits of the receiver. The large resistor is separated into five sections—R, R₁, R₂, R₃ and R₄. The lower end of the resistor (R₄) is connected to the negative B lead which also is the ground terminal of the filter circuit. The upper end (R) is connected to the high-voltage terminal. Thus, a potential difference of 250 volts now exists across the two ends of the resistance unit.

The first section (R) of the divider must provide a voltage drop of 70 volts from 250 volts in order to obtain the



To see and hear El Brendel in the movies and to hear him as the blundering waiter in the CBS musical revue, "Hollywood Hotel," you'd swear that he was a native of Sweden. Well, sir, El doesn't know a word of Swedish. His acquired accent may be heard over the See-Bee-Ess network from WABC every Friday from 9:30 to 10:30 p. m. EST.

180 volts required for the first tap. Also, the top tap (250 volts) will require a current drain of 50 milliamperes (MA). Therefore, 100 milliamperes remain to supply the taps of lower voltages below the top 250-volt tap. So, in this case, a current of 100 milliamperes will flow down through R, which reduces the voltage from 250 to 180 for the second tap. This tap takes 30 of the 100 milliamperes now available.

Voltage Drop

There now remains a current of 70 milliamperes which flows down through resistor R₁. But, as this section must have a voltage drop of 45 volts to reduce the 180 volts to 135 volts, it requires a certain resistance. Then, too, this third tap needs 20 milliamperes for its tube. There now remains a current of 50 milliamperes

which flows on down through the section R_2 . A voltage drop of 45 volts in this section will deliver 90 volts to the fourth tap. As 20 milliamperes are required by this tap, 30 milliamperes remain to flow down through section R_3 . The voltage drop in this section is 45 volts, and, therefore the last or fifth tap provides 45 volts. The current drain at this tap is 15 milliamperes. There now remains only 15 milliamperes which has not been accounted for. The various taps of the divider have taken off a total of 135 milliamperes from the original current of 150 milliamperes. The remaining 15 milliamperes will be consumed by the last section of the resistance, R_4 .

This final loss or consumption of current is called the *bleeder current*. It is a more or less constant load on the power unit, but is so low that it is far from being a short circuit. The bleeder current usually is rather high. It tends to act somewhat as a reservoir in case a tap should become overloaded and draw more current than normally needed.

Simple Calculations

How can we determine how much resistance (in ohms) should be placed in the sections R_1 , R_2 , R_3 , and R_4 , in order to provide the proper potentials in volts and current in milliamperes to the various taps, and thence to the tubes of the receiver?

We must know the voltage and current supplied by the power unit, and also the voltages and currents to be delivered by all the taps individually to the various parts of the receiver. We wish to know the resistances of the various sections of the entire divider. By Ohm's Law, we find that resistance is equal to the voltage divided by the current. The calculations, therefore, are quite simple.

The resistance of section R_1 , which has a voltage drop of 70 volts and carries a current of 100 milliamperes, is calculated by dividing the voltage by the current in amperes (70 divided by .100). It will be 700 ohms. Sec-

tion R_2 , by the same method (45 divided by .070), will have a resistance of 630 ohms. Section R_3 , which will be 45 divided by .050, has a resistance of 900 ohms. Section R_4 (45 divided by .030) has a resistance of 1,500 ohms. Section R_5 (45 divided by .015) will have a resistance of 3,000 ohms. The total resistance of the entire divider, then, will be 6730 ohms.

Negative Voltages

Radio circuits also require certain negative voltages, such as supplied by "C" batteries. It is possible to get negative voltages from a voltage-divider circuit. At Fig. 2, in "B," is shown a second series of resistors. Below —B will be seen three additional taps, marked C-6, C-16, and C-45 volts. Their total is -67 volts. But, before we can get 67 negative volts from the circuit shown in Fig. 1, at "B," we must provide a power transformer that will give 67 volts *in addition* to the 250 required for the positive "B" portion of the divider circuit. This transformer, then, must have an output of not less than 317 volts.

As shown at "B," Fig. 2, the negative B terminal is grounded. This is the zero potential point. Positive voltages exist *above* this point. This portion of the divider circuit is identical to that shown in Fig. 1, of "B." We will get the negative C voltages *below* the grounded or zero potential point of the circuit. The arrangement of resistors is as follows:

To obtain a negative potential of -6 volts, we find, by dividing the voltage drop of 6 volts by the *total* amount of current carried in the divider circuit (6 divided by .150), that a resistance of 40 ohms will provide the negative voltage from the seventh tap. This resistor is section R_6 , shown in "B," Fig. 2.

Resistor R_6 , with its voltage drop of 10 volts to give -16 volts for the next or eighth tap, (10 divided by .150), has a resistance of 67 ohms. Resistor R_7 , drops the voltage from

(Continued on page 48)

Among the Attenuated Frequencies

• • • with PAGE TAYLOR

HORACE GREELEY'S definition of "news" can be adapted for shortwaves in this manner: "When a South American changes wavelengths, it's not news, but when one remains steady, that is news." Judging from this standard, then, RADEX has very little "news" to offer on South American stations this month, because only a few stations have not changed.

The Peruvian station which has been recorded in these columns as OA4AP, La Voz de Peru, on various wavelengths between 31 and 51 meters, has definitely decided on the call sign OAX4D. In English the slogan "Radio Dusa" is heard, and in Spanish, "La Voz de Peru." Long wave station OAX4C is relayed by OAX4D on 5780 kc/s. or 51.87 meters, on Wednesdays from 9 until 11:30 p. m., EST, according to their announcements, but have been reported at other times. This station is easily identified by announcements in English and Spanish, and they sign off in Morse.

"Back again in the fold but this time from California rather than Washington," postcards Phil E. Lockwood, Santa Ynez, Calif. "OAX4D in Lima, Peru, has been coming in on 51 meters every night, 6-8:30 p. m., PST, for two weeks, QSA5, R7 usually. They announce in English each night as they sign off between 8:25 and 8:30, PST. They announce as also being on some 22 meters but I have not heard them there."

The SAR station in Caracas, Venezuela, YV4RC, has moved from 5990 to 6375 kilocycles (47.03 meters). YV4RC is owned by Sociedad Anonima Radio, Caracas, and announce sometimes as "Estacion SAR." This station is a member of the Cadena Indo-Americana group and has been

heard often near and after midnight talking with other stations in the network, as well as on its regular schedule of 4:30 to 10:30 p. m., EST.

News of COH

Sr. Hector Zayas Bazan, Manager of the new COH, advises us that the frequency of his station is 9428 kilocycles, equivalent to 31.8 meters, but COH has been heard as high as 9500 kcs. In fact, the frequency changes sometimes even during a broadcast. "COH is home-made and the power is 150 watts," he writes. "The direction of the antenna is from NE to SW at 50 degrees from the Greenwich Meridian. We are on the air daily from 10 to 11 a. m., 5 to 6 p. m. and 8 to 9 p. m., EST. On Thursdays we transmit a religious program under the direction of Rev. Pain from 11 to 12 a. m." The 5-6 p. m. programs for the Cuban National Lottery and the 8-9 p. m. programs for the General Electric Company are well worth listening to. Address reports to Estacion COH, Calle B No. 2, Vedado, Havana, Cuba.

That other fine Cuban station, COC, has settled on 6010 kcs. or 49.89 meters, but has added to its time on the air. COC can be heard from 4 to 6 p. m., 8 to 9 p. m., and sometimes from 10 to 11 p. m., in addition to their DX programs on Saturday nights from 11:30 until 12:30 a. m. Sunday morning. COC as well as COH, has been relaying programs from b.c.b. station CMCY at irregular times.

Some South Americans

"Please be advised that YV5RMO in Maracaibo, Venezuela, has a new frequency of 5850 kcs. or 51.28 meters, according to a verification I recently received," reports Edward E. Lesiak, Ash at Madison, Scranton, Pa. Although YV5RMO has al-

ways been quite easily received, it has been very much improved since making this change. YV5RMO, owned by Santiago M. Vegas, announces as "Ecos del Caribe," always striking a gong once before making the announcement. Sr. Vegas is the "Amigo Vegas" of the Indo-Americana network.

A new station in Barranquilla, Colombia, is on the air but it has not yet been reported and its frequency is unknown. Senorita Judy of PRADO was heard several times talking with a station HJ1ABH, at Barranquilla, and we believe this station will become a member of that rapidly-growing Latin American network.

In the West Indies

The Dominican Republic is fast becoming shortwave conscious. The pioneer Dominican station, HIX, has changed its frequency to 5980 kcs. to avoid confusion but still transmits on its regular schedule of 8 to 10 p. m. on Tuesdays and Fridays. On January 6 HIX will broadcast a special program on its broadcast band frequency between 4 and 6 a.m., and

they may transmit simultaneously on shortwaves.

HI-1-A, owned by Sr. Rafael Western of Santiago de los Caballeros, is working now on 48.04 meters (6240 kcs.) from 7:30 to 9:30 p. m. daily, and at other times irregularly. "La Vos del Yaque" serves to identify this station, and the selection "Anchors Aweigh" sometimes terminates the broadcasts.

Three other low-powered Dominican stations are heard, two of them less regularly than the two above mentioned. HIH and HIL are heard inconsistently, but HI-4-D is a regular visitor. HI-4-D advises us that they transmit on 6480 kcs. on Mondays and Saturdays from 4:40 to 7:40 p. m., EST, but they are actually heard on 6500-6510 kcs. (46.13 meters). Instead of being above HJ5ABD, HI-4-D is located on the dials about midway between PRADO and HJ5ABD. The time, 4:30 to 7:40 p. m., is correct, but they are heard almost every day, announcing in Spanish and using the slogan, "La Voz de Quisqueya."

San Pedro de Macoris, D. R., is represented by station HIH, "La Voz del Higuamo," an irregularly heard station on 6810 kcs. or 44.03 meters. The schedule is supposed to be Sundays and Thursdays from 7 to 9 p. m., EST. HIL in Santo Domingo City on 6518 kcs. can be heard, if one is fortunate enough to bring it in, between HI-4-D and PRADO.

It may be of some assistance to dialers to know the relative position on the dials of these Latin-American stations. The dial settings following serve only as pointers and indicate the approximate spacing between certain stations.

71, HIH. 72, JVT. 73, TIEP. 73¾, HC2RL. 74½, PRADO. 75, HI-4-D. 76, HJ5ABD. 78, HJ1ABB. 79, YV4RC. 82, HI-1-A. 83, YV3RC. 84, CP5. 85, DJC. 85½, COC. 88½, YV5RMO. 90, OAX4D.

About the Japanese

Official information has finally been received from the Nazaki sta-



Alexander Woolcott, who as "Ye Towne Crier" talks about anything he happens to think about during the broadcasts on Sunday nights, from 7:00 to 7:30 p. m. EST over WABC and the Columbia chain.

tions. These stations are owned by the Kokusai-Denwa Kaisha, Ltd., Osaka Building, Kojimachiku, Tokyo, Japan, the address to which reports should be sent. The transmitters are situated at Nazaki in the Prefecture of Ibaraki, about 50 miles north of Tokyo. We are advised that JOAK, Tokyo, is relayed at the following times: 1:50 to 2:20 a. m., market quotations and news; 4 to 8 a. m., Children's Hour, news, lectures, entertainment, music, drama, etc.; 5:20 to 5:40 p. m., physical exercises; 7 to 7:10 p. m., weather forecast; 9:40 to 9:45 p. m., market quotations, and, 10:40 to 11:10 p. m., news and market quotations. These times are Eastern Standard. Any one of the four 20 kw. transmitters JVM, JVN, JVP or JVT, is used.

With the Europeans

"The announcer at DJC said the other night that they would use a new station soon," reports R. E. Robinson, 133 Mitchell St., Providence, R. I. "This is to be known as DJN, 'N as in Nora,' he said, and as well as I could get it, he gave the wavelength as 31.45 meters and the schedule as 9:15 to 10:30 p. m., EST. A card recently received from CT1AA gives their schedule as 5:30 to 7 p. m., EST, on Tuesdays, Thursdays and Saturdays."

As we predicted last month, the Italian stations are to be no longer experimental. The call sign I2RO is still used on some of the transmissions but we believe commercial call letters will obtain on all the frequencies soon. On 6070 kcs. the station is now known as IRA and the present schedule is 6:30 to 8 p. m. EST on Mondays, Wednesdays and Fridays. In the 31 meter band the stations are heard testing irregularly.

A new Roman telephone station is making a great commotion in the air. This is IRS (or IRF) on 8070 kcs. or 37.15 meters. IRS has been reported at various times between 9 a. m. and 7 p. m., relaying programs of the

new EIAR station and calling various countries. IRS has a terrific signal and is about the loudest station ever heard here on shortwaves. The volume and quality were so good that at least one listener was unable to believe it was a trans-Atlantic. "Was this a fake?" asks H. L. Branthaver, 517 F Street N. E., Washington, D. C. "There was a voice at about 8000 kcs. proclaiming 'IRS, IRS, Allo America.' It was altogether too clear, the announcer had not the slightest accent and, strange to relate, no location was given. There was a great amount of telegraphic interference both above and below it and had this station been genuine it would have been difficult to bring it through the interference."

Address of W1XAL

The World Wide Broadcasting Corp. of Boston, Mass. inaugurated, on December 1st, a series of educational programs "dedicated to enlightenment." W1XAL employs frequencies of 6040, 11790, 15250 and 21460 kcs. with 5 kw. power but the new program series is transmitted only on 6040 kcs., from 7:30 to 9:30 p. m., EST on Tuesdays, Thursdays and Sundays. Reports on reception of these broadcasts are invited and recommendations for increasing their usefulness are specially welcome. Letters can be addressed to Educational Director, W1XAL, University Club, Boston, Mass.

Our Readers Report

"I have had quite a few surprises with my reception lately," observes Geo. W. Acker, 267 N. Lyman St., Wadsworth, Ohio. "Most of these surprises have concerned Europeans, and two countries in particular, the USSR and France. Hitherto Moscow has been practically impossible for me to hear, but last Sunday RNE was literally raising the roof off the house during its entire transmission from 9:30 until 11 a. m. Paris, too, has always been very poor, but now on both 15230 and 11900 kcs. it is

providing very satisfactory reception. ORK, Brussels is also improving and it, too, threatened to raise the roof. Germany has started broadcasting on a new frequency. This is DJN on 31.45 meters or 9540 kcs. It was not heard very well but it seems to be directed towards Central America, which no doubt accounts for its weakness.

"I have found another Asiatic coming through. It is KAY, Manila, on 14980 kcs. JVE on 15660 was strong enough one night commencing at 6:30 p. m. to enable me to make it out well. They were calling KAY, and KAY was slightly the better of the two stations. JVF can be heard nearly every night after 4:30 p. m. talking to KWO."

"About two months ago I exchanged my standard wave set for a short and long wave set and have become an ardent s.w. DXer," advises R. E. MacLaren, 103 Dresden Row, Halifax, N. S. "My set is a Westinghouse 6-tube super. The only draw-back to an otherwise perfect set is the almost constant interference by local man-made static. My DXing is limited to nights and Sundays but I manage to log most of the popular foreign catches, such as PRADO, HJ1ABB, PHI, YV3RC and CT1AA."

Three in a Row

"After trying constantly for two years to hear a Russian station, I have finally been rewarded by hearing no less than three of them on the same day," says Leon Papernow, 2204 Clarendon Road, Brooklyn, N. Y. "The three Soviets were RNE, RKI and RV59. RNE was the best of the three and RKI the poorest. From what I have heard, that South American Saturday night hook-up is composed of the following stations: YV5RMO, Prado, TIEP, HJ1ABB, HJ4ABB, X1AZ, HJ1ABG, HJ3ABD, HJ4ABE and YV4RC."

"Just a few lines to let you know that I have my new receiver. It is a Hammerlund Comet PRO and is very

selective and sensitive," writes N. J. Hock, 20 Burnet St., Newark, N. J. "The band spread and beat oscillator are certainly very helpful in finding those distant stations. Anyone who does not have a beat oscillator certainly ought to have one, otherwise many distant stations get away. Some of the stations I have had are: HJ2ABC, RV59, YV4RC, HJ1ABG, VE9HX, TIEP, KNRA, OXY, RNE and 55 others."

The American Consul in Brussels advises us that ORK, the government station at Ruyselede, transmits daily on 10332 kcs. for the benefit of the Belgian Congo. These programs are radiated from 2:45 to 4:15 p. m. EST and are well received in the United States.

S. W. in Bermuda

"My log of 60 foreign stations heard on my Atwater-Kent 711 Model may be of interest to anyone who



Don McNeill, comedian of the Pontiac Program, is strictly a product of radio. In 1931 he, with Van Fleming, started an act called "The Two Professors," which became very successful in the Middle West. McNeill commutes from Chicago to New York for the Pontiac show every Sunday night at 10:30 p. m. EST. On NBC-WEAF chain.

would like to know what reception is like on this tiny island just seven hundred miles off the coast of Eastern USA," suggests C. B. Denman, G. P. O., Hamilton, Bermuda. "I have not had much luck on the b.c.b., being able to receive only the high powered ones in USA, Canada, Cuba Mexico and Puerto Rico, so I have devoted most of my time listening to the s.w. for the period of nine months that I have had my new receiver. In closing I might add that I verified only what I considered my best catches, these being: CT1AA, LSQ, ORK, PHI, RV59 and VK3ME." Mr. Denman's log of stations includes nearly all the stations from COC to ZFS.

The Netherlands Stations

The call letters of the world's pioneer shortwave station, PCJ, have been assigned to a new station owned by N. V. Philips Radio of Huizen, Netherlands. PCJJ and PCJ on 9590 kcs. had the largest audience of any station in the world while transmitting experimentally from March, 1927 until November of 1931. Now these famous call letters have been given to the new station on 15,220 kcs. This new station re-transmits the programs of PHI irregularly, and can be heard between Pontoise and DJB. Some listeners report very good reception, while others report difficulty in hearing it. R. N. Putnam, 920 12th Ave. North, Fargo, N. Dak. says it is heard very well.

Another Feminine Fan

"Looking through RADEX and other magazines I fail to see the states of Iowa and Nebraska represented. And where are the women DX'ers?" complains Ethel Bluto, 306 W. 19th St., Fremont, Nebr. and formerly of Council Bluffs, Ia. "I have been a DX fan for a long time. In February, 1931, I got the Vatican station HVJ and as a proof of this reception have a picture of the Pope talking on the inaugural broadcast from this station. I verified London,

Berlin and Madrid in 1931. This year I bought a Philco 16X and have already logged 80 stations, all outside of the USA and have requested veries from more than 30 of them. Some day I am going to devote my fishing to the phones, as I have not yet logged any of them except KNRA and I believe I had K1Z once.

"I'll send more information when my veries start coming in but meanwhile, nudge the lady DX'ers and the Nebraska fans. We want to hear from them."

"I have a Victor RCA All-wave radio and have had the following on the shortwaves," announces Norquay Scott, 279 Briar Hill Ave., Toronto, Ont. "Daventry, Zeesen, Madrid, PHI, Pontoise, I2RO, HC2RL, PSK, CP5 and the three Aussies 2ME, 3LR and 3ME, as well as COH in Havana. I would like to write to other DX'ers and will answer all letters, stamps or



One of radio's loveliest songbirds is Kay Tolan, blonde contralto frequently heard on Columbia programs from Chicago. Just 19, Kay was awarded a place on the Chicago CBS staff after she was runner-up in the WBBM auditions that sent Rowene Williams starward in the "Hollywood Hotel" contest.

no stamps. I have over 400 b.c.b. stations verified."

Makes it 102

"I propose two additions to your 100 Best Stations," postcards Drexel Peterson, 615 7th St., Boone, Ia. "They are TIEP in San Jose, Costa Rica, and COH in Havana, Cuba. The present frequency of COH is approx. 9450 kcs. I have a G-E receiver which I like very well."

Correspondence with other readers is requested by C. E. Dunlop, Box 171, Kirkland Lake, Ont. Mr. Dunlop uses a 12-tube Victor-RCA with an RCA double-doublet antenna. Being situated, as he says, on the roof of the world and in a highly mineralized locality, good reception is rare, but his log includes all the regularly-heard stations.

"Will you please pass this information along to other readers?" requests Wm. J. Wood, 817 Lake St., Oak Park, Ill. "Byrd Expedition comes in very good over LSX, about R7 or R8, and COH in Vedado, Havana, Cuba is one of the best stations heard now on my G-E, K-85 All-wave set. COH is heard best from 5 to 6 p. m., EST, and sometimes from 8 to 9 p. m."

A New C—V on 6005?

"Is there a new Canadian on 6005 kcs?" asks John L. West, 1325 Beach Ave., Lakewood, Ohio. "At about 11:40 p.m. I picked up a station relaying the Canadian Radio Commission program, the Northern Messenger. On signing off at midnight my station announced as CRCM on 910 and s.w. C—X. I know the freq. 6005 is correct as COC was logged just a hairline away. I use a Crosley Model 168 which tunes from 540 to about 6100 kcs. so my shortwave range is strictly limited. However, on the 49 meter band I have had England, Germany, Mexico, Cuba, Venezuela, Canada and all the US relays. Also the British, Canadian, Bermuda and ship-to-shore stations."

"I have not had much luck with

verifications" complains Joseph Ficere, 845 A Olive Ave., Long Beach, Calif. "I always enclose the correct return postage, if not more than the required amount. In writing to VK3ME some time ago I enclosed five cents for return postage but they have not answered. Can there be any reason for this?" We believe VK3ME will answer Mr. Ficere in time, despite the fact his nickle is of no use to them. American coins are as useless, for money, in foreign countries, as a Japanese yen or a Mexican peso is here. They may be interesting as pocket pieces but no doubt the Australian station managers have pocket pieces by the bushel.

The Foreign Amateurs

"I have a very good log of stations which, I am sorry to say, few s. w. fans listen for," writes Irving Goodeve, 1619 Krom Ave., Kalamazoo, Mich. "I refer to the foreign amateurs on 20 meters. Following are a few of them: LAIG, 50 watts, Oslo, Norway; G5BY, Croyden, England; G5BJ, Birmingham, England; F8GR, 100 watts, Nice, France; LU8AB, Buenos Aires; CE1AS, Chuquicamata, Chile; OA4B, 160 watts, Lima, Peru; TI3AV, 30 watts, Cartago, Costa Rica; K6BAZ, Honolulu, Hawaii; and X1AA, X1AI, X1G and X2N of Mexico. All of the above are verified. The following have been heard: ON4BZ, ON4VC, EA4AV, LU1BP, LU6AT, HJ5ABG, HC1FG, K6CMC, VP6AD.

"I use the Perfect Phone Adapter and to it I give 90 per cent of the credit in logging such catches as these. It makes logging extremely reliable because you can cut the volume away down below the static background. Give the phone adapter a good write-up as it surely is a remarkable instrument for listening to DX. I am a member of the CDXR and the IDA. I would like to hear from anyone using the 16-B Philco and the Perfect Phone adapter."

An IDA Special

The International DXers Alliance of Bloomington, Ill., announces a special gala broadcast on January 6th from Lima, Peru, celebrating the 400th anniversary of the founding of that country. OAX4D, OA4B and OAX will broadcast in the evening. IDA relay stations ZS6D and ZU6X calling U. S. on 20 meters at 9 to 11 a. m., EST.

Members of the IDA, through the Publicity Department of that organization, James T. Spalding, Director, contribute the following items:

New stations: GSI, Daventry, on 15,260 kc.; GSJ, Daventry, on 21,530 kc.; DJM on 6079; DJN on 9540; DJO on 11,795; DJP on 11,855; DJQ on 15,280; DJR on 15,340.

I2RO, Rome, has been heard often on 9780 using English at 4:00 p. m. EST.

YV4RC has been heard on 6370 kcs. (Caracas, Venez.)

YV5RMO, Maracaibo, Venez., is now on 51.26 meters.

PCJ, Huizen, Netherlands, relays PHI. They are on 19.71 meters mornings.

According to an official communication I2RO, Rome, will broadcast to the U. S. on 6150 although, as stated above, they are heard on 9780.

IRW was heard broadcasting to Buenos Aires on October 7 using 19,520 kcs. They promptly verified reception and said they operated only on special occasions therefore could not send advance data.

JVF, Japan, was heard testing on 15,620 kcs. at 3:50 p. m. CST.

HI7G, a 20-watt Dominican ham, is heard frequently on 14,000 kcs. in the early evenings. He sends a nice QSL card.

A mysterious station was heard on about 6,440 kcs. on November 28 at 8 a. m. CST. He repeated his call letters several times, giving them as VK7 and was talking to a certain

IS3. No locations were given and neither call is listed.

CGA4 on 9,330 kcs. may be heard early evenings. He verifies promptly.

TIEP Will Verify

We are in receipt of the following letter from TIEP: "We are transmitting daily from 6 to 9 p. m., Costa Rica time, on 44.71 meters (6.710 kegs.) and we also transmit on Sundays from 12 o'clock noon on 22.35 meters (13.415 megs.). We will be glad to hear from readers of your magazine and reports will be verified.

The Thrill Waves

(Continued from page 9)

every State in the Union, from Canada, every South American country, England, New Zealand, South Africa and Australia, and once in a while, Japan, Hawaii or some European city. There certainly are thrills on short-waves for those who want them badly enough to try for them.

"And so to Bed"

This has been quite a successful night; we have heard thirteen different stations in eight countries on three continents, all of them with enjoyable volume and delightful programs. But, we have just scratched the possibilities of an evening. We didn't try to tune EAQ in Madrid nor TIEP in Costa Rica. Other stations that would come in just as easily as the ones we heard are OAX4D, YV5RMO, YV2RC, HJ1ABG, XEBT, VE9CL, HJ4ABB, PRF5, etc. An average log for an average evening should nearly always show a total of 12 or 14 South Americans and a few Europeans. Then, if one wishes to rise early in the morning he should hear Australia, Japan and maybe Java before breakfast and the Netherlands, France, Germany, England and possibly Russia before leaving for work.

Aye, the short waves are full of thrills.

"Dear Mr. Editor"

The Mail Bag

WE NEVER quite realized before what a great number of readers we had north of the international boundary line. Our vote on the merits of the governmental and commercial broadcasting systems brought us letters from Yukon Territory to the eastern tip of Newfoundland—from ranches, from mines, from the great open spaces, from little hamlets in the North Woods and the big metropolitan centers of Ontario. It is pleasant to think that in these widely-scattered homes all over the great Dominion, this magazine is adding to the pleasure that radio brings.

We often marvel at the wonderful efficiency of the postal service. It is a rare thing to have a copy of this magazine fail to reach its destination. We drop a copy in the mail box here in Cleveland and in due course it is delivered to a reader on the island of Cyprus in the Mediterranean, on the island of Aruba in the Caribbean, on one of the islands off Nova Scotia or British Columbia, in a frontier camp in Alaska or Australia. Some readers are so far away that it takes a full month for a copy to reach them. It is amazing to realize that they hear a program from Radio City even before it reaches the ears of the audience in the last rows of the studio in which it is produced! Modern miracles!

Station News

"Here's some data you may find useful about our new station here," writes David W. Jefferies, Technician of WHDL at Olean, N. Y. "WHDL is now located on the sixth floor of the Exchange National Bank Building in the heart of Olean. Our station at Tupper Lake was closed down on October 25 and the appara-

tus shipped to Olean. The transmitter proper was completely rebuilt and we purchased a new Collins speech amplifier panel. We are now on the air daily from 7 a. m. to 5 p. m. and Sundays from 9 a. m. to 5 p. m. EST, 1420 kc., 100 watts. Antenna is inverted L type. We are extremely interested to hear from DX listeners and are making every effort to put our transmitter in shape so that we may reach as many states as possible this winter. A special card has been designed for replying to all reports. We feel sure all DXers will be glad to have one of the verification cards so we are extending an invitation to all fans to tune for us, either during our regular



Gene Arnold, writer and interlocutor of the Sinclair Greater Minstrels, has been with the show since its first performance in March, 1928. Starting on a Chicago station in 1928 with a cast of three—Arnold and two end-men—the program has attained national popularity over an NBC coast-to-coast network. On the Blue, Mondays at 9 p. m. EST.

hours or while we are on our monthly frequency check, the first Monday morning of each month from 2:50 to 3:10 a. m. EST."

Three of the stations in Brooklyn, N. Y., on 1400 kc. are to be combined—WLTH, WARD and WVFW. The call that will be used has not yet been announced. WBBC on the same channel and in the same city remains independent and will share time with the consolidated stations.

This advice comes from Stuart B. Leland, New Canaan, Conn.: Station CFRC is an experimental transmitting plant connected with the electrical engineering department of Queen's University in Kingston. As the station has no definite schedule, it does very little broadcasting and is silent from April to October. Listeners will have an opportunity to hear it, however, every Monday from 5:00-6:00 p. m. EST. during January, February and part of March, when the institution will give a series of lectures for the CRC.

Authority to establish a 1000-watt station in Windsor, Ont., has been granted to the CRC. The new station will be known as CRCW and is expected to be in operation by the middle of January. CRCW and CKLW will be operated from the same location.

The Singleton Contest

"Can harmonics of long wave airport stations be counted in the Singleton contest?" inquires Ray La Rocque, Worcester, Mass. It is hardly fair to count harmonics as these are often due to some peculiarity within the set. The ideal set would not pick up harmonics and it would not be quite right to penalize ideal sets and honor those which pick up signals they should not.

"Why not have the Singleton contest run by states and provinces?" queries H. H. Searles, 349 Broadway, Rochester, N. Y. "In other words an eliminator must live in the same state as the one who claims the

singleton." Have a heart! This would mean that the poor editor would really have 58 singleton contests on his hands. One alone is bad enough; 58 would put him in the asylum.

"I have been thinking of a plan and I would like to have your reaction to it," requests Burney McClurkan, 804 N. Locust St., Denton, Tex. "It is this: I'd like to organize a club here in the Southwest for the purpose of exchanging information and holding meetings about once a month in different cities. This club would not be one to arrange DX programs as there are enough of these. It would be a general get-together of southwestern DXers, both s. w. and b. c." We suggest that readers near Denton write Mr. McClurkan their thoughts regarding such an organization.

J. Meyer, 517 Sixteenth St., Merced, Calif., complains of several stations have kept his dime and failed to send him verification. "Why can't RADEX furnish us with coupon-books. We can send the coupons to the broadcasting stations which could cash them through RADEX. I get pretty sore losing so many hours' sleep to get these stations and then not get the verifications." The idea is good but the amount of work involved frightens our staff.

Measuring Distances

Many of our readers are interested in measuring distances. This letter is typical of many we receive: "I would like to know how many miles to the inch on the RADEX Radio Map of the World." It is impossible to measure long distances on a flat map. The equator is nearly 25,000 miles long. The Arctic Circle is only about 2,000 miles long. Yet on a flat map both of these are necessarily shown as the same length. A mile from either pole, *it is only six miles around the earth.* Yet on a flat map it would appear to be 25,000 miles.

Other readers write: "Where can I get a book showing the distances from one radio station to another?" The only way of showing such distances is to print the names of the cities down one side of the paper and the same cities along the top, with the mileage opposite each. It will readily be seen that the number of cities that can be shown in this way is limited to the number that can be printed along the edge of the paper. To show more than forty or fifty different cities would require a very large sheet.

There is only one accurate and satisfactory way of measuring long distances and that is by means of a World Globe. With such a map the distance between any two points in the world may be quickly and accurately measured.

Those "Mexican Nights"

In our last issue we mentioned the "Mexican Nights" programs being arranged for the NRC. Earl R. Roberts, 2308 Roosevelt Ave., Indianapolis, Ind., writes us regarding them; "We have acceptances from the following additional stations: XEFJ, Monterrey, N. L., for Jan. 12, 5 to 6 a. m. EST; XEPN, Piedras Negras, Coah., for Jan. 13 from 1:30 to 2:30 a. m. EST; XETH, Puebla, Pue., Jan. 13, 2:00 to 3:00 a. m. EST; XEFV, Juarez, Chih. Jan. 11, 3 to 5 a. m. EST. That makes three programs on 1210 kcs. and, unfortunately, WEDC refuses to sign off for them. So we may have to ask the Mexican stations to come on the air Thursday morning, Jan. 10, as WEDC say they are off the air every Thursday. It might be well for DXers to watch for the Mexicans on 1210 on the morning of Jan. 10. They will probably appear in this order: XETH, 2:30-3:30 EST; XEFV, 3:30-5:30 EST; XEFJ, 5:30-6:30." We are entering these stations in the DX calendar for Jan. 10 as, naturally, it will be useless for them to come on while



Born in Ireland, lived in India, studied in England and Canada, and now a singer in the U. S. That's the story, in brief, of Anne Jamison who was engaged to sing leading roles with the Palmolive Beauty Box Theatre after a single audition. On the NBC-WFAP at 10 p. m. Tuesdays EST.

WEDC is using the 1210 channel.

Some readers complain that RADEX does not reach their newsstands until the 2nd or 3rd of the month, causing them to lose the first two or three days' tips. We are endeavoring to have this magazine on the stands in every state and province in North America between the 25th and the 1st. Copies are mailed to subscribers on the 20th of each month and thus reach them before all newsstands can be covered as the latter supply sometimes has to go through two or three hands.

The Federal Housing Administration asks us to call attention to three unusually interesting programs broadcast every week over the networks of the three big broadcasting companies. Wednesdays at 12:45 p. m. EST on the Columbia network, "Your Home and Mine" in which representative Americans tell true stories of how they have modernized

their homes with Uncle Sam's help. Each broadcast is from a different section of the U. S. Wednesdays at 9:45 p. m. EST on the American Broadcasting System network, a series of special interest to women with a famous and distinguished woman guest speaker. Saturdays at 6:45 p. m. EST, "The Master Builder" on the NBC Blue net.

Our British Representative

Arthur C. Baker, 10, Lansdowne Road, Sale, Cheshire, England, who has been the British representative of RADEX, has been appointed Engineer-in-Charge of the British Government building at the 1935 Brussels Exposition and is leaving England to assume charge of his new duties. This is a fine honor and we know Mr. Baker's American friends will join us in our congratulations. Robert Pybus, 4 Highfield Road, Chorlton-cum-Hardy, Manchester Lancs., now becomes our representative in Britain. European readers of our magazines may secure their copies of RADEX, the *DX Log of the World* and the *Time Converter* direct from Mr. Pybus.

We receive many letters of this tenor: "Why do you list such-and-such a station as not verifying when I received a verification from them?" When we list a station as not replying to letters or verifying reception, it is because that station so advised us. We have to choose between giving our readers the policy of the station as that station informs us, or being guided by the experience of some one reader. The latter would be very inaccurate.

From time to time readers inquire when we will again print a list of the police stations. These will now appear regularly together with the other short wave stations of the world in our *DX Log of the World*. They will be found on pages 23 to 30 in the November-December-January issue.

We receive many requests for a

list of all the amateurs. There are many thousands of these and they make a very large book which may be secured from the Radio Amateur Call Book, Inc., 608 S. Dearborn St., Chicago, for \$1.25.

J. F. Morris, 1610 Dufferin St., Toronto, Ont., contributes this kink: "I am using a Westinghouse 81 and find that by putting a small loop in the insulated leadin and slipping it over the top of the first r.f. tube (screen grid) it greatly improves the sensitivity.

TEN YEARS of RADIO

IT IS just a decade this month since the first RADEX was published. What changes have been wrought in radio. Very few possessed factory-built sets in 1924, the great majority being home made. It was next to impossible to secure parts. Dealers sold them out before they were unpacked. There were waiting lists for condensers and tubes. Coils were wound at home. Bakelite tubes were hard to get and many used oatmeal boxes. There were no loud speakers other than a phone unit with a tin horn attached. Tubes cost several dollars each and everything was battery-operated.

The principal circuit was called the Copp—a regenerative which howled fiercely in the hands of the inexperienced users. Later came the reflex, the neutrodyne, then the t.r.f. and much later the superheterodyne. There was of course the crystal set and some battery sets were designed to use a crystal detector. Those early home-made sets were things to marvel at. It was next to impossible to buy cabinets so many were also built by hand out of whatever material the builder could find.

The Anxious Moment

After spending days and nights drilling bakelite panels, installing



Thrilling thousands of feminine "Myrt and Marge" fans again is the voice of Vinton Haworth, who, after a year's absence, returned this fall to the cast of the back-stage serial in the role of Jack Arnold. Marge's big love interest. On the Columbia. Mondays through Fridays, 7:00-7:15 p. m. EST in the East and 11:00-11:15 p. m. EST, in the West.

condensers and knobs, soldering wires and joints—what excitement and anxiety there was when the phones were first attached and the switch thrown. More often than not, the set was perfectly dumb. Something was wrong and more hours were spent tracing the wiring, comparing with the diagram, and trying to run down the difficulty. Again and again, the phones were put on until finally, away off in vast distances, there was a sound of music. Tuning in a five-watter in New Zealand doesn't bring one-half the thrill that came from hearing even a local station in those days on a set that you, knowing nothing at all about radio, had built yourself.

The next time one used two tubes and tried to bring the signals through the makeshift loud-speaker—an old phonograph horn with a phone unit at the small end. Later came the fiber-board horns, then the cone speakers and much later, the dynamic. When a set would work at

all, relatives and friends and neighbors demanded that the builder make them one just like it. Neighborhoods were sprinkled with squealing, oscillating sets and the nights were filled with hideous noises.

Complete Chaos

Control which the Department of Commerce had assumed over the growing infant of radio, broke down under the ruthless grabbing of wave lengths. Stations sprang up over night and took whatever frequency suited their fancy and, like as not, they changed to another the next night. Frequencies were not used at all; stations advertised their programs by wave-lengths in meters. As a consequence there were stations on 205.4, 206.8, 209.7, etc.

A glance at the index for 1924 is interesting. How many have these old stations on their logs?

ALABAMA		
Auburn	WSY	1199
Mobile	WEAP	1141
Montgomery	WKAN	1327
ARIZONA		
Phoenix	KFAD	834
	KFCB	1260
Tucson	KFDH	1160
CALIFORNIA		
Burlingame	KFNZ	1299
Hanford	KFRN	1339
Holy City	KFQU	1282
Los Angeles	KHJ	742
Oakland	KZM	833
Paso Robles	KFNL	1249
Redlands	KFRP	1421
San Leandro	KFUU	1340
Taft	KFQC	1299
Whittier	KFOC	1271
COLORADO		
Boulder	KFAJ	1150
Denver	AA3	681
CONNECTICUT		
New Haven	WPAJ	1119
DELAWARE		
Wilmington	WHAV	1128
IDAHO		
Kellogg	KFEY	833
Moscow	KFAN	1300
Wallace	KFOD	1339
IOWA		
Atlantic	KFLZ	1099
Le Mars	KFCY	1190
Lemont	KFFV	1199
Marengo	KFOL	1282
Oskaloosa	KFHL	1249
Waterloo	WRAN	1271
NEBRASKA		
Belden	KFQY	1099
David City	KFOR	1327
Hartington	KFRZ	1351
Oak	KFEQ	1119
Omaha	KFCZ	1163
	WIAK	1079
Teecumseh	WTAU	1240

Some Thoughts

While DXing

• • • By John L. West*

BIG thrill of the evening! Received LR5 on 830, QSA5, R7-8, at 2:07 a.m. EST. Quite by accident, didn't even know they were on. Just happened to catch Spanish on 830 as I came down the dial and hesitated just as the announcer broke into English to the effect that the program was from LR5. Went back several times between fishing for new ones and they were still there, R7-8 every time. Tried all last season to get them to no avail. Rather proud of this catch because it was warm and raining and blowing cats and dogs outside and I was bothered all evening by faulty power lines in my neighborhood.

* * *

Heard TGW at Guatemala City again for the third successive Sunday morning. They were exactly 565 as listed this time and at last came through QSA5, R8. Previously their modulation on speech was very poor. Go after it, boys.

* * *

Here's one that has me wondering. On 990 kc. after WHO and WBZ had gone to bed, a Spanish speaking station, very weak but occasionally strong enough to hear music and speech fairly well. Like so many of the Spanish-speaking announcers, this one talked so rapidly I was unable to catch an identifying word. It was still there when I went to bed at 3:30 a.m. Who could this be—XEK or possibly LR4? Or a new one?

* * *

Another one that has me. At the same time on about 1015 kc. a Mexican who announced himself as X—in Coahuila, Mexico, on 1020 kc. The call letters were slurred but the location was unmistakable.

On October 15 at 11 p.m. EST, I heard in back of and through WHO on 1000 kc., another station playing slow organ music but couldn't bring them out sufficiently to catch a single word either in English or a foreign language. WHO is like a local on my receiver so I can't figure out who would have been strong enough to come through like that. Haven't heard it since.

* * *

Have been hearing a strong Cuban in Havana on about 878 or 880 kc. pushing through CRCO on certain nights. Can't catch call letters but have heard "Havana" mentioned many times. CMX used to be about that frequency but the latest RADEX has them moved.

* * *

Finally identified the station on 845 as CMQ as listed in the November RADEX on 840. Listened to him night after night between CRCT and WWL, thinking it was CMC or XEXX off frequency. CMC seems to be gone. Used to hear them regularly last year. XEXX shows no signs of life that I can notice.

* * *

Heard a strong Spanish-speaking station on 1150 kc. the other night. Is it COK on their new frequency? I have a devil of a time with these Mexicans and Cubans—don't seem to catch their call letters, but they provide plenty of interest and excitement, popping up here and there—here one day and gone the next. I love 'em!

* * *

Caught COA on their new frequency several nights ago right through WCAU and KOB.

* * *

I'm not much of a DXer as yet but even a tyro stores up a lot of information and perhaps I could help someone just getting started in the greatest game in the world. I'd like

to hear from some other DXers. Saturday night is my only real DX opportunity and conditions have been none too good so far. Have trouble pulling in many that were easy last season but am often surprised by what I do catch, considering my rig—a very poor one—and a very annoying form of interference that has developed in my neighborhood of late.

* * *

My total log, started January 1 of this year, when I put my new receiver into service, stands at 432 on the b.c.b., 33 s.w. phone and relay, 93 police and countless "hams" and aircraft calls. I use a Crosley Model 168, seven-tube table model, tuning from 540 to about 6100 kc., thus my s.w. range is strictly limited. However on the 49-meter band, I've had England, Germany, Mexico, Cuba, Venezuela, Canada and all the U. S. relays. Also British, Canadian, Bermudan and ship-to-shore phones.

* * *

My policy is to start a new log each September, relogging all stations, even locals. No one knows how hard it can be to relog some stations until they try it. I do not verify due to the expense involved and anyhow I do this entirely for my own pleasure and don't care a hoot whether anyone believes my catches or not. RADEX is my bible and sole guide in the radio world and it's all I need. I don't even belong to a DX Club although I would like to join a good one if it wasn't too expensive.

* * *

*1325 Beach Avenue, Lakewood, Ohio.

From VONF

"We have been experimenting with broadcasting on various frequencies between 950 and 970 in an endeavor to find a suitable location with the least interference from stations in the United States, Canada and Europe. We are considering returning to 1195 kc. which we used originally."

Tips on Europeans

● ● ● By P. H. Robinson*

Using a six-tube Sparton super-heterodyne receiver with a 300-foot aerial, has brought many European stations in. Following are some of the best:

Poste Parisien, 959 kc., usually signs off about 5:30 p.m. EST. On Sundays a program for English listeners from 5:30 to 6:00 p.m. EST. All announcements in English. Signs off with a trumpet call.

Toulouse, 913 kc., on until 7:00 p.m. EST or later; R8-9; sounds gong.

Bordeaux, 1077 kc., ruined by WBT after 5:00 EST. Best at 4:45.

Turin, 1140 kc., and Trieste, 1222, very good until spoiled by locals about 5:15 p.m. EST. Song of nightingale between programs.

Rome, I1RO, 713 kc., very good until WOR comes in about 5:30. Lady announcer. Relayed by I2RO late afternoons on 30.7 meters.

Stuttgart, 574 kc., very good until signoff at 6:00 or sometimes 6:30 p.m. EST. Signs three notes something like DJD and other s.w. stations. English program on Tuesdays from 6:00 to 4:30 p.m. EST.

Lyons-la-Doua, 648 kc., good around 4:30 p.m. EST; two strokes on bell.

Florence, 609 kc., about same strength as WIP, doesn't cause whistle, directional antenna cuts out WIP leaving Florence with good volume; nightingale signal; around 5:00 p.m. EST.

Rabat, 601 kc., plays Marseillaise at signoff 5:00 p.m.

All the British regional stations heard very well at news given from 5:00-5:15 p.m. EST. Athlone, 565 kc., good until 6:00 p.m. EST. Lady announcer."

*Shelburne, Nova Scotia.

Which System of Broadcasting?

• • • A Symposium by Canadian Readers

The Vote

In favor of the Governmental system with a tax.....	2052
In favor of the Commercial system with advertising.....	2502

IN THE November issue of this magazine, we printed a ballot for the use of our readers in Canada, who have experienced both private and governmental control, whereby they might indicate their preference between the two systems. The issue is not a clear-cut one. Most of our readers in the Dominion evidently would prefer to pay \$2.00 a year tax and have programs free from sales ballyhoo but at the same time they want the variety embodied in the sponsored programs and the high type of artist. In other words, they want the advantage of the sponsored program without the disadvantage.

It is quite generally recognized that no reasonable tax would provide sufficient revenue for the government to put on the high-priced artists and features that are possible under the competitive commercial system. There is a strong under-current of protest against a governmental body trying to force upon the listening public educational or cultural programs in lieu of lighter entertainment. Evidently educational features as well as advertising must be heavily sugar-coated and worked into the evening's entertainment without being too baldly prescribed.

Another factor that prevents a clear-cut decision is the fact that even under governmental control, the programs are not free from advertising. In addition to the private or commercial stations which are still in the majority in Canada, even the Commission stations have evidently been forced to accept advertising to eke out their income.

All in all, this "election" has aroused a great amount of interest among the radio listeners in Canada. A large number of those sending in ballots indicated their intense interest in the question by supplementing them with letters setting forth their positions in detail. From these letters we are quoting some interesting excerpts.

Faults of the Canadian System

Some of the major points raised against the governmental controlled system as it exists in Canada, are the following:

Too many of the Commission programs are either in French or in French and English. Listeners see no reason why English Canada should be made bi-lingual when polyglot United States uses English only.

The Canadian Commission programs are too "high brow." As one reader put it, the Commission refuses to humor the listeners with humor. The programs lack the variety and the spontaneity of those south of the border.

In spite of the fact that one of the professed purposes of the tax is to provide the elimination of interference, this work is not done as well under the Commission as formerly under the Bureau of Marine and Fisheries.

A great many listeners in Canada have difficulty tuning in the Commission programs due to unfavorable allocation of frequencies. On the other hand, some readers have the feeling that the Commission is allocating frequencies purposely to interfere

with their reception from south of the border.

Faults of the Sponsored System

The great majority of those voting for a system with a tax do so wholly because of the advertising feature of the sponsored program. While many are good-humoredly willing to take "the bitter with the better" as Jane Ace puts it, even they object to the sponsor monopolizing the program with his wares. Some of the horrible examples they point out are the "Lady Esther" and the "Uncle Ezra" programs. A considerable number mention the Ford programs as being ideal in the matter of advertising.

Those advertisers who repeat the same advertising over and over on a program—at the beginning, in the middle, and at the end—are just driving their audience away. "Don't tune that program in, it's all advertising" people are beginning to say in connection with certain programs. Some of those sponsors who are trying to crowd as much ballyhoo as possible into their programs, would be astonished if they could see into the homes for they might find all but a few of them listening to some other program. They might just as well put their program on before a disconnected microphone.

Some sponsors are happily discovering how to work their advertising message into the program in such a way that it not only causes no offense but actually interests the listener. Some stations, too, are achieving this fortunate technique with their spot announcements but on the whole these extraneous advertisers rub the fur the wrong way. Listeners resent these announcements as coming from "chiselers" and, while stations are undoubtedly adding to their revenue by whittling off the ends of the regular programs and selling the time again to local firms, they are doing so at considerable cost in the good-will of their listening public.

The Canadian System

The following letter from Mr. H. Sedgwick, Managing Director of CFRB at Toronto, one of the major stations of Canada, gives a clear picture of the present set-up in the Dominion:

"In the November issue of R-DEX I read with interest an article entitled 'Canadian vs. American Broadcasting' wherein you are attempting to get expressions of opinion from Canadian listeners as to what system of radio broadcasting they prefer.

"I am not writing as a listener but as a broadcasting station operator so that you may be in possession of the correct information.

"There are in Canada 72 licensed stations; all but six are privately owned and operated and all of the 72 rely, for the major portion of their income, on programs sponsored by advertisers. In that respect they are no different to the 600 odd stations operated in the U. S.

"The Canadian Radio Commission is a body incorporated by the Parliament of Canada, receiving its money from that body out of the \$2.00 license fee which is charged to each owner of a radio receiving set in Canada. There are in the neighborhood of 700,000 licenses issued in Canada this current year giving an amount of \$1,400,000. Of this amount, something better than \$1,000,000 is turned over to the Radio Commission. With this money, they exercise some control over the advertising content of radio programs, the type of continuity used and produce a limited number of Radio Commission programs free from advertising which they put out to some stations whose time they rent and permit other stations whose time they do not rent to pick up.

"A number of other stations in Canada have neither time rented to the Commission nor are they permitted to pick up Commission pro-

grams. They augment their income by the sale of advertising to sponsors and maintain a regular commercial department for that purpose, operating in a similar way to the NBC or Columbia System but, of course, on a much smaller scale. It is, of course, obviously impossible for the Commission to own and operate stations in Canada on a full time basis on the money at their disposal."

From Our Canadian Readers

"At first, when the CRC came into being, there was a lot of doubt as to whether it was for the best or not. This fall there has been considerable improvement in the programs and a better feeling between the independents and the CRC. The amount of advertising is controlled on all stations to three per cent. of the advertiser's time on the air." Ottawa, Ont.

"The Canadian Radio Commission broadcast hour after hour of opera and classical music which is either not understood or listened to by the average Canadian. Therefore we depend upon the U. S. networks for our entertainment at the same time paying a tax to the CRC for what? The only regret we in Western Canada can voice is the fact that neither the NBC nor the Columbia have stations close enough or powerful enough for daylight reception. I am sure that both networks would add hundreds to their listening audience if stations were built that would allow daylight reception in the Western Provinces." Balcarres, Sask.

"The CRC is not putting on programs to suit the different classes of people. They cannot get money enough from licenses to pay for their artists. They are at the present time trying to induce manufacturers to buy time on the air from the government. The commercial programs are far the best on the air today. We could not begin to pay for those artists with a two-

dollar fee." Acton, Ont.

"The U. S. advertisers sure do put on good programs even if they butt in once in a while. The four stations in Montreal—CRCM, CKAC, CFCF and CHLP—lots of times are all broadcasting the same program. Why be taxed for entertainment when you have to take what you can get?" Louiseville, Que.

"Our programs in Canada do not, except in very rare instances, compare with those offered over the U. S. stations by sponsors. In Canada we have one program and must listen to it regardless of taste, while in the U. S. public opinion is catered to and the sponsors compete with one another to obtain the service of the more popular artists and forms of entertainment. I am in favor of a tax on radio sets but in my opinion, this should be used to improve conditions such as the elimination of man-made static, in preference to providing a program to which no one listens unless conditions are such that more distant stations cannot be heard." Courtenay, B. C.

Approves Advertising

This reader finds some merit in the much-maligned advertising: "Anyone willing to learn when he listens to the advertisers, will find out things that he never suspected. The public has learned more about the care of teeth, for instance, than was ever generally known before. What about the things that the housewife has learned that she thought she knew all about? What about the facts disclosed about refrigeration and the dangers of infected food. Yes, if the public would listen to the advertising they would learn all right." Mirror Landing, Alberta.

"The best talent is attracted by commercial programs. The programs are more versatile. Each sponsor has his own idea of what the public wants. The CRC has only one idea of what its public wants and they al-

ways guess wrong. In other words the U. S. system pleases all of the people some of the time but the Canadian system pleases very few of the people, very little of the time. The objection to our Canadian system as I see it, is not the small tax but the sameness and poor quality of the announcing and entertainment and lack of snappy original humor." Edmonton, Alberta.

"The advertising on WGR's morning programs by Clinton Buhlmann, is done in such a way as not to bore the listener unduly. I do not object to advertising when it is done in this manner, although unfortunately this type of advertising is too rare." Picton, Ont.

"May I say that, if the listener to U. S. programs gets them for nothing and enjoys them so much that he listens to the same program every week, then he should, in all fairness to the sponsor of that program, listen to what he has to say about his product. If the listener paid to hear the program then he could crab about the advertising but when he gets it for nothing and likes it, he should give the sponsor a break." Red Deer, Alta.

"The proportion of time given to direct advertising to entertainment on the U. S. programs is small compared to the proportion of advertising space to news of our daily papers. And after all it is less painful to pay for one's radio entertainment by buying shaving cream, soap or tires than to pay for it in the form of an annual tax however small that tax may be." Chatham, Ont.

"For all the advertising done on your programs, you are sure lucky not to have to pay a license. This is only fair to the sponsor who pays plenty for such good talent. I heard Guy Lombardo the other night and the wife would not let me change till his program was over. This was from WLW which comes in very good out here. He was on the St.

Joseph Aspirin program. We had never heard of this aspirin till now so the sponsors will gain another customer." Vancouver, B. C.

"I certainly do not like the ad blurbs, stuff and puffs but — the the cost of doing away with them is too much. Here we find the air jammed to every radio station except those of the Canadian Radio Commission with the deliberate intent of preventing us from having a free choice of the programs we want, forcing us to listen to French — no, not French but Quebec slang — programs. If you hear of Western Canada seceding from the Confederation, it will be after we win the "Radio Rebellion." For God's sake, don't you folks put the radio down there under the Government." Regina, Sask.

"A sponsor who wishes to advertise his product will put on a program which will appeal to the many rather than the few and so, under the U. S. system, we get programs we *want* rather than the 'high-class' programs to which we 'should' listen." Winnipeg, Man.

"I do not object to advertising if it is held within reasonable limits. In most U. S. programs, though, it is included to such a length and goes into so much detail that it is bore-some." New Dayton, Alberta.

XEFI Specials

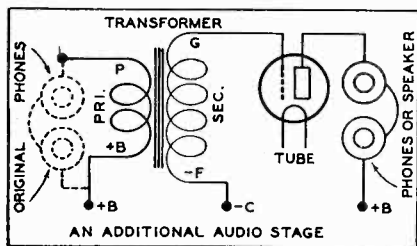
Between October 18, 1934, and March 6, 1935, Station XEFI, Chihuahua, Mexico, will broadcast 13 DX programs, each of which will be dedicated to a radio club. The January programs are on the 5th, 17th and 31st. Those in February will be on the 7th and 21st.

All programs start at 2:00 a.m. CST and sign off at 3:00 or 3:30 a.m. Announcements will be in both Spanish and English.

International Reply Coupons which may be secured at any post-office should be sent with reports. United States stamps are useless.

In Our Radio Laboratory

• • • With THE TECHNICAL EDITOR



I HAVE a small two-tube battery receiver which gives volume enough for a pair of headphones. Can I add another tube and get sufficient volume for a speaker?

Another audio stage will give greater volume and will operate a small magnetic speaker for the more powerful nearby stations. More power will be noted with headphones, particularly on the more distant stations.

All that need be done is to replace the headphones of your receiver with the primary of a 6 to 1 audio transformer. The secondary of the transformer is connected to the grid of another power tube, such as a -30 or -31. The plate of this tube goes to the headphones or speaker and thence to either 90 or 135 volts of B battery, according to the type of tube used. The secondary of the transformer, opposite to the end connected to the grid, should be connected to a C battery. The -30 tube requires $-4\frac{1}{2}$ volts while the -31 requires $-22\frac{1}{2}$ volts C battery.

The connections are indicated in the circuit diagram.

Tubes In Philco 71

Please tell me the type and functions of each of the tubes used in my Philco 71 radio receiver.

The tubes used in the Philco 71 are operated on a 6-volt circuit. The radio-frequency tube is a type 44; the

detector-rectifier is a 37; the detector-amplifier is a 44; the output power amplifier is a 42; and the rectifier is an -80. The latter tube uses only 5 volts and is heated by a separate secondary winding on the power transformer.

R. C. A. Loop Antenna

Can I use an old R. C. A. loop antenna with my Philco 89 receiver? This loop is one of those that came with the Radiola receiver—an early super-heterodyne circuit adapted to the loop. I have tried the loop but without good results.

The receiver used requires a substantial antenna. A small loop, such as the R.C.A., is not suitable for this purpose. The old Radiola had several stages of amplification and was somewhat adapted to a loop for selective reception. If you use the loop for greater selectivity with nearby powerful stations, we suggest that a small fixed condenser, of about .00025 mfd. capacity, be connected in series with the ground end of the loop and the ground terminal of your receiver. Use the regular ground wire to the receiver.

Tone Control

How can I provide a simple type of tone control on my receiver? I understand it is made from a combination of fixed condensers. How do I connect them to the set?

You have not mentioned the make of receiver on which you wish to use a control. However, the following scheme will give results with most any type of receiver not equipped with a tone control switch.

For a simple tone control connect three fixed condensers across the plate of the last or output power tube and the grounded chassis of the set. The condensers are arranged with a switch that will cut in

one, two or all three of the condensers at will. This changes the capacity connected between the plate and chassis of the tube. The condensers should each be about .015 mfd. capacity.

A Noiseless Loop

I have been wondering whether a loop antenna will do away with much of the local noise picked up by the leadin and long top of the antenna proper. What is your experience?

The loop antenna will eliminate much of the noise picked up by a long leadin wire and antenna. But, unless the set is a powerful superheterodyne, the energy picked up by a small loop will be insufficient to give good results. Furthermore, the volume control of the receiver will have to be turned up so high, in order to amplify the weak loop signals, that the noise level of the receiver will also be amplified. This will thwart the purpose of the noise-reducing action of the loop.

We suggest that you try, with your Atwater Kent 376 receiver, one of their antennas of the doublet noise-reducing type made to operate with A-K receivers. This, and other types, were described on page 30 of the November, 1934, issue of RADEX.

More Volume

I have been attempting to obtain more volume from my Silver Marshall 730 set, but when I added more voltage to the plate circuit I burned out the resistors in the 255 transformer. How can I obtain this extra power without damaging the parts?

The capacity of the output circuit to handle heavy currents will determine whether or not more volume can be obtained. We doubt that this can be done with the 256 or 255 audio transformers used in your receiver. It is suggested that you use the normal voltages on these two transformers and the power tubes of the receiver so as not to overload them, and add another audio stage to

increase the gain of the audio circuit. It is not practicable to increase the gain by stepping up the plate voltage or increasing the load resistance beyond a certain point, as you have discovered. It was the purpose of the makers to obtain tone and high fidelity by the use of low ratio transformers. Greater volume can be had by changing the two transformers to higher ratios, such as 6 to 1 for the 255 and 3½ to 1 for the 256, or last stage.

Or you can add two -12A or two -71A power tubes in parallel. These will handle the output of the 256 transformer without distortion. The two grids of the new power tubes connect together and thence to the outlet of the last transformer (256). This is terminal No. 3. No. 4, of the secondary, goes to a C battery of from 6 to 16 volts. The two plates are connected in parallel through the primary of a 1 to 1 ratio output power transformer, and thence to about 135 volts of B battery. The speaker is attached to the secondary or output of the transformer.

Nearby Interference

A nearby station can be heard on any wavelength from 900 to 1500 kilocycles. I have adjusted all the trimmer-condensers, but to no avail. Can I use a wave trap to keep out these unwanted signals?

Some receivers are made without pre-selectors or pre-amplifiers. For this reason it is not possible to select the incoming signal by means of a tuned circuit. To overcome this difficulty the undesired signal must be reduced to a low ratio with respect to the strength of the desired signal at the detector input. This is done simply by using circuits which are sufficiently selective to reduce the intensity of the undesired signal. A wave trap, therefore, will not be successful if there is the least bit of signal pickup in the circuit of the receiver following the antenna terminal.

A vario-mu tube of the super-con-

trol pentode class, such as a 58, or even of the .35 type, should be used in the first stage of the receiver, before the first detector, so as to prevent detection of the signal before it has been carefully selected. You should be able to use a tube of this type, or a good service man can easily make the substitution and necessary wire and socket changes.

Auto Radio

I am troubled with motor noise in my 7-tube Motorola 77A, and have tried short antennas and the antenna in the top of the car. Condensers have been placed between ammeter and ground, and from generator to ground. Suppressors are used on plugs and distributor. Wires from the speaker to set, from meter to coil, and the 6-volt wire from coil to distributor, all run through grounded copper shielding. Noise is present even if the car rolls along while in gear and engine dead and high tension wires removed. Is the trouble in the set or in the installation?

Your description indicates that the noise can be heard when the motor of the car is not running. This would naturally place the trouble either in the running gear of the car or in the set itself.

In many cases car receivers are very sensitive to electric charges created by the metallic parts in the brake lining and clutch plates. Thus, when the wheels are turning, or when there is friction in the clutch, the noise will appear. In some cases re-lining the brakes or replacing the clutch plates will effect a cure, and unless this works there is no other alternative.

It is also conceivable that the trouble is in the set, especially if it is of the vibrator-powered type. While this does not directly account for the trouble, the motion of the car would indicate that static charges are being generated by friction of metal and dry fabric material.

A Shorted Converter

One side of my short-wave converter's power supply is grounded; also, my house lighting circuit is grounded. It is necessary to plug in the wire to the converter so as not to short circuit the a.c. power line. How can I arrange to connect the converter to any house socket so as not to short the line?

Do not directly connect a ground line from the converter to the regular receiver, but use a .5 mfd. condenser in the ground wire from ground to the converter. Ground the receiver in the usual manner. Then couple the antenna connection of the receiver to the converter through a very small condenser, about 15 to 20 mmfds. In this way you need have no fear of connecting the attachment plug of the converter to any electrical outlet whose grounded side you do not know. No trouble will arise unless one or both of the condensers becomes defective and shorted.

Hears A Howl

Whenever I use a converter with my Grebe 88 broadcast set there is a howl only when the speaker is switched on. I do not get it when headphones are in use. The speaker does not howl when the set is used for the broadcast band, and when the converter is disconnected.

It seems likely that the howl is a microphonic howl in which case it will be necessary to cushion the converter from any mechanical proximity to the speaker. It may be possible to overcome this effect simply by cushioning the tube or tubes in the converter.

We also suggest that you put the power transformer tap on the lowest voltage tap that will give the actual filament or heater voltage necessary. The howl also may easily be due to failure in tube emission, because of the additional load placed upon the winding by the converter. Ordinary causes of howl, such as defective grid resistors, gassy tubes, faulty

transformers, etc., will be worth investigation if the possibilities of vibration between the speaker and converter does not locate the source.

Volume Falters

I have a Silver Marshall model J receiver. It has a habit of changing from loud to soft in volume. One moment its sound is good with normal volume, and the next it can hardly be heard. Whenever this occurs there is static and the dial light flickers. Then the set shuts off completely and comes back again. All the tubes check satisfactory. Why is this?

This effect is undoubtedly caused by an intermittent shorting of one of the radio-frequency or intermediate-frequency plate wires or leads. This in turn may be traced to a short circuit in the shielding about the plate lead; a short at the case containing the intermediate-frequency or radio-frequency coils or transformers, with the tuning condensers or the shielding cover; one of the two plate-bypass condensers; or possibly even the output filter condenser. A careful examination of these parts should locate the trouble. Your serviceman can quickly test the parts with his apparatus.

Other possible causes are: Intermittent shorting of the power transformer filament winding for the heaters; partially shorted bias resistor bypass condenser for the power stage; shorted tube socket; or a defective rectifier tube.

All-Wave Antenna

My early model Scott receiver is to be repaired at the factory so that it will operate with a doublet antenna. In your opinion what is the best type of antenna to use? What type of outdoor ground contact should I use?

We assume from your statements that you are about to change the antenna coupling circuit so it will work with a doublet antenna. There are a number of all-wave doublets on the market. The R. C. A. Lynch, Philco, Atwater Kent, Tobe, etc., all

give excellent results. The Lynch concern has been a pioneer and extensive investigator of this subject. See the October and November issues of RADEX for detailed information on such antennas.

Bolt or solder one end of a No. 12 copper wire to a piece of $\frac{3}{4}$ inch galvanized iron pipe about six feet long. Flatten the lower end of the pipe to a chisel-like point. Drill a number of holes through the pipe. Drive the pipe into the earth with about six inches protruding. Three such pipes, spaced about six feet apart in a row, all connected together with a wire, and placed close to the building, preferably beneath the eaves so as to be in a moist location, will make a perfect ground. Occasionally pour a strong brine down into the tops to maintain moisture and a good earth contact.

Non-Oscillating Converter

I built the RADEX converter described last year, but it will not work on certain wave bands—the lower ones. What shall I do to improve reception on these bands?

Not all tubes oscillate freely on the higher frequencies. First make sure the tube is a good one and try replacing it with several others until you find one that will be a perfect oscillator.

Perhaps the circuit is not oscillating on all low bands for certain reasons—particularly construction. Try changing the taps on the oscillator coils. Increase the number of turns from the bottom, as for instance, instead of the $1\frac{1}{3}$ turns from the bottom, on one coil, try from 2 to 3 turns, etc. Experimentation will be necessary. Also make sure the plate voltage is the full amount—180 volts.

Type -30 Tubes

Can I use the -30 type tubes in place of -01As and -71As in my old Crosley set; also in a R.C.A. III receiver? What shall I do to make this change?

The 01As and the -71As use 5

volts while the -30s use 2 volts. The wiring of the set is arranged so that any tube can be used provided proper voltage is supplied. As the plate current and potential characteristics of the -01A and the -71A are quite similar to the -30 and -31, respectively, you can use the latter type tubes. Use a two-volt "A" battery instead of the 6-volt battery. The resistance control must be turned up to full strength.

Majestic Power Tube

I wish to replace the tubes in my Majestic 130A receiver, particularly the power tube. Please advise me.

There is an adapter that permits a 2A5 tube to be used in a -45 socket; other adapters also permit a -47 to be used in place of a -45. A 57 can be used in place of a -24A by means of an adapter. All of these substitutions will improve reception in this particular set. The 57 and 2A5 type tubes will reduce hum because of their heater construction.

Modernizing Philco 86

Would it be practicable to rebuild my Philco 86 receiver so as to use newer type tubes? Please tell me what should be done.

Rebuilding the Philco 86 would not prove worth while. This is a tuned-radio-frequency receiver. It uses four type 26 tubes for which there are no substitutes. The -27 tube can be replaced with a 56. The two -71 push-pull audio tubes can be replaced with -45s, but changes in filament voltage would be necessary, and there would be some additional drain on the power unit. To replace the 26s with -24s, -35s or 57s, would require wiring and socket changes, together perhaps with new r.f. coils. The mechanical and electrical alterations, together with the expense involved, makes the plan rather impracticable.

Cross Talk

My small DeWald "Dymette" 54 receiver does not tune out all "cross talk" and interference from nearby

stations. What can be done to this set to improve its performance?

Try a wave trap—made of a coil of 50 turns of No. 26 wire wound on a two inch tube, and shunted by a .00035 mfd. variable condenser—placed in series with the antenna and receiver as a possible prevention of the "cross talk" and local interference. A small receiver, like yours, is likely to show some such interference in certain localities because of the absence of a pre-selector circuit.

Silver-Marshall 30

Please tell me how to change the tubes in my Silver-Marshall model 30 receiver so as to use newer and more efficient tubes.

We suggest you substitute a type 56 for the -24 in the first r. f. stage. Remove the 400-ohm wire resistor connected to the cathode prong of the first r. f. tube socket and discard it. Remove the 2600-ohm resistor and red condenser wire from the grid of this socket. The screen voltage lead to the first r. f. stage should now be clipped off. Connect the red condenser lead (previously removed from the grid of the old tube) to the cathode post for the new tube. This will now connect two of the three sections of the triple (0.1 mfd.) condenser to this cathode. Now remove the grip clip from the wire leading to the antenna coil. Solder this wire to the grid terminal of the new 56 tube socket for grid control at the socket (instead of at the cap as was used on the -24 tube). Resolder the 2600-ohm resistor between the cathode and the chassis ground. A 56 can also be used to replace the -27 first audio tube. Two -47s may be used in place of the two -45s with suitable adapters.

Back issues containing "The Beginners' Story of Radio" are available at usual rates. Do not miss a single chapter of this interesting and illuminating serial.



"Just Plain Bill," the elderly barber of Hartville, comes to life in the person of Arthur Hughes, noted character actor, every Monday through Friday from 7:15 to 7:30 p. m. EST over the WABC-Columbia network. The program is rebroadcast for Midwest listeners from 1:00 to 1:15 EST.

A World Globe

We are offering a very fine Globe, 17 inches high and nearly 38 inches in circumference

For Only \$3.95
postpaid

In Canada and West of the Rockies the price is \$4.45.

The Globe is too large to ship to Cuba or South America.

Finished in eight brilliant colors, with the latest geographical changes, this is

A Rare Bargain

RADIO PARTS CO.
1401 Prospect Ave.,
Cleveland, Ohio

The Silver Masterpiece

(Continued from page 5)

turning off the switch.

Next to the lower, left knob or volume control, is a manual tone control. This knob allows bass or treble notes to be increased as desired. The third knob is the four-position wave-change switch. It has four colored markers corresponding to the dial scale colors—yellow, red, green and white. The right hand or last knob is the sensitivity control or noise suppressor. It operates a variable control and not a switch, and can be set to cut out all local inter-station noise.

Our readers may secure literature more fully describing the "Masterpiece III" by addressing McMurdo Silver, Inc., 3361 N. Paulina St., Chicago, Ill.

Some IDA Specials

The International DXers Alliance through their publicity department, James T. Spalding, Director, announce the following DX programs for January: Time is EST.

- Jan. 5, 7:30-9:00 p.m. Fecamp, France, on 1456.
- Jan. 10, 4:30-5:30 a.m. EAJ7, Madrid, on 1095.
- Jan. 10, 10 p.m.-12:30 a.m. Cairo, Egypt, on 621.
- Jan. 16, 12:01-2:00 a.m. Parede, Portugal on 1031.
- Jan. 20, 1:00-2:00 a.m. PP, Paris, on 959
- Jan. 22, 2:00-3:00 a.m. LS2, Buenos Aires on 1190.
- Jan. 25, 10 p.m.-12:30 a.m. Cairo, Egypt, on 621.

Our Readers' Dials

(Continued from page 16)

"I have a battery-operated ten-tube Paramount which covers from 9 to 2000 meters," says Eric Butcher, Cokeville, Wyo., another new correspondent. "It is a very selective set. On the bc. b. I pick up WABC and WCAU almost every night and WJR and numerous other distant

stations come in like locals. Would like to hear from someone who has a Paramount as I am the only one in this locality."

"This present season has been the best I've ever seen," exults Jean P. Leinroth, Jr., 37 The Fairway, Montclair, N. J. This season I have received KGU, KFXJ, KWYO, KTM, KFAC, KHJ and TGW. Last season's best were KFI, KPO, KNX, KDYL, KGNO. My log now stands at 189 with 87 verified. I have a 1929 Fada. I would like to correspond with DXers in Wyoming, Arizona, New Mexico, Nevada and Idaho."

"Three months ago I bought a copy of RADEX and began DXing," prefaces Francis Schmidt, 707 Edmond St., Pittsburgh, Pa. "Since then I have logged 225 stations in Canada, Cuba, Guatemala, Mexico, Puerto Rico and the U. S. My best are CMK, KFAC, KFYO, KGDY, KGER, KONO, KRGV, KTM, KWSC, TGW, WLNH, WNEL, WSYB and XEW. My receiver is a Philco 81 with four tubes. Would like to hear from other DXers using the same model."

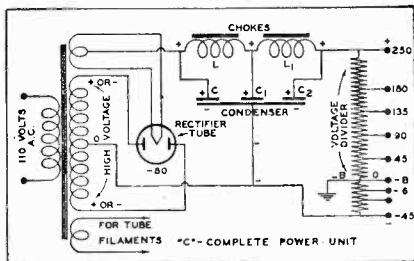
The Beginners' Story

(Continued from page 23)

-16 to -45. Therefore, its 29-volt drop divided by the total current (29 divided by .150), gives us a resistance of 193 ohms.

Complete Power Unit

This completes the voltage divider circuit. If the foregoing rules have been followed carefully it will not be difficult to design a voltage divider circuit for any receiver operating under all conditions of voltage and current demands. However, in order that the reader may see how the complete unit looks in the circuit, let us take the power transformer shown at "A," in Chapter 13; the tube rectifier shown at "C," in the same chapter; the filter system shown at "A," of this chapter;



and the voltage divider shown at "B"; and combine the *three systems* into a *single complete power unit*. The power unit, shown at "C," will be recognized in any radio circuit diagram, with perhaps, just a few variations. The basic principles, however, will not be changed.

(Next month the final and concluding installment of this series will describe the manual and automatic control of sound and fidelity of tone; telephones, loudspeakers, and the reproduction of sound.)

The Singleton List

The readers named below have reported possessing verifications from the stations named. Are they the only ones in North America who have heard and verified these stations? You may eliminate any of these singletons by notifying us that you too, have verifications from any of the stations named. Do not send verifications to us but be sure you have them if they are called for in case of dispute.

SINGLETONS

- ZTD, Durban, South Africa. C. E. Lowe, Merced, Calif.
- 2ZP, Wairoa, New Zealand. Charles Hesterman, Saskatoon, Sask.
- 3BO, Bendigo, Australia. Robert R. Rawstron, Worcester, Mass.
- 6PR, Perth, Australia. Art. Collins, Buffalo, N. Y.
- 2YC, Wellington, N. Z. Harold Alexson, Vancouver, B. C.
- 2CA, Canberra, Australia. W. Pollard, Victoria, B. C.
- JOBG, Maebashi, Japan. R. W. Schofield, Missoula, Mont.
- JOLK, Fukuoka, Japan. R. W. Schofield, Missoula, Mont.

VUG, Delhi, India. Robert Slosson, Milwaukee, Wis.
 OER3, Vienna, Austria. Lincoln A. Wood, Lynn, Mass.
 CX-18, Montevideo, Uruguay. Marvin D. Dixon, Shelby, N. C.
 LR-8, Buenos Aires, Arg. Murray D. Bryce, Royal Oak, B. C.
 7UV, Ulverstone, Tasmania. Murray D. Bryce, Royal Oak, B. C.
 Copenhagen, Denmark. Ray La Rocque, Worcester, Mass.
 Trieste, Italy. Ray La Rocque, Worcester, Mass.

ELIMINATORS
 2KY, Sydney, Australia, awarded to Art. Collins, Buffalo, N. Y. Eliminated by Robert R. Rawstron, Worcester, Mass.
 3KZ, Melbourne, Australia, awarded to Art. Collins, Buffalo, N. Y. Eliminated by Robert R. Rawstron, Worcester, Mass.
 SBH, Horby, Sweden, awarded to Ray La Rocque, Worcester, Mass. Eliminated by Robert R. Rawstron, Worcester, Mass.

PREVIOUSLY ELIMINATED
 SBA, Stockholm, Sweden.
 HAL, Budapest, Hungary.
 4BC, Brisbane, Australia.

THE JANUARY DX CALENDAR

of frequency checks and special programs for distant listeners arranged by the stations outside of their regular hours. All time is EST so that programs may be arranged in order.

DAILY			3:01-3:09			4:00-5:00		
11:00-11:05	VAS	685 2000	Glacé Bay	CHSJ	1120 100	St. John		
12:00-1:00	WFLA	620 1000	Clearwater	KGCX	1310 100	Wolf Point		
	WMC	780 1000	Memphis	January 27				
12:00-6:00	KFAC	1300 1000	Los Angeles	12:00-8:00	KGIR	1360 1000	Butte	
12:00-8:00	KJBS	1070 100	San Francisco	1:00-1:30	WKY	900 1000	Oklahoma City	
1:00-7:00	WEDC	1210 100	Chicago	2:00-3:00	KGEK	1200 100	Yuma	
5:30-7:00	WFPA	1420 100	Spartanburg	2:30-4:30	CKBI	1210 100	Prince Albert	
6:00-7:00	KFBI	1050 5000	Ablene	4:00-5:00	WGBF	630 500	Evansville	
					WOL	1310 100	Washington	
Sunday Mornings				January 6, 13, 20, 27				
January 6			10:00-1:00	CMBX	1425 250	Havana		
12:00-1:00	CKOC	1120 500	Hamilton	11:00-11:30	CFQC	840 1000	Saskatoon	
1:00-5:00	VOGY	840 400	St. John's	12:00-2:00	WGES	1360 500	Chicago	
2:00-3:30	KVOA	1260 500	Tucson	12:00-3:00	CMCD	955 150	Havana	
2:00-4:00	CHAB	1200 100	Moose Jaw	1:00-1:15	KOMA	1480 5000	Oklahoma City	
2:05-3:05	LR-5	830 25000	Buenos Aires	2:00-4:00	XEMO	865 2500	Tijuana	
3:00-3:05	CFCT	1450 75	Victoria	2:00-5:00	WMMN	890 250	Fairmont	
3:10-5:10	HIX	1270 1000	Santo Domingo	2:00-6:00	TGW	565 10000	Guatemala	
3:00-3:20	KLCN	1290 100	Blithville	3:00-6:00	CKOV	630 100	Kelowna	
3:30-3:50	KXYZ	1440 250	Houston		CFCT	1450 75	Victoria	
3:50-4:10	KTUL	1400 250	Tulsa	4:00-5:00	CFJC	880 100	Kamloops	
4:00-4:20	KPAC	1260 500	Pt. Arthur					
4:10-4:30	KGDY	1340 250	Huron	Monday Mornings				
4:20-4:40	KRGV	1260 500	Weelaco	January 7				
4:50-5:10	KARK	890 250	Little Rock	2:00-2:20	WCNW	1500 100	Brooklyn	
5:00-5:20	KGEO	670 500	Wichita Falls		WJAC	1310 100	Johnstown	
5:20-5:40	WNAD	1010 500	Norman	2:10-2:30	WFAS	1210 100	White Plains	
5:40-6:00	KUOA	1260 1000	Fayetteville	2:20-2:40	WRAC	1370 100	Williamsport	
					WNBF	1500 100	Binghamton	
					WCBS	580 500	Charleston	
					WAGM	1420 100	Presque Isle	
					WBTV	1370 100	Danville	
					WLVA	1200 100	Lynchburg	
					WHDL	1420 100	Tupper Lake	
					WHAT	1310 100	Philadelphia	
					WCAX	1200 100	Burlington	
					WBYW	1500 100	Rutland	
					WTEL	1310 100	Philadelphia	
					WIBX	1200 100	Utica	
					WQDM	1370 100	St. Albans	
					WKOK	1210 100	Sunbury	
					WMBO	1310 100	Auburn	
					KUJ	1370 100	Walla Walla	
					WGLC	1370 100	Hudson Falls	
					WBAX	1210 100	Wilkes-Barre	
					WCAD	1220 500	Canton	
					KOOS	1200 250	Marshfield	
					WBBL	1210 100	Richmond	
					KGBU	900 500	Ketchikan	
					WNBZ	1290 50	Saranac Lake	
					WBRE	1310 100	Wilkes-Barre	
					KGVO	1200 100	Missoula	
					WNBO	1200 100	Washington	
					KFPQ	1500 100	Wenatchee	
					WBAW	1310 100	Reading	
					EGY	1210 100	Olympia	
					WAAT	940 300	Jersey City	
					KRKO	1370 50	Everett	

5:00-5:20	WSYR	570	250	Syracuse	1:30-2:00	WHBL	1410	500	Sheboygan
	KFXD	1200	100	Nampa	1:30-2:30	WBUI	880	500	Iowa City
5:10-5:30	KVL	1370	100	Seattle	2:00-2:20	WEBR	1310	100	Buffalo
	WCAC	600	500	Storrs	2:10-2:30	WPEN	920	100	Philadelphia
5:20-5:40	KGEE	1310	100	Kalispell	2:20-2:40	WBAJ	1310	100	Grove City
5:30-5:50	KUJ	1370	100	Walla Walla	2:30-2:50	WHIS	1410	250	Bluefield
5:40-6:00	KGX	1310	100	Wolf Point	2:30-3:30	CHWK	780	100	Chilliwaick
5:50-6:10	KFQD	780	250	Anchorage	2:40-3:00	WFBG	1310	100	Altoona
6:00-6:20	KSEI	900	250	Pocatello	2:50-3:10	WPHR	880	100	Petersburg
6:10-6:30	KVOS	1200	100	Bellingham	3:00-3:20	WDSA	1370	100	Philadelphia
6:20-6:40	KIT	1310	100	Yakima		WKBW	1500	100	East Dubuque
6:30-6:50	KRSC	1120	100	Seattle	3:10-3:30	WRBX	1410	250	Roanoke
6:40-7:00	KXRO	1310	100	Aberdeen		WHBC	1200	100	Canton
6:50-7:10	KFIO	1120	100	Spokane		EGTV	1420	100	Alamamos
7:00-7:20	KFJI	1210	100	Klamath Falls	3:20-3:40	WMBG	1210	100	Richmond
7:10-7:30	KMED	1310	100	Medford		WTRC	1310	50	Elkhart
7:20-7:40	KORE	1420	100	Eugene		KICA	1370	100	Clovis
					3:30-3:50	WBCM	1410	500	Bay City
2:00-2:15	WAVE	940	1000	Louisville		KGHI	1200	100	Little Rock
						WSVS	1370	50	Buffalo
12:00-2:00	WGES	1360	500	Chicago	3:40-4:00	WGH	1310	100	Newport News
12:00-1:30	WCNW	1500	100	Brooklyn		WGBF	630	500	Evansville
1:00-1:30	WHEF	1500	100	Kosciusko		KIDW	1420	100	Lamar
1:00-2:30	XEX	1310	125	Monterrey	3:50-4:10	WOCL	1210	50	Jamestown
2:30-4:30	CKMO	1410	100	Vancouver		WROK	1410	500	Rockford
4:30-5:00	WNBO	1200	100	Washington		KBTM	1200	100	Jonesboro
					4:00-4:20	WGAN	880	250	Scranton
						WBOW	1310	100	Terre Haute
					4:10-4:30	KPBB	1280	1000	Great Falls
2:00-2:20	WQDX	1210	100	Thomasville		WHEC	1430	500	Rochester
2:10-2:30	WBHS	1200	100	Huntsville		WOSU	570	750	Columbus
2:20-2:40	WBHQ	1370	100	Memphis	4:20-4:40	KGFL	1370	100	Roswell
2:30-2:50	WEDP	1420	100	Rocky Mount		WSAZ	1190	1000	Huntington
2:40-3:00	WOPI	1500	100	Bristol		WBEO	1310	100	Marquette
2:50-3:10	WSMB	1320	500	New Orleans	4:30-4:50	WGAL	1500	100	Lancaster
3:00-3:20	WMBR	1370	100	Jacksonville		WKBN	570	500	Youngstown
3:00-5:00	KGFF	1420	100	Shawnee		WCAL	1250	1000	Northfield
3:10-3:30	WNRA	1420	100	Muscle Shoals	4:40-5:00	WCZA	1070	100	Carthage
3:20-3:40	WSJS	1310	100	Winston-Salem		KFJB	1200	100	Marshalltown
3:30-3:50	WHEF	1500	100	Kosciusko	4:50-5:10	WKBF	1400	500	Indianapolis
3:40-4:00	KMLB	1200	100	Monroe		WACO	1420	100	Waco
3:50-4:10	WAGF	1370	100	Dothan	5:00-5:20	WDZ	1070	100	Tuscola
4:00-4:20	KWG	1200	100	Stockton		KGDE	1200	100	Fergus Falls
4:10-4:30	WTJS	1310	100	Jackson	5:00-6:00	XEAO	560	250	Mexicali
4:20-4:40	KPJM	1370	100	Prescott	5:10-5:30	WLBL	900	2500	Stevens Point
4:30-4:50	WPFB	1370	100	Hattiesburg		WLB	1250	1000	Minneapolis
4:40-4:50	KERN	1370	100	Bakersfield	5:20-5:40	WBAA	890	500	W. Lafayette
	WGPC	1420	100	Albany		WIL	1200	100	St. Louis
	KXO	1500	100	El Centro	5:30-5:50	WTAD	1440	500	Quincy
4:40-5:00	WBNO	1200	100	New Orleans		KGHF	1320	250	Pueblo
	KIEM	1210	100	Eureka	5:40-6:00	WXYZ	1240	1000	Detroit
4:50-5:10	WROL	1310	100	Knoxville					
	KLS	1440	250	Oakland	12:01-2:00	CT1GL	1031	5000	Portugal
5:00-5:20	WDNC	1500	100	Durham	2:00-2:30	KWTO	560	1000	Springfield
	KGIX	1420	100	Las Vegas	2:30-3:30	WHBQ	1370	100	Memphis
5:10-5:30	WJBW	1200	100	New Orleans	3:00-3:30	KSO	1320	250	Des Moines
	KGMB	1320	250	Honolulu	3:00-5:00	WOPI	1500	100	Bristol
5:20-5:40	WAML	1310	100	Laurel					
	KRE	1370	100	Berkeley	5:30-5:45	WFBG	1310	100	Altoona
5:30-5:50	WSIX	1210	100	Springfield					
	KGU	750	2500	Honolulu					
5:40-6:00	KGAR	1370	100	Tucson	2:00-2:30	WROK	1410	500	Rockford
5:50-6:10	KCRJ	1310	100	Jerome					
6:00-6:20	KGDM	1100	250	Stockton	January 2, 9, 16, 23, 30				
6:10-6:30	K8UN	1200	100	Lowell	10:00-1:00	CMBX	1425	250	Havana
6:20-6:40	KTRB	740	250	Modesto	11:00-11:30	CFQC	840	1000	Saskatoon
					1:00-1:30	WHEF	1500	100	Kosciusko
					2:30-4:30	CKMO	1410	100	Vancouver
2:00-3:00	KDYL	1290	1000	Salt Lake	6:00-6:30	WASH	1270	500	Grand Rapids
3:00-3:30	KSO	1320	250	Des Moines					
3:00-4:30	CKBI	1210	100	Prince Albert					
1:00-1:30	WDNC	1500	100	Durham	2:00-2:20	WSOC	1210	100	Charlotte
1:00-4:00	WDAY	940	1000	Fargo	2:10-2:30	WSFA	1420	100	Spartanburg
2:00-3:00	XETH	1210	100	Puebla	2:30-2:50	WSGN	1310	100	Birmingham
3:00-5:00	XEFV	1210	100	Juarez	2:30-3:30	CHWK	780	100	Chilliwaick
5:00-5:10	KFNF	890	500	Shenandoah	2:40-3:00	WJBO	1420	100	Baton Rouge
5:00-6:00	XEFJ	1210	100	Monterrey	2:50-3:10	WGCM	1210	100	Gulfport
					3:00-3:15	KREG	1500	100	Santa Ana
2:00-3:00	LS-2	1190	40000	Buenos Aires	3:00-3:20	WRDW	1500	100	Augusta
						WHBY	1200	100	Green Bay
1:00-2:00	CMBC	1035	150	Havana		WDAH	1310	100	El Paso
					3:10-3:30	WKAQ	1240	1000	San Juan
						WJMS	1420	100	Ironwood
1:00-2:00	KFYR	550	1000	Bismarck		KLUF	1370	100	Galveston

3:20-3:40	WCSF 1360 500	Charleston	5:40-6:00	WTAQ 1330 1000	Eau Claire
	WEDC 1210 100	Chicago		WMBH 1420 100	Joplin
	KTSM 1310 100	El Paso			January 11
3:30-3:50	WBIG 1440 500	Greensboro	3:00-4:00	XEAA 920 200	Mexicali
	KGKL 1370 100	San Angelo			January 18
3:40-4:00	WCOA 1340 500	Pensacola	12:00-1:00	KGVO 1200 100	Missoula
	WBCB 1210 100	Chicago			January 25
	KFPM 1310 15	Greenville	1:00-2:00	CMJP 1360 75	Moron
3:50-4:10	WQBC 1360 500	Vicksburg			January 4, 11, 18, 25
	KFIZ 1420 100	Fond du Lac	10:00-1:00	CMBX 1185 250	Havana
	KMAC 1370 100	San Antonio	11:30-11:30	CFQC 840 1000	Saskatoon
4:00-4:20	WDBO 580 250	Oriando	1:00-2:30	XEX 1310 125	Monterrey
	WEBQ 1210 100	Harrisburg	2:30-4:30	CKMO 1410 100	Vancouver
	KFYO 1310 100	Lubbock			Saturday Mornings
4:10-4:30	WNBR 1430 500	Memphis			January 5
	WMPC 1200 100	Lapeer	1:00-2:00	WWAE 1200 100	Hammond
	KONO 1370 100	San Antonio	1:00-3:00	CMJP 1360 75	Moron
4:20-4:40	WQAM 560 1000	Miami	2:10-2:30	WBRB 1210 100	Red Bank
	WHBF 1210 100	Rock Island	2:20-2:40	WWRL 1500 100	Woodside
4:30-4:50	WDAE 1220 1000	Tampa	2:30-2:50	WGNV 1210 100	Chester
	WKBZ 1500 100	Muskegon	2:30-3:30	CHWK 780 100	Chilliwack
	KFJM 1370 100	Grand Forks	2:40-3:00	WMBQ 1500 100	Brooklyn
4:40-5:00	WCBS 1210 100	Springfield	2:50-3:10	WGBB 1210 100	Freeport
4:50-5:10	WCOG 880 500	Meridian	3:00-3:20	WOKO 1430 500	Albany
	WKBV 1500 100	Richmond		WJBC 1200 100	Bloomington
5:00-5:20	WTAQ 1210 100	Springfield		KTRH 1330 1000	Houston
	KGXB 1310 100	Springfield	3:00-4:00	XEFI 1440 250	Chihuahua
	WIOD 1300 1000	Miami	3:10-3:30	WGL 1370 100	Fort Wayne
5:10-5:30	WTOG 1260 1000	Savannah		KFPW 1210 100	Fort Smith
	WHBD 1370 100	Mount Orab	3:20-3:40	WWAE 1200 100	Hammond
	KCMC 1420 100	Texarkana		WTAW 1120 500	College Station
5:20-5:40	WHBU 1210 100	Anderson	3:30-3:50	WLBC 1310 100	Muncie
5:30-5:50	WIBM 1370 100	Jackson		KASA 1210 100	Elk City
	KGFF 1420 100	Shawnee	3:40-4:00	WFAM 1200 100	South Bend
5:40-6:00	WOMT 1210 100	Manitowoc		KWLC 1270 100	Decorah
	KNOW 1500 100	Austin	3:50-4:10	WCAP 1280 500	Asbury Park
			4:00-4:20	WJAY 610 500	Cleveland
1:00-2:30	EAJ7 1095 10000	Madrid		KGCA 1270 100	Decorah
4:30-5:30	10BP 1200 25	Wingham	4:10-4:30	WBNS 1430 500	Columbus
				KFVS 1210 100	Cape Girardeau
3:00-4:00	XEFI 1440 250	Chihuahua		WTNJ 1280 500	Trenton
			4:20-4:40	WWJ 920 1000	Detroit
3:00-5:00	NED 1160 500	Guadalajara		KGHL 780 1000	Billings
			4:30-4:50	KQV 1380 500	Pittsburgh
3:00-4:00	NEFI 1440 250	Chihuahua		KDLR 1210 100	Devils Lake
3:15-3:45	KFH 1300 1000	Wichita	4:40-5:00	WLAP 1420 100	Lexington
			4:50-5:10	WSMK 1380 200	Dayton
12:00-3:00	WCNW 1500 100	Brooklyn		KFXJ 1200 100	Grand Junction
3:00-4:00	CKWX 1010 100	Vancouver	5:00-5:20	WAVE 940 1000	Louisville
				KFDM 960 500	Beaumont
			5:10-5:30	WADC 1320 1000	Akron
				KWTN 1210 100	Watertown
3:00-3:20	WJW 1210 100	Akron	5:15-6:15	WSUI 880 500	Iowa City
	KRMD 1310 100	Shreveport	5:20-5:40	WSPD 1340 1000	Toledo
3:10-3:30	WPAD 1420 100	Paducah		WEW 760 1000	St. Louis
	KOTN 1500 100	Pine Bluff	5:30-5:50	KWEA 1210 100	Shreveport
3:20-3:40	WSEN 1210 100	Columbus	5:50-6:10	KGGM 1230 250	Albuquerque
	KFXR 1310 100	Oklahoma City			January 12
3:30-3:50	WELL 1420 50	Battle Creek	1:00-1:30	WKY 900 100	Oklahoma City
	KGEK 1200 100	Sterling	2:00-3:00	KFJZ 1370 100	Ft. Worth
3:40-4:00	WALR 1210 100	Zanesville	3:00-4:00	KFBK 1310 100	Sacramento
	KFPL 1310 100	Dublin		XEAA 920 200	Mexicali
3:50-4:10	WMBC 1420 100	Detroit			January 19
	WCAT 1200 100	Rapid City	12:01-5:00	KGVO 1200 100	Missoula
4:00-4:20	WDF 1310 100	Flint	12:41-12:49	CKPC 930 100	Brantford
	KGCU 1240 250	Mandan	12:51-12:59	CHNS 930 1000	Halifax
4:10-4:30	WFBE 1200 100	Cincinnati	1:01-1:09	CFCY 630 500	Charlottetown
	KWYO 1370 100	Sheridan	1:11-1:19	CJLS 1310 100	Yarmouth
4:20-4:40	WGAR 1450 500	Cleveland	1:21-1:29	CFPL 736 100	London
	KLPM 1240 250	Minot	1:31-1:39	CKJL 1310 100	Kirkland Lake
4:30-4:40	WCLO 1200 100	Janesville	1:41-1:49	CHNC 1210 100	New Carisus
	KGFQ 1370 100	Okl. City	1:51-1:59	CENB 560 500	Fredericton
4:40-5:00	WCLS 1310 100	Joliet	2:01-2:09	CHRC 580 100	Quebec
	KABC 1420 100	San Antonio	2:11-2:19	CFCH 930 100	North Bay
4:50-5:10	WJBL 1200 100	Deatour	2:21-2:29	CRCS 950 100	Chicoitini
	KFJZ 1370 100	Fort Worth	2:31-2:39	CKGB 1420 100	Timmins
5:00-5:20	WJBK 1500 100	Detroit	2:41-2:49	CKCL 580 100	Toronto
	KWCR 1430 250	Cedar Rapids	2:51-2:59	CKTB 1200 100	St. Catharines
5:10-5:30	WIBU 1210 100	Poynette	3:01-3:09	CHSJ 1120 100	St. John
	KGFI 1500 100	Corpus Christi			January 5, 12, 19, 26
5:20-5:40	WHDJ 1370 100	Calumet	12:30-1:00	KDKA 980 50000	Pittsburgh
	WLHF 1420 100	Kansas City	1:00-3:00	TGX 1400 150	Guatemala
5:30-5:50	WCRW 1210 100	Chicago		CMCW 540 150	Havana
	KGKB 1300 100	Tyler			

Where to Get the DAY'S NEWS

More radio listeners are interested in knowing where and when to tune in the news of the day, than in any other feature. Radio stations are invited to submit the hours of their daily or weekly news flashes or bulletins. A list of the news commentators will be found under "Talks" on page 62. Key: 1 Sunday, 2 Monday, 3 Tuesday, 4 Wednesday, 5 Thursday, 6 Friday, 7 Saturday.

Stations Using Eastern Time

CFRB, Toronto, on 690
8:00-8:10 a.m. (234567)
12:25-12:30 p.m. (234567)
6:30-6:40 p.m. (234567)
11:00-11:15 p.m. (1234567)

CKLW, Windsor, on 1030

8:00-8:05 a.m. (1234567)
10:00-10:05 a.m. (1234567)
12:45-12:50 p.m. (1234567)
5:55-6:00 p.m. (1234567)
7:45-8:00 p.m. (123456)
8:15-8:30 p.m. (246)

WABC, New York, on 860

10:00-10:05 a.m. (234567)
6:55-7:00 p.m. (234567)
10:55-11:00 p.m. (1)

WCAU, Philadelphia, on 1170

10:00-10:05 a.m. (234567)
7:45-8:00 p.m. (234567)
11:00-11:15 p.m. (234567)

WCKY, Cincinnati, on 1490

10:45-10:50 a.m. (1234567)
6:30-6:35 p.m. (1234567)

WEAF, New York, on 660

10:00-10:05 a.m. (234567)
11:00-11:05 a.m. (1)
4:30-4:45 p.m. (1)
6:30-6:35 p.m. (234567)
6:45-7:00 p.m. (7)
11:15-11:20 p.m. (1)

WGY, Schenectady, on 790

6:30 p.m. (1234567)

WHAM, Rochester, on 1150

12:15 p.m. (1234567)
4:15 p.m. (1234567)
10:30 p.m. (1234567)
11:10 p.m. (4)

WJR, Detroit, on 750

11:00-11:15 p.m. (2345)
11:15-11:30 p.m. (6)

WJZ, New York, on 760

10:45-10:50 a.m. (234567)
11:00-11:05 a.m. (1)
6:30-6:35 p.m. (234567)
6:45-7:00 p.m. (23456)

WLW, Cincinnati, on 700

9:55-10:00 a.m. (7)
10:00 a.m. (4)
10:40 a.m. (23456)
11:00-11:05 p.m. (1234567)

WOR, Newark, on 710

8:00-8:05 a.m. (234567)
12:00-12:05 p.m. (234567)
3:00-3:15 p.m. (1)
5:05-5:10 p.m. (234567)
11:00-11:05 p.m. (234567)
11:00-11:15 p.m. (4)

WPG, Atlantic City, on 1100

10:00 a.m. (1234567)

WRVA, Richmond, on 1110

10:00 a.m. (2356)
10:30 a.m. (7)

WTIC, Hartford, on 1040

10:00-10:05 a.m. (234567)
11:00-11:05 a.m. (4)
6:00-6:30 p.m. (234567)
11:30-11:35 p.m. (4)

Stations Using Central Time

CKY, Winnipeg, on 960

1:00-1:05 p.m. (234567)
4:15-4:30 p.m. (36)
5:40-5:45 p.m. (234567)
9:45-10:03 p.m. (1234567)

KFAB, Lincoln, on 770

11:30-11:45 a.m. (234567)
1:15-1:30 p.m. (234567)
3:15-3:30 p.m. (23457)
4:00-4:15 p.m. (234567)

KSTP, St. Paul, on 1460

7:30-7:35 a.m. (234567)
12:45-12:50 p.m. (234567)
6:10-6:15 p.m. (234567)
10:15-10:25 p.m. (1234567)

KTHS, Hot Springs, on 1060

9:00-9:05 a.m. (234567)
10:00 a.m. (4)

KYW, Chicago, on 1020

6:15-6:30 p.m. (1234567)
9:00-9:15 p.m. (1234567)

WCCO, Minneapolis, on 810

8:30 a.m. (234567)
11:45 a.m. (234567)

WENR, Chicago, on 870

5:30-5:45 p.m. (234567)

WFAA, Dallas, on 800

10:00 a.m. (234567)
5:30 p.m. (234567)

WGN, Chicago, on 720

9:00-9:05 p.m. (234567)

WHO, Des Moines, on 1000

12:30 p.m. (7)
12:45 p.m. (23456)
6:30 p.m. (7)
6:45 p.m. (23456)
10:05 p.m. (234567)

WJJD, Chicago, on 1130

6:00-6:30 a.m. (234567)
12:50-1:00 p.m. (234567)

WLAC, Nashville, on 1470

6:30-7:00 a.m. (234567)
5:55-6:00 p.m. (234567)

WLS, Chicago, on 870

7:00 a.m. (234567)
8:30-8:45 a.m. (4)
10:25 a.m. (234567)
11:55 a.m. (234567)

WMAQ, Chicago, on 670

5:30-5:45 p.m. (234567)

WOAI, San Antonio, on 1190

9:00 a.m. (234567)
10:05 a.m. (4)
5:30 p.m. (234567)

WOWO, Ft. Wayne, on 1160

12:15 p.m. (1234567)

Stations Using Mountain Time

KFEL, Denver, on 920

8:00 a.m. (1234567)
12:00 noon (1234567)
4:00 p.m. (1234567)
7:00 p.m. (1234567)

KOB, Albuquerque, on 1180

6:45 p.m. (234567)

KSL, Salt Lake City, on 1130

8:00 a.m. (234567)
4:55 p.m. (234567)

Stations Using Pacific Time

KECA, Los Angeles, on 1430

12:15 p.m. (234567)
6:15 p.m. (234567)

KFI, Los Angeles, on 640

7:30 a.m. (234567)
9:45 a.m. (234567)
12:00 noon (234567)
10:00 p.m. (234567)

KGO, San Francisco, on 790

9:45-9:50 a.m. (5)
9:55-10:00 a.m. (7)
10:00-10:05 a.m. (2346)
10:30-10:35 a.m. (7)
9:30-9:35 p.m. (2)
10:30-10:35 p.m. (3457)
10:55-11:00 p.m. (6)
11:00-11:05 p.m. (1)

KJR, Seattle, on 970

9:30-10:45 a.m. (234567)
6:00-6:15 p.m. (234567)
9:00-9:15 p.m. (1234567)

KNX, Hollywood, on 1050

9:45-10:00 a.m. (234567)
12:00-12:15 p.m. (234567)
6:00-6:15 p.m. (234567)
9:00-9:15 p.m. (234567)

KPO, San Francisco, on 680

9:00-9:15 a.m. (7)
10:15-10:30 a.m. (246)
12:00-12:15 p.m. (34567)
4:45-5:00 p.m. (23456)
10:55-11:00 p.m. (234567)
11:00-11:05 p.m. (1)

WHAT'S ON THE AIR TONIGHT

Fill in calls and dial numbers for those stations through which you best receive the three chains. You can then turn quickly to the one that has the feature you want.

COLUMBIA (C)	
Call	Dial

NATIONAL, Red (R)	
Call	Dial

NATIONAL, Blue (B)	
Call	Dial

TIME: E Eastern; C Central; M Mountain; P Pacific

RADEX is the only publication listing stations in alphabetical order for your convenience.

While these programs are correct at the time of going to press, changes are made from time to time.

MONDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00

C — Buck Rogers; 25th Century
CKLW WAAB WABC WBNS WCAO
WCAU WFBL WHEC WHK WJAS
WJSV WKBW WKRC WOKO

E-6:30 p.m., C-5:30, M-4:30, P-3:30

C — The Shadow; Drama
WAAB WABC WCAU WCAU WDRC
WEAN WFBL WHEC WIBX WJSV
WKBW WOKO WORC

E-6:45 p.m., C-5:45, M-4:45, P-3:45

R — Billy Batchelor
WBEN WCAE WCSI WFAF WEEI
WFBR WFI WGY WJAR WRC
WTAG WTAM WTIC WWJ

B — Lowell Thomas

CFCP CRCT KDKA WBAL WBZ
WBZA WFLA WGAR WHAM WHM
WJAX WJR WJZ WLW WMAL
WRVA WSYR

E-7:00 p.m., C-6:00, M-5:00, P-4:00

C — Myrt and Marge
WABC WADC WBT WCAU WCAU
WDAE WDBO WEAN WFBL WGR
WJAS WJSV WKRC WNAC WOKO
WQAM WSPD WTOC WWVA

B — Amos 'n' Andy

CRCT KDKA WBAL WBZ WBZA
WCKY WENR WFLA WGAR WHAM
WIOD WJR WJZ WLW WMAL
WPTF WRVA

E-7:15 p.m., C-6:15, M-5:15, P-4:15

B — Willard Robison; Mildred Bailey
KDKA KOIL KSO KWCR KWK
WBAL WBZ WCKY WENR
WHAM WJR WJZ WMAL WSYR

E-7:30 p.m., C-6:30, M-5:30, P-4:30

C — The O'Neills
WABC WCAU WCAU WDRC WFBL
WGR WHEC WHI WJAS WJSV
WMAS WOKO WORC WWVA

C — Buck Rogers; 25th Century

KMBC KMOX KRLD KTRH K TSA
WBMM WBT WCCO WDSU WFBM
WGST WHAS WMBG

B — Red Davis; Drama

KDKA KOIL KPRC KSO KSTP
KTBS KWCR KWK WAVE WBAL
WBZ WBZA WEBC WENR WFLA
WHAM WIBA WIOD WIS WJAX
WJDX WJZ WKY WMAL WMC

WPTF WREN WRVA WSB WSM
WSMB WSYR WTAR WWNC

E-7:45 p.m., C-6:45, M-5:45, P-4:45

C — Boake Carter for Philco
CKLW KMBC KMOX WABC WBMM
WBT WCAO WCAU WCCO WGR
WHAS WHK WJAS WJSV WNAC

B — Dangerous Paradise; Drama
KDKA KOIL KSO KTBS KVOO
KWCR KWK WBAL WBZ WBZA
WENR WFAA WGAR WHAM WJR
WJZ WKY WMAL WQAI WREN
WSB WSM WSMB WSYR

R — Uncle Ezra

KYW WHEN WCAE WCSI WDAF
WEAF WEEI WGY WJAR WMAQ
WOW WRC WSAI WTAG WTAM

E-8:00 p.m., C-7:00, M-6:00, P-5:00

C — Bar X Days; Carson Robison
CKLW KDB KERN KFBK KFPY
KFCR KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KSL KYI KWG
WABC WHAM WBNS WCAO WCAU
WCCO WDRC WEAN WFBL WFBM
WGR WHAS WHEC WHK WJAS
WJSV WKRC WNAC WOKO

R — Richard Himber and Orchestra

KPRC KSD KTBS KVOO WBAF
WBEN WCAE WCSI WDAF WFAF
WEEI WFAA WGY WHO WJAR
WKY WMAQ WQAI WOC WOW
WRC WSAI WTAG WTAM WTIC

B — Jan Garber and Orchestra

KDKA KDYL KFI KGO KGW KHIQ
KOA KOIL KONO KSO KWCR
KWK WBAL WBZ WBZA WGAR
WHAM WJR WJZ WKBK WLS WLW
WMAL WREN WSYR

E-8:15 p.m., C-7:15, M-6:15, P-5:15

C — Edwin C. Hill
CKLW KMBC KMOX WABC WADC
WBMM WCAO WCAU WCCO WDRC
WEAN WFBL WFBM WGR WHAS
WHK WJAS WJSV WKRC WNAC
WOKO WSPD

C — Billy Batchelor

KDB KERN KFBK KFPY KFCR
KGB KHJ KMJ KOIN KOL KVI
KWG

E-8:30 p.m., C-7:30, M-6:30, P-5:30

C — Kate Smith's Star Revue
CKLW KDB KERN KFBK KFPY
KFCR KGB KHJ KLZ KMBC KMOX

KMT KOIN KOL KRLD KSL KVI
KWG WABC WADC WBMM WBT
WCAO WCAU WCCO WDOD WDRC
WDSU WEAN WFBL WFBM WGR
WHAS WHK WJAS WJSV WKRC
WMT WNAC WOKO WOWO WQAM
WSPD

R — Voice of Firestone

CFCP CRCT KFYR KPRC KSD
KSTP KTBS KVOO KYW WAVE
WBEN WCAE WCSI WDAF WDAY
WEAF WHEC WEEI WFBR WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKBK WKY WMAQ
WMC WQAI WOW WPTF WRC
WRVA WSB WSM WSMB WSOC
WTAG WTAM WTAR WTIC WTMJ
WWJ WWNC

E-9:00 p.m., C-8:00, M-7:00, P-6:00

C — Chesterfield Program
CKLW KDB KERN KFBK KFH
KFPY KFCR KGB KGMB KHJ
KLRA KLZ KMBC KMJ KMOX
KOH KOIN KOL KOMA KRLD
KSCJ KSL KTRH K TSA ETUL
KVI KWG WABC WACO WADC
WALA WBMM WBIG WBNS WBRK
WBT WCAO WCAU WCCO WDAE
WDBJ WDBO WDNC WDOD WDRC
WDSU WEAN WFBL WFBM WFAA
WGST WHAS WHEC WHK WHI
WIBW WICC WISN WJAS WJSV
WKBH WKBW WKRC WLAC WLWB
WLBZ WMAS WMBD WMBG
WMBR WMT WNAC WNAX WOKO
WORC WOWO WPG WQAM WRC
WFAA WJSV WSPD WTOC

R — A & P Gypsies

KSD WBEN WCAE WCSI WDAF
WEAF WEEI WGY WHO WJAR
WLIT WMAQ WOC WOW WTAG
WTAM WTIC WWJ

B — Sinclair Greater Minstrels

KDKA KFI KPSD KFYR KOA KOIL
KFO KPRC KSO KSTP KTAR KTBS
KTBS KVOO KWK WBAL WBZ
WCAU WDAY WEBC WFAA WFLA
WGAR WHAM WIBA WIOD WIS
WJAR WJDX WJR WJZ WKY WLW
WLV WMC WQAI WPTF WREN
WRVA WSB WSM WSMB WSOC
WTAR WTMJ WWNC

E-9:30 p.m., C-8:30, M-7:30, P-6:30

C — The Big Show
CKAC CKLW KFBK KLZ KMBC
KMOX KSL WABC WADC WBMM

MONDAY (Continued)

WBNS WBT WCAO WCAU WCCO
WDRS WDSU WEAN WFBL WFBM
WHAS WHK WICC WJAS WJSV
WKBW WKRC WNAC WOKO
WOWO WREC WSPD

R — Colgate House Party

KDYL KFI KFYZ KGO KGW KHQ
KOA KOMO KPRC KSD KSTP
KTBS KVOO WBEN WCAE WCHS
WDAF WDAY WFAF WFCB WEET
WFAA WFBW WFLA WGY WHO
WIBA WIOD WIS WJAR WJAX
WJDX WKY WLIT WLW WMAQ
WMC WOA1 WOC WOW WPTF WRC
WRVA WSA1 WSB WSM WSMB
WTAG WTAM WTMJ WWJ WWNC

B — Princess Pat Players

KDKA KOIL KSO KWCR KWK
WBAL WBT WBZA WCKY WENR
WGAR WHAM WJR WJZ WMAL
WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00

C — Wayne King and Orchestra

CKLW KDB KERN KFAB KFBK
KFPY KFCR KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KRLD
KSL KY1KWG WAAB WABC WADC
WBBM WBNS WCAO WCAU WCCO
WDRS WDSU WEAN WFBL WFBM
WHAS WHK WIBW WJAS WJSV
WKBW WKRC WOKO WSPD

R — Contented Program

CFCE CRCT KDYL KFI KFYZ
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP WBEN WCAE WCHS
WDAF WFAF WFCB WEET WFAA
WFBW WGY WHO WJAR WKY
WLIT WLW WMAQ WMC WOA1
WOC WOW WRC WSB WSM WTAG
WTAM WTIC WTMJ WWJ

E-10:30 p.m., C-9:30, M-8:30, P-7:30

C — Talks on Health Problems

CFRB CKLW KFH KLRA KLZ
KMBC KOH KRLD KTRII KTSA
KYOR KWKH WAAB WABC WACO
WADC WALA WBIG WBNS WBRB
WBT WCAU WCCO WDAE WDBJ
WDBO WDNC WDOD WDSU WEAN
WFBL WFBM WFEA WGLC WGR
WHCC WHK WHP WIBW WICO
WISN WJAS WJSV WKRC WLAC
WLBW WLBZ WMAS WMBD
WMBG WMBR WMT WNAX WNOX
WOKO WORC WPG WQAM WREC
WSBT WSFA WSJS WSPD WTOC

E-10:45 p.m., C-9:45, M-8:45, P-7:45

C — Emery Deutsch and Orchestra

CFRB CKLW KFH KHJ KGKO
KLRA KLZ KMBC KOH KRLD
KTRII KTSA KYOR KWKH WAAB
WABC WACO WADC WALA WBIG
WBNS WBRB WBT WCAO WCAU
WDAE WDBJ WDBO WDNC WDOD
WDSU WEAN WFBL WFBM WFEA
WGLC WGR WHCC WHK WHP
WICC WISN WJAS WJSV WKRC
WLAC WLBW WLBZ WMAS WMBD
WMBG WMBR WMT WNAX WNOX
WOKO WORC WPG WQAM WREC
WSBT WSFA WSJS WSPD WTOC

E-11:00 p.m., C-10:00, M-9:00, P-8:00

C — Myrt and Marge

KDB KERN KFAB KFBK KFPY
KFCR KGB KHJ KLRA KLZ KMBC
KMJ KMOX KOIN KOL KOMA
KRLD KSL KTRII KY1 KWG WALA
WBBM WBRB WCCO WDSU WFBM
WGST WHAS WLAC WREC WSFA

B — Amos 'n' Andy

KOIL KPRC KSTP KTHS KWK
WBAP WCKY WDAF WENR WFAA
WJR WKY WMC WOA1 WREN
WBS WSM WTMJ

E-11:15 p.m., C-10:15, M-9:15, P-8:15

C — Glen Gray and Orchestra

KLRA WABC WALA WBRB WBT
WCAO WDAE WDBJ WDBO WDNC
WDOD WDRS WDSU WEAN WFEA
WJSV WLAC WLBZ WMAS WMBG
WMBR WNAC WNOX WORC WPG
WQAM WRRC WSFA WSJS WTOC

C — Edwin C. Hill

KDB KERN KFBK KFPY KFCR
KGB KHJ KLZ KMJ KOIN KOL
KSL KY1 KWG

E-11:30 p.m., C-10:30, M-9:30, P-8:30

R — Voice of Firestone

KDYL KFI KFSD KGHL KGIR
KGU1KGW KHQ KOA KOMO KP0
KTRAR

TUESDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00

C — Buck Rogers, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30

C — Musical Appreciation Program
CKLW KLRA WABC WALA WBIG
WBRB WBT WCAO WDAE WDBJ
WDBO WDNC WDOD WDRS WDSU
WEAN WFEA WGLC WHEC WHK
WHP WJAS WJSV WKBW WKRC
WLAC WLWB WLBZ WMAS WMBG
WMBR WNOX WOKO WORC WQAM
WREC WSFA WSJS WSPD WTOC
WVVA

E-6:45 p.m., C-5:45, M-4:45, P-3:45

R — Billy Batchelor, See Monday

B — Lowell Thomas, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00

C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30

B — Household Musical Memories

KDKA KOIL KSO KWCR KWK
WBAL WBT WBZA WENR WGAR
WHAM WJZ WMAL WREN WSYR

C — Buck Rogers, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45

C — Boake Carter, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00

C — Frank Munn; Gustav Haenschel

CKLW KMBC KMOX WABC WADC
WBBM WCAO WCAU WDRS WEAN
WFBL WFBM WGR WHAS WHK
WJAS WJSV WKRC WNAC WOKO

R — Leo Reisman and Orchestra

KFYZ KPRC KSD KSTP KTHS
KVOO WAVE WBAP WBEN WCAE
WCHS WDAF WDAY WFAF WFCB
WEET WFBW WFI WFLA WGY
WIBA WIOD WIS WJAR WJAX
WJDX WKHF WKY WMAQ WMC
WOC WOW WPTF WRC WSB WSM
WSMB WSOC WTAG WTAM WTAR
WTIC WTMJ WWJ WWNC

B — Eno Crime Clues

KDKA KOIL KSO KWCR KWK
WBAL WBT WBZA WGAR WJR
WJZ WLS WLW WMAL WREN
WSYR

E-8:15 p.m., C-7:15, M-6:15, P-5:15

C — Billy Batchelor, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30

C — Abe Lyman; Vivienne Segal

CFRB CKLW KMBC KMOX WABC
WADC WBBM WCAO WCAU WCCO
WDRS WEAN WFBL WFBM WGR
WHAS WHK WJAS WJSV WKRC
WNAC WOKO WOWO WSPD

R — Wayne King and Orchestra

KPRC KSD KSTP WBEN WCAE
WCHS WDAF WFAF WEET WFAA
WFI WGY WHO WJAR WKBW WKY
WMAQ WMC WOA1 WOC WOW
WRC WSA1 WSB WSM WSMB
WTAG WTAM WTIC WTMJ WWJ

B — Lawrence Tibbett

CFCE CRCT KDKA KOIL KSO
KWCR WBAL WBT WBZA WGAR
WHAM WJR WJZ WLS WMAL
WREN WSYR

E-9:00 p.m., C-8:00, M-7:00, P-6:00

C — Bing Crosby

CKLW KDB KERN KFBK KFPY
KFCR KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KRLD KSL
KTUL KY1 KWG WABC WADC
WBBM WBT WCAO WCAU WCCO
WDRS WDSU WEAN WFBL WFBM
WGST WHAS WHK WJAS WJSV
WKBW WKRC WNAC WOKO
WOWO WREC WSPD

R — Ben Bernie and Orchestra

KFYZ KOA KPRC KSD KSTP
KTBS WBAP WBEN WCAE WCHS
WDAY WFAF WEET WFBW WFI
WGY WJAR WJDX WKY WMAQ
WMC WOA1 WOW WRC WSB WTAG
WTAM WTIC WTMJ WWJ

E-9:30 p.m., C-8:30, M-7:30, P-6:30

C — Isham Jones and Orchestra

CKLW KDB KERN KFAB KFBK
KFH KFPY KFCR KGB KGKO
KHJ KLRA KLZ KMBC KMJ KMOX
KOH KOIN KOL KOMA KRLD
KSCJ KSL KTRII KTSA KTUL KY1
KWG KWKH WABC WACO WADC
WALA WBBM WBNS WDAE WDBJ
WCAO WCAU WCCO WDAE WDBJ
WDBO WDOD WDRS WDSU WEAN
WFBL WFBM WFEA WGST WHAS
WHCC WHK WHP WIBW WHX
WICC WIND WISN WJAS WJSV
WKBW WLBW WKRC WLAC
WLBW WMAS WMBD WMBG
WMBR WMT WNAC WNAX WNOX
WOKO WORC WOWO WPG WQAM
WREC WSFA WSJS WSMK WSPD

R — Ed Wynn; Eddie Duchin

KDYL KFI KFSD KFYZ KGHL
KGR KGO KGW KHQ KOA KOMG
KPRC KSD KSTP KTRII KTBS
KTHS KVOO WAVE WBAP WBEN
WCAE WCHS WDAF WDAY WFAF
WFCB WEET WFBW WFI WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKBW WKY WMAQ
WMC WOA1 WOW WPTF WRC
WRVA WSB WSM WSMB WSOC
WTAG WTAM WTIC WTMJ WWJ
WWNC

E-10:00 p.m., C-9:00, M-8:00, P-7:00

C — Glen Gray; Walter O'Keefe

CKLW KFAB KFH KLRA KMBC
KMOX KOMA KRLD KSCJ KTRII
KTSA KTUL KWKH WABC WACO
WADC WALA WBBM WBIG WBNS
WBRB WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDNC WDOD
WDRS WDSU WEAN WFBL WFBM
WFEA WGST WHEC WHK WHP
WIBW WICC WISN WJAS WJSV
WKBW WKRC WLAC

E-10:00 p.m., C-9:00, M-8:00, P-7:00

C — Glen Gray; Walter O'Keefe

CKLW KFAB KFH KLRA KMBC
KMOX KOMA KRLD KSCJ KTRII
KTSA KTUL KWKH WABC WACO
WADC WALA WBBM WBIG WBNS
WBRB WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDNC WDOD
WDRS WDSU WEAN WFBL WFBM
WFEA WGST WHEC WHK WHP
WIBW WICC WISN WJAS WJSV
WKBW WKRC WLAC

TUESDAY (Continued)

WLBW WLBZ WMAS WMBD
WMBG WMBR WMT WNAC WNAX
WOKO WORC WOWO WPG WQAM
WREX WSFA WSJS WSPD WTOG

R — Palmolive Beauty Box

CFRC CRCT KDYL KFI KFSD
KFYR KGHLL KGBR KGO KGW
KHQ KOA KOMO KFRC KSD KSTP
KTAR KTBS KVVO WAVE WBAF
WBEN WCAE WCSH WDAF WDAY
WEAF WEBC WEEI WFBR WFLA
WGY WHO WIOD WIS WJAR WJAX
WJDX WKBF WKY WLW WMAQ
WMC WOAI WOC WOW WPTF
WRC WRVA WSB WSM WSMB
WSOC WTAG WTAM WTMJ WWJ
WWNC

E-10:30 p.m., C-9:30, M-8:30, P-7:30

C — Fats Waller's Rhythm Club

CFRB CKAC CKLW KDB KFH
KGKO KLRA KLZ KMBC KOH
KOM KRLD KSCJ KTRH KTSK
KVOR KWKH WAAB WABC WACO
WADC WALA WBIG WBNS WBRC
WBT WCAO WCAU WDAE WDBJ
WDBO WDNC WDOO WDRC WDSU
WEAN WFBL WFBM WFEA WGLC
WGR WHC WHK WHI WIBW
WICC WJAS WJSV WKRC WLAC
WLBW WLBZ WMAS WMBD
WMBG WMBR WMT WNAX WNOX
WOKO WORC WPG WQAM WSBT
WSFA WSJS WSPD WTOG

E-11:00 p.m., C-10:00, M-9:00, P-8:00

C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15

C — Joe Haymes and Orchestra
CKAC CKLW KDB KFH KGKO
KLRA KLZ KOH KOA KRLD
KTRH KTSK KVOR KWKH WABC
WACO WADC WALA WBNS WBRC
WBT WCAO WDAE WDBJ WDBO
WDNC WDRC WDSU WEAN WFBL
WFEA WGLC WHC WHK WHP
WIBW WJAS WJSV WKBW WKRC
WLAC WLBW WLBZ WMAS WMBG
WMBR WMT WNAC WNAX WNOX
WOKO WORC WPG WQAM WSBT
WSFA WSJS WSPD WTOG WWVA

E-11:30 p.m., C-10:30, M-9:30, P-8:30

C — Henry Busse and Orchestra

CFRB CKAC CKLW KFH KGKO
KLRA KLZ KMBC KOH KOMA
KRLD KSCJ KTRH KTSK KVOR
KWKH WABC WADC WBBM WBNS
WBRC WBT WCAO WCAU WDAE
WDBJ WDBO WDNC WDOO WDRC
WDSU WEAN WFBL WFEA WHC
WHK WHI WIBW WICC WISN
WJAS WJSV WKBW WKRC WLAC
WLBW WLBZ WMAS WMBD
WMBR WMT WNAC WNAX WNOX
WORC WPG WQAM WSBT WSFA
WSJS WSPD WTOG WWVA

R — Leo Reisman and Orchestra

KDYL KFI KFSD KGIR KGU KGW
KHQ KOA KOMO KPOT KTAR

WEDNESDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00

C — Buck Rogers, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30

C — The Shadow, See Monday

E-6:45 p.m., C-5:45, M-4:45, P-3:45

R — Billy Batchelor, See Monday

B — Lowell Thomas, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00

C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15

B — Willard Robison, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30

C — Buck Rogers, See Monday

B — Red Davis, See Monday

C — The O'Neill's, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45

C — Boake Carter, See Monday

B — Dangerous Paradise, See Monday

R — Uncle Ezra, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00

C — Easy Aces

CFRB CKLW KMBC KMOX WABC
WBBM WCAO WCAU WCCO WFBL
WFBM WGR WHAS WHK WJAS
WKRC WNAC WOKO WOWO WSPD

R — Mary Pickford and Company

CFRC CRCT KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KFRC
KSD KSTP KTAR KTBS KVVO
WAVE WBAF WBEN WCAE WCKY
WCSH WDAF WDAY WEAF WEBC
WEEI WFBR WFLA WGY WHO
WIBA WIOD WIS WJAR WJAX
WJDX WKY WLIT WMAQ WMC
WOAI WOC WOW WPTF WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WTIC WTMJ WWJ
WWNC

B — Eno Crime Clues, See Tuesday

E-8:15 p.m., C-7:15, M-6:15, P-5:15

C — Edwin C. Hill, See Monday

C — Billy Batchelor, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30

C — Everett Marshall; Victor Arden

CKLW KDB KERN KFBK KFPY
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KOMA KRLD
KSL KVI KWG WAHC WADC
WBBM WBT WCAO WCAU WDRC
WDSU WEAN WFBL WFBM WGR
WHAS WJAW WJAS WJSV WKRC
WLAC WNAC WOKO WOWO WSPD

B — Lanny Ross and Orchestra

KDKA KOIL KSO KWCR WBAL
WGAR WHAM WJR WJZ WLS
WMAL WREN WSYR

R — Wayne King, See Tuesday

E-9:00 p.m., C-8:00, M-7:00, P-6:00

R — Fred Allen; Lennie Hayton

KFRC KSD KSTP KTBS KVVO
WBEN WCAE WCSH WDAF WEAF
WEBC WEEI WFBR WGY WIOD
WIS WJAR WJAX WKY WLIT
WLW WMAQ WMC WOAI WOW
WPTF WRC WRVA WSB WSM
WSMB WTAG WTAM WTIC WTMJ
WWJ

B — Warden Lawes; Drama

KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KWCR
KWK WBAL WBZ WBZA WCKY
WGAR WHAM WJR WJZ WKBF
WLS WLW WMAL WREN WSYR
C — Chesterfield Program, See Mon.

E-9:30 p.m., C-8:30, M-7:30, P-6:30

C — George and Gracie

CKLW KDB KERN KFBK KFPY

KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KOMA KRLD
KSL KTRH KTSK KVI KWG WABC
WADC WBBM WBIG WBT WCAO
WCAU WCCO WDRC WDSU WEAN
WEAF WFBM WHK WJAS WJSV
WKBW WKRC WNAC WOKO WORC
WOWO WSPD

B — John Charles Thomas

KDKA KDYL KFI KGO KGW
KHQ KOA KOIL KOMO KSO KWCR
KWK WBAL WBZ WBZA WCKY
WENR WGAR WHAM WJR WJZ
WKBF WLW WMAL WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00

C — Byrd Expedition Broadcast

CKLW KDB KERN KFBK KFBK
KPH KFPY KFRC KFZ KGB KHJ
KLRA KLZ KMBC KMJ KMJ
KOIN KOL KOMA KRLD KSL KTRH
KTSK KVI KWG WABC WACO
WADC WBBM WBNS WBT WCAO
WCAU WCCO WDAE WDRC WDSU
WEAN WFBL WFBM WGST WHAS
WHC WHK WHI WIBW WJAS
WJSV WKBW WKRC WLAC WLW
WMBG WMT WNAC WNAX WOKO
WORC WOWO WQAM WREX

R — Guy Lombardo and Orchestra

KFRC KSD KFBK KTHS KVVO
WAVE WBEN WCAE WCSH WDAF
WEAF WEEI WFAA WFBR WFLA
WGY WHO WIOD WIS WJAR WJAX
WJDX WKBF WKY WLIT WLW
WMAQ WMC WOAI WOC WOW
WPTF WRC WRVA WSB WSM
WSMB WTAG WTAM WTIC WWJ
WWNC

E-10:15 p.m., C-9:15, M-8:15, P-7:15

B — Madame Sylvia, Talks

KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KSTP KWCR
KWK WBAL WBZ WBZA WBBM
WENR WGAR WHAM WJR WJZ
WMAL WREN WRVA WSYR WTMJ

E-10:30 p.m., C-9:30, M-8:30, P-7:30

C — Howard Barlow; Mary Eastman

CFRB CKAC CKLW KDB KFH
KGKO KHJ KLRA KLZ KMBC
KOH KOMA KRLD KSCJ KTRH
KTSK KVOR KWKH WAAB WABC
WACO WADC WALA WBBM WBIG
WBRC WBT WCAO WCAU WDAE
WDBJ WDBO WDNC WDOO WDRC
WDSU WEAN WFBL WFBM WFEA
WGLC WGR WHC WHI WIBW
WICC WISN WJAS WJSV WKRC
WLAC WLBW WMAS WMBD
WMBR WMT WNOX WOKO WORC
WQAM WSBT WSFA WSJS WSPD
WTOG

B — Harry Richman; Jack Denny

KDYL KFYR KOA KOIL KFRC
KSO KSTP KVVO KWCR KWK
WBAL WCKY WDAY WEBC WENR
WFAA WHAM WJR WJZ WKY
WMAL WREN WRVA WSYR WTMJ

R — One Man's Family

KSD WANI WAVE WBEN WCAE
WCSH WEAF WFBR WFLA WGY
WIOD WIS WJAR WJAX WJDX
WKBF WLIT WMAQ WMC WOW
WPTF WRC WSAI WSB WSMB
WSOC WTAG WTAM WTAR WWJ
WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00

C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

WEDNESDAY (Continued)

E-11:15 p.m., C-10:15, M-9:15, P-8:15
C — Leon Belasco and Orchestra
KLRA WABC WALA WBRG WBT
WCAO WCAU WDAE WDBJ WDBO
WDNC WDOD WDRC WDSU WEAN
WFEA WFSW WLAC WLBB WMBR
WNAC WNOX WORC WPG WQAM
WSFA WSJS WTOG

C — Edwin C. Hill, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Ozzie Nelson and Orchestra
KLRA WABC WALA WBRG WBT
WCAO WCAU WDHJ WDBO WDNC
WDOD WDRC WDSU WEAN WFEA
WICC WISN WJSV WLAC WLBB
WMAS WMBR WNAC WNOX WORC
WPG WQAM WSFA WSJS WTOG

C — Voice of Experience
KDB KERN KFBK KFPY KFRG
KGB KHJ KLZ KMJ KOIN KOL
KSL KVI KWG

B — Lanny Ross and Orchestra
KDYL KFI KFSD KGO KGW KHQ
KOA KOMO

E-12:00 p.m., C-11:00, M-10:00, P-9:00
R — Fred Allen; Lennie Hayton
EDYL KFI KGO KGW KHQ KOA
KOMO

THURSDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Buck Rogers, See Monday

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — Billy Batchelor, See Monday
B — Lowell Thomas, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — Myrt and Marge, See Monday
B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15
B — Gems of Melody
KDKA KOIL KSO KTHS KWCR
WBAL WBLB WBZA WENR WHAM
WJZ WMAL WREN WSYR

E-7:30 p.m., C-6:30, M-5:30, P-4:30
C — Buck Rogers, See Monday

R — Al Bernard-Paul Dumont
KSD KYW WBEN WCSH WDAF
WEAF WSAI WHO WJAR WMAQ
WRC WGY WTAG WTAM WJJ

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Boake Carter, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — Rudy Vallee and Orchestra
CFCF CRCT KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAI KVOO WAPI
WBAP WBEN WCAE WCSH WDAF
WEAF WEBC WEEI WFBR WFI
WFLA WGY WHO WIOD WIS
WJAR WJAX WJDX WKY WLW
WMAQ WMC WOAI WOC WOW
WPTF WRC WRVA WSB WSM
WSMB WTAG WTAM WTIC WWJ
WVNC

C — Easy Aces, See Wednesday

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C — Fray and Braggiotti
CKLW KDB KFH KGKO KHJ
KLRA KLZ KMBC KOH KOMA
KRLD KSCJ KTRH KTS KVA
KWKH WABC WACO WADC WALA

WBIG WBNS WBRG WBT WCAO
WCAU WDAE WDBJ WDBO WDNC
WDOD WDRC WDSU WEAN WFBL
WFBM WFEA WGLC WGR WHP
WIBW WICC WISN WJAS WJSV
WKRC WLAC WLBB WLBB WMAS
WMT WNAC WNAX WNOX WOKO
WORC WQAM WSBT WSFA WSJS
WTOG WVVA

C — Billy Batchelor, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — Edwin C. Hill
CKLW KMBC KMOX WABC WADC
WBBM WCAO WCAU WDRC WEAN
WFBL WFBM WGR WHAS WHK
WJAS WJSV WKRC WNAC WOKO
WOWO WSPD

E-9:00 p.m., C-8:00, M-7:00, P-6:30
C — Glen Gray; Walter O'Keefe
CKLW KFAB KFH KLRA KMBC
KMOX KOMA KRLD KSCJ KTRH
KTS KTLU KWKH WABC WACO
WADC WALA WBBM WBIG WBNS
WBRG WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDOD WDRC
WDSU WEAN WFBL WFBM WFEA
WGST WHAS WHEC WHK WHP
WIBW WICC WISN WJAS WJSV
WKBN WKWB WKRC WLAC
WLBB WLBB WMAS WMBD
WMBG WMBR WMT WNAC WNAX
WOKO WORC WOWO WPG WQAM
WREC WSFA WSJS WSPD WTOG

R — Maxwell House Show Boat
KDYL KFI KFSD KGHJ KGIR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAI KTRB WAPI
WAVE WBAP WBEN WCAE WCSH
WDAF WEAF WEEI WFBR WFI
WFLA WGY WHO WIOD WIS WJAR
WJAX WJDX WKBW WKY WLW
WMAQ WMC WOAI WOC WOW
WRC WRVA WSAI WSB WSM
WSMB WTAG WTAM WTIC WTMJ
WWJ WVNC

B — Death Valley Days; Drama
KDKA KOIL KSO KWCR KWK
WLBB WBZ WBZA WGAR WHAM
WHJ WJZ WLS WLW WMAL WREN
WSYR

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Fred Waring's Pennsylvanians

CFRB CKLW CRCM KDB KERN
KFAB KFBK KFH KFPY KFRG
KGB KGKO KHJ KLRA KLZ KMBC
KMI KMOX KOH KOIN KOMA
KRLD KSCJ KSL KTRH KTS
KTLU KVI KFOR KWG WABC
WACO WADC WALA WBBM WBIG
WBNS WBRG WBT WCAO WCAU
WCCO WDAE WDBJ WDBO WDNC
WDOD WDRC WDSU WEAN WFBL
WFBM WFEA WGLC WGST WHAS
WHEC WHK WHP WIBW WICC
WISN WJAS WJSV WKBN WKWB
WKRC WLAC WLBB WLBB WMAS
WMBD WMBG WMBR WMT WNAC
WNAX WNOX WOKO WORC WOWO
WPG WQAM WREC WSFA WSJS
WVNC WTOG

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — 45 Minutes in Hollywood

CFRB CKAC CKLW KFH KLZ
KMOX KOMA KRLD KSL KTRH
KTS KTLU WABC WACO WBBM
WBNS WBT WCAO WCAU WCCO
WDAE WDBO WDRC WDSU WEAN
WFBL WGST WHEC WHK WJAS
WJSV WKBW WKRC WLAC WMBR
WNAC WOKO WQAM WSPD

R — Paul Whiteman's Music Hall
CFCF CRCT KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAI KTRB KTHS
KVOO WAPI WAVE WBAP WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFBR WFI WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLW WMAQ
WMC WOAI WOC WOW WPTF
WRC WRVA WWS WSM WSMB
WTAG WTAM WTIC WTMJ WWJ
WVNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15
C — Little Jack Little
CFRB CKAC CKLW KDB KFH
KGKO KLRA KLZ KOH KOMA
KRLD KSCJ KTRH KTS KVA
KWKH WABC WACO WADC WALA
WBBM WBNS WBRG WBT WCAO
WCCO WDAE WDBJ WDBO WDNC
WDOD WDRC WDSU WEAN WFBL
WFBM WFEA WGLC WHEC WHK
WHP WIBW WISN WJAS WJSV
WKWB WKRC WLAC WLBB WLBB
WMAS WMBD WMT WNAC WNAX
WNOX WOKO WORC WPG WQAM
WSBT WSFA WSJS WSPD WTOG
WVVA

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Glen Gray; Walter O'Keefe
KDB KERN KFBK KFPY KFRG
KGB KHJ KLZ KMJ KOH KOIN
KOL KSL KVI KFOR KWG

FRIDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Al Kavelin's Orchestra
CKLW KFH KGKO KLZ KMBC
KOH KOMA KRLD KSCJ KSL
KTRH KFOR KWKH WAAB WABC
WADC WBBM WCAO WCAU WDNC
WDRC WFBL WHEC WHK WISN
WJAS WJSV WKBW WLAC WLBB
WMT WOKO WORC WSPD

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C — H. V. Kallenborn
CKLW KFH KGKO KLZ KMBC KOH
KOMA KRLD KSCJ KSL KTRH
KFOR KWKH WAAB WABC WBBM
WCAO WCAU WDNC WDRC WFBL
WGLC WHEC WHK WISN WJAS
WJSV WKBW WLAC WLBB WMT
WOKO WORC WSPD

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — Billy Batchelor, See Monday
B — Lowell Thomas, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15
B — Willard Robison, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30
B — Red Davis, See Monday
C — The O'Neill's, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Boake Carter, See Monday

B — Dangerous Paradise, See Monday

R — Uncle Ezra, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — Cities Service Concert
CRCT KDYL KOA KPRC KSD

FRIDAY (Continued)

KSTP KTBS KTBS KV00 KYW
WBAP WBEW WCAE WCSH WDAF
WEAF WEBC WEEL WFAA WFBR
WGY WHO WJAR WKY WLIT
WQAI WOC WOW WRC WRVA
WSAI WTAG WTAM WTIC WWJ

B — Irene Rich; Drama

KDKA KOIL KSO KWCR WAVE
WBAL WBZ WBZA WHAM WJZ
WLS WMAL WMC WREN WSB
WSM WSYR

C — Easy Aces, See Wednesday

E-8:15 p.m., C-7:15, M-6:15, P-5:15

C — Edwin C. Hill, See Monday

C — Billy Batchelor, See Monday

B — Robert Armbruster and Orchestra

KDKA KOIL KSO KWCR WBZ
WBZA WJR WJZ WKBF WLS
WMAL WREN WSYR

E-8:30 p.m., C-7:30, M-6:30, P-5:30

C — True Story Court

CKLW KNBC WABC WADC WBBM
WCAO WCAU WCCO WDRC WEAN
WFBL WGR WHK WJAS WJSV
WKRC WNAC WOKO

B — Al Goodman and Orchestra

KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WGAR WHAM
WJR WJZ WLS WMAL WREN
WSYR

E-9:00 p.m., C-8:00, M-7:00, P-6:00

C — March of Time

CKLW KDB KERN KFBK KFPY
KFRK KGB KHJ KLZ KMJ KMOX
KOLN KOL KRLL KSL KVI KWG
WABC WADC WBBM WCAO WCAU
WCCO WDRC WDSU WEAN WFLB
WFBM WGST WHAS WHK WJAS
WJSV WKBW WKRC WNAC WOKO
WOW WSPD

R — Frank Munn; Abe Lyman

KSD WBEW WCAE WCSH WDAF
WEAF WEEL WFBR WGY WJAR
WLIT WLW WMAQ WOW WRC
WTAG WTAM WWJ

B — Phil Harris and Orchestra

KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KWCR
KWK WAPI WBAL WBZ WBZA
WCKY WFAA WGAR WHAM WJZ
WKY WLS WMAL WQAI WREN
WSB WSM WSMB WSYR

E-9:30 p.m., C-8:30, M-7:30, P-6:30

C — Hollywood Hotel

CFRB CKAC CKLW KDB KERN
KFBK KFBK KFH KFPY KFRK
KGB KGKO KHJ KLI KIZ KMBC
KMJ KMOX KOH KOIN KOL KOMA
KRLL KSCJ KSL KTRH KTSA
KTUL KVI KYCR KWG KWKH
WABC WACO WADC WADL WCAO
WBIG WBNS WBRW WBT WCAO
WCAU WCCO WDAE WDBJ WDBO
WDNC WDDD WDRC WDSU WEAN
WFLB WFBM WFEA WGST WHAS
WHCC WHK WHF WHW WIX
WICC WISN WJAZ WJZ WKBH
WKBW WKRC WLAC WLBW WLIZ
WMAS WMBD WMBG WMBR WMT
WNAC WNAX WNOX WOKO WORC
WOW WPG WQAM WREC WSBT
WSFA WSJS WSPD WTOC

R — Pick and Pat

KSD WBEW WCAE WCSH WDAF
WEAF WFBR WGY WHO WJAR
WLIT WMAQ WOC WOW WRC
WSAI WTAG WTAM WTIC WWJ

B — Armour Program; Phil Baker
KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KPRC KSO
KSTP KTAR KWK WAPT WAVE
WBAL WBZ WBZA WEBC WFNH
WFAA WFLA WJAZ WHAM WIOD
WJAX WJR WJZ WKY WMC WQAI
WREN WRVA WSB WSM WSMB
WTMJ WWNC

E-10:00 p.m., C-9:00, M-8:00, P-7:00

R — First Nighter; Drama

KDYL KFI KGO KGW KHQ KOA
KOMO KPRC KSD KSTP WBEW
WCAE WCSH WDAF WEAF WEBC
WEEL WFAA WFBR WGY WHO
WJAR WKY WLIT WLW WMAQ
WMC WQAI WOC WOW WRC WSB
WSM WSMB WTAG WTAM WTIC
WTMJ WWJ

B — Al Bernard and Paul Dumont

KDKA KOIL KSO KWCR WBAL
WBZ WBZA WENR WGAR WHAM
WJR WJZ WMAL WREN WSYR

E-10:30 p.m., C-9:30, M-8:30, P-7:30

C — O'Flynn's Musical Drama

KLRA KWKH WABC WBIG WBT
WCAO WCAU WCHS WDBJ WDDD
WDRC WDSU WFBL WGR WHEC
WHP WICC WJAS WJSV WLAC
WLBW WMAS WMBG WOKO WORC
WPG WREC WSJS

E-11:00 p.m., C-10:00, M-9:00, P-8:00

C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15

C — Ozzie Nelson and Orchestra

KLRA WABC WALA WBRW WBT
WCAO WDAE WDBO WDNC WDDD
WDRC WDSU WEAN WFEA WHK
WJSV WLAC WLIZ WMAS WNAC
WNOX WORC WPG WQAM WSFA
WSJS WTOC

C — Edwin C. Hill, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30

C — True Story Court

KDB KERN KFBK KFPY KGB
KHJ KLZ KMJ KMOX KOIN KOL
KSL KVI KWG WFRG WHAS
WOWO

SATURDAY

E-6:00 p.m. C-5:00, M-4:00, P-3:00

C — Liliac Time; Arthur Murray

CKLW KMOX WAAB WABC WADC
WBBM WCAU WCCO WDRG WFBL
WGR WHAS WHK WOKO WSPD

E-6:30 p.m., C-5:30, M-4:30, P-3:30

C — Leon Navara's Orchestra

WABC WBIG WBT WCAO WCAU
WDBJ WDNC WDRG WFLB WFLB
WFEA WHEC WHP WICC WJAS
WJSV WKBW WLBZ WMAS WMBG
WNAC WOKO WORC WSJS

E-7:00 p.m., C-6:00, M-5:00, P-4:00

C — Socyland Sketches

WABC WDRG WEAN WGR WICC
WLBZ WMAS WNAC WOKO WORC

E-7:45 p.m., C-6:45, M-5:45, P-4:45

C — Lawry; and The Public

CFRB CKAC CKLW KDB KFH
KGKO KHJ KLRA KLZ KMBC
KOH KOMA KRLL KSCJ KTRH
KTSA KVROR KWKH WABC WACO
WADC WALA WBIG WBNS WBT
WCAO WCAU WCCO WDAE WDBJ
WDBO WDNC WDDD WDSU WEAN

WFBL WFBM WFEA WGLC WGR
WHEC WHP WIBW WICC WISN
WJAS WJSV WKRC WLAC WLWB
WLWZ WMAS WMT WNAC WNAX
WOKO WORC WQAM WSBT WSFA
WSJS WSPD WTOC WWVA

E-8:00 p.m., C-7:00, M-6:00, P-5:00

C — Roxy and His Gang

CFRB CKAC CKLW KDB KERN
KFBK KFPY KFRK KGB KHJ
KLRA KLZ KMBC KMJ KMOX
KOLN KOL KOMA KRLL KSL
KTRH KTSA KVI KWG WABC
WBBM WBRG WCAO WCAU WCCO
WDDD WDRG WDSU WEAN WFBL
WFBM WGR WGST WHAS WHK
WIBW WJAS WJSV WKRC WLAC
WMT WNAC WOKO WORC WREC
WSPD

R — Swift Hour; Sigmund Romberg

KDYL KFI KGO KGW KHQ KOA
KOMO KPRC KSD KSTP KTSB
WBAP WBEW WCAE WCSH WDAF
WEAF WEBC WEEL WFBR WFI
WGY WIBA WJAR WKY WLW
WMAQ WQAI WOW WRC WTAG
WTAM WTIC WTMJ WWJ

E-8:45 p.m., C-7:45, M-6:45, P-5:45

C — Robert Armbruster and Orchestra

CKLW KDB KERN KFBK KFPY
KFRK KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KRLL KSL KVI
KWG KWKH WABC WADC WBBM
WBT WCAO WCAU WCCO WDRG
WEAN WFBL WFBM WGR WHAS
WHK WJAS WJSV WKRC WNAC
WOKO WOWO WSPD

E-9:00 p.m., C-8:00, M-7:00, P-6:00

R — Songs You Love

KFPY KSD KSTP WBEW WCAE
WCSH WDAF WDAY WEAF WEBC
WEEL WFBR WFI WGY WIBA
WJAR WLW WMAQ WOW WRC
WTAG WTAM WTIC WTMJ WWJ

B — Radio City; Frank Black

KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KWCR KWK
WBAL WBZ WBZA WCKY WGR
WHAM WJR WJZ WLS WMAL
WREN WSYR

C — Chesterfield Program, see Monday

E-9:30 p.m., C-8:30, M-7:30, P-6:30

C — Richard Himber and Orchestra

CKLW KFH KMBC KMOX WAAH
WABC WADC WBBM WBNS WHT
WCAO WCAU WCCO WDRG WDRG
WEAN WFBL WFBM WGST WHK
WJAS WJSV WKBW WKRC WOKO
WSBT WSPD

R — Gibson Family Musical

KDYL KFI KFPY KGO KGW KHQ
KOA KOMO KSD KSTP WBEW
WCAE WCSH WDAF WDAY WEAF
WEBC WEEL WFBR WFI WGY
WIBA WJAR WLW WMAQ WOW
WRC WTAG WTAM WTIC WTMJ
WWJ

B — National Barn Dance

KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WGAR WHAM
WJR WJZ WKBF WLS WMAL
WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00

C — Carborundum Band

CKLW KDB KERN KFBK KFPY
KFRK KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KSL KVI KWG

SATURDAY (Continued)

WAAB WAEC WBBM WBT WCAO
WCAU WCCO WHAS WHK WJAS
WKBW WKRC

E-10:30 p.m., C-9:30, M-8:30, P-7:30

C — Saturday Revue

CFRB CKLW KDB KFH KGKO
KIJ KLRA KLZ KMBC KOH KOMA
KRLD KSCJ KTRH KTSa KVOR
KWKH WAAB WABC WACO WADC
WALA WBIG WBT WCAO WCAU
WCCO WDAE WDBJ WDBO WDNC
WDOB WDRC WDSU WEAN WFBL
WFBL WFEA WGLC WGR WHFC
WHP WIBW WICC WISN WJAS
WJSV WKRC WLAC WLWB WLBZ
WMAS WMBD WMT WNOX WNOX
WOKO WORC WPG WQAM WWSB
WSFA WSJS WSPD WTOC WWTW

R — Let's Dance

KFYR KPRC KSD KTBS KTHS
KV00 KYW WAVE WRAP WBEN
WCAE WCSH WDAY WFAE WIBC
WEEI WFAA WFRB WFLA WGY
WIBA WIOD WIS WJAR WJAX
WJDX WKY WLW WMAQ WMC
WOAI WOW WRC WSB WSMB
WTAG WTAM WTAR WTIC WTMJ
WWJ WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00

C — Richard Himber and Orchestra
KDB KERN KFBK KFPY KFCR
KGB KHJ KLZ KMJ KOIN KOL
KSL KVI KWG

B — National Barn Dance

KDYL KFI KGO KGW KHQ KOA
KOMO WAVE WJDX WLS WMC
WSB WSMB

C — Elder Michaux's Congregation

CKAC CKLW KLRA WAAB WABC
WBT WDAE WDBJ WDBO WDOB
WDRS WDSU WFBM WGLC WGR
WHFC WHP WIBW WJAS WJSV
WKRC WLAC WORC WQAM WSBT
WSFA WSJS WTOC

E-11:30 p.m., C-10:30, M-9:30, P-8:30

C — Glen Gray and Orchestra
CKAC CKLW KLRA WAAB WABC
WBT WDAE WDBJ WDBO WDOB
WDRS WDSU WFBM WGLC WGR
WHFC WHP WIBW WJAS WJSV
WKRC WLAC WORC WQAM WSBT
WSFA WSJS WTOC

E-12:00 p.m., C-11:00, M-10:00, P-9:00

C — Joe Haymes and Orchestra

CKAC CKLW KDB KFH KGKO
KLRA KLZ KMBC KOH KOMA
KTRH KTSa KWKH WABC WBSN
WCAU WDBO WDNC WDOB WEAN
WFBL WFBM WGLC WHP WIBW
WICC WJSV WKBW WKRC WLAC
WLWB WNAC WNOX WOKO WPG
WQAM WSBT WTOC

SUNDAY

E-11:30 a.m., C-10:30, M-9:30, P-8:30

C — Salt Lake Tabernacle Choir

CKLW KFH KGKO KLRA KLZ
KOH KRLD KSCJ KSL KTRH
KTSa KWKH WABC WACO WADC
WALA WBBM WBSN WCCO WDAE
WDBO WDOB WDRS WDSU WEAN
WFBL WFBM WFEA WGLC WHK
WHP WIBW WICC WISN WJAS
WJSV WLAC WLWB WLBZ WMAS
WMBD WMBR WMT WNAK WNOX
WNOX WOKO WORC WQAM WREC
WSFA WSPD

R — Major Bowes' Family

KDYL KFYR KOA KPRC KSTP
KTBS KV00 WAPI WCAE WDAF
WDAY WFAE WFBM WFAA WFRB
WFLA WGY WHO WIOD WJAR
WJAX WKY WMAQ WMC WOAI
WOC WRC WRVA WSAI WSMB
WTAG WTAM WWNC

E-12:30 p.m., C-11:30, M-10:30, P-9:30

C — Tito Guizar

CKLW KMBC KMOX WABC WADC
WBBM WCAO WCAU WDRS WEAN
WFBM WFBM WGR WHAS WJAS
WJSV WKH WKRC WMAS WNAC
WOKO WORC WOW WSPD

B — Radio City Symphony

CFCE CRCT KDKA KDYL KFI
KFYR KGO KGW KHQ KOA KOL
KOMO KPRC KSO KV00 WAPI
WBAL WBSZ WBSZ WCKY WDAY
WIBC WGR WHAM WIS WJDX
WJR WJZ WKY WMAL WOAI
WREN WSMB WSYR WWNC

E-1:00 p.m., C-12:00, M-11:00, P-10:00

C — Church of the Air

CFRB CKLW KFH KGKO KIJ
KLRA KLZ KOH KRLD KSCJ KSL
KTRH KTSa KWKH WAAB WABC
WACO WALA WBBM WHIG WBSN
WBT WCAO WCCO WDAE WDBJ
WDBO WDNC WDOB WDRS WDSU
WFBL WGLC WGR WHFC WHP
WIBW WJAS WJSV WKRC WLAC
WLWB WLBZ WMBR WMT WNOX
WOKO WORC WPG WQAM WREC
WSBT WSFA WSJS WSPD WVVW

R — Dale Carnegie, Talks

WBEN WCAE WFAE WEEI WFRB
WFI WGY WJAR WRC WSAI
WTAG WTAM WTIC WWJ

E-1:30 p.m., C-12:30, M-11:30, P-10:30

R — Miss Bab-o's Surprise

WBEN WCAE WCSH WDAF WFAE
WEEI WFRB WFI WGY WJAR
WMAQ WOW WRC WSAI WTAG
WTAM WWJ

C — Little Jack Little

CKLW KMBC KMOX KRLD WABC
WADC WBBM WBT WCAU WCCO
WFBL WFBM WGR WHAS WHK
WJAS WJSV WKRC WOWO

E-1:45 p.m., C-12:45, M-11:45, P-10:45

C — Pat Kennedy; Art Kassel

CFRB CKLW KDB KERN KFBK
KFPY KFCR KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KRLD
KSL KVI KWG WABC WBBM
WBSN WCAO WCAU WCCO WDSU
WFBM WGR WGST WHAS WHK
WJAS WJSV WKRC WMT WOWO
WSPD

E-2:00 p.m., C-1:00, M-12:00, P-11:00

C — Lazy Dan, Minstrel Man

CKLW KDB KERN KFAB KFBK
KFPY KFCR KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KOMA
KRLD KSL KVI KWG WABC WADC
WBBM WBSN WBT WCAO WCAU
WCCO WDBJ WDRS WDSU WEAN
WFBL WFBM WGST WHAS WHFC
WHK WIBW WJAS WJSV WKBW
WKRC WLAC WMBG WMT WNAC
WOWO

B — Anthony Frome; Poet Prince

KDKA KOIL KSO KWCR KWR
WBAL WBSZ WBSZ WENR WGAH
WJR WJZ WMAL WREN WSYR

E-2:15 p.m., C-1:15, M-12:15, P-11:15

B — Becker's Chats About Dogs

KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WGAR WJR
WJZ WLS WMAL WREN WSYR

E-2:30 p.m., C-1:30, M-12:30, P-11:30

C — Hammerstein's Music Hall

CKLW KDB KERN KFAB KFBK
KFPY KFCR KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KOMA
KRLD KSL KVI KWG WABC
WADC WBBM WBT WCAO WCAU
WCCO WDBJ WDRS WDSU WEAN
WFBL WFBM WGST WHAS WHFC
WHK WIBW WJAS WJSV WKBW
WKRC WLAC WMBG WMT WNAC
WOWO

R — Gene Arnold and Commodores

WCAE WCSH WFAE WEEI WFRB
WGY WJAR WMAQ WOW WRC
WSAI WTAG WTAM

B — Lux Program; Dramas

KDKA KDYL KFI KFYR KGO
KGW KHQ KOA KOIL KOMO KPRC
KSO KSTP KTBS KTHS KV00
KWCR KWK WBAL WBZ WBZA
WDAY WIBC WFAA WGAR WHAM
WIBA WJR WJZ WKY WLW WMAL
WOAI WPTF WREN WRVA WSYR
WTAR

E-3:00 p.m., C-2:00, M-1:00, P-12:00

C — N. Y. Philharmonic Symphony

CFRB CKLW KLRA KFH KGKO
KHJ KLRA KLZ KOH KRLD KSCJ
KSL KTRH KTSa KVOR KWKH
WABC WADC WALA WBG WBSN
WBT WCAO WCAU WCCO WDAE
WDBJ WDBO WDNC WDOB WDRS
WDSU WEAN WFBL WFBM WFAE
WGLC WGR WHFC WHK WHP
WIBW WICC WISN WJAS WJSV
WKRC WLAC WLWB WLBZ WMAS
WMBD WMBR WMT WNAC WOKO
WORC WQAM WREC WSBT WSFA
WSJS WSPD WTOC

R — Sally of The Talkies

WAPI WBEN WCAE WCSH WDAF
WFAE WEEI WFRB WGY WHO
WJAR WJDX WLIT WMAQ WMC
WOC WOW WRC WSAI WSB WSM
WSMB WTAG WTAM WWJ

E-3:30 p.m., C-2:30, M-1:30, P-12:30

R — Maybeline Musical Romance

KDYL KFI KGO KGW KHQ KOA
KOMO KSD WBEN WCAE WCSH
WDAF WFAE WEEI WFRB WGY
WHO WJAR WLIT WLW WMAQ
WOC WOW WRC WSAI WTAG
WTIC WWJ

E-4:00 p.m., C-3:00, M-2:00, P-1:00

Rev. Charles E. Coughlin

KSTP KWK WCAO WCAU WDRS
WEAN WFBL WFEA WGAR WGR
WHB WHO WICC WIND WJAS
WJDX WJR WLBZ WLW WMAS
WMC WNBH WOC WOKO WOL
WOR WORC

R — Rhythm Symphony

KDYL KFI KGW KOA KOMO KPO
KFCR KTBS WAPI WAVE WBP
WBEN WCSH WDAF WFAE WIBC
WEEI WFRB WFLA WGY WIBA
WIOD WJAR WJAX WJDX WLIT
WMAQ WMC WOAI WPTF WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WTIC WWJ

B — Sherlock Holmes; Drama

KDKA KOIL KSO KWCR WBAL
WBZ WBZA WENR WJZ WMAL
WREN WSYR

SUNDAY (Continued)

E-4:30 p.m., C-3:30, M-2:30, P-1:30

R — Harry Reser and Orchestra

KYW WBNB WCAE WCSH WFAE
WEEI WFBF WGY WJAR WMAQ
WRC WSAI WTAG WTAM WTIC
WVJ

R — Tony Wons

KDYL KFI KFSD KFYR KGO
KGW KHQ KOA KOMO KSTP KTAR
WAPI WBCB WJDX WMC WSB
WSM WSMB

B — Land of Beginning Again

KDKA KGO KOIL KWCR WBZ
WBZA WENR WHAM WJZ WMAL
WREN WSYR

E-4:45 p.m., C-3:45, M-2:45, P-1:45

R — Dream Drama

WBNB WCAE WCSH WDAF WFAE
WEEI WFBF WFI WGY WJAR
WMAQ WRC WSAI WTAG WTAM
WTIC WVJ

E-5:00 p.m., C-4:00, M-3:00, P-2:00

C — Freddy Martin and Orchestra

CKLW KFII KLRA KLZ KMBC
KMOX KOMA KRLL KSL KTRH
KTSa KTUL WAAB WABC WADC
WBBM WBIG WBZ WBT WCAO
WCAU WCCO WDRC WDSU
WEAN WFBL WFBM WGR WGST
WHAS WHBC WHK WIBW WJAS
WJVS WKBN WKRC WLAC WLWB
WMAS WMBG WOKO WORC WOWO
WREB WSPD

R — Sentinels Serenade

CFCE CRCT KDYL KFI KFYR
KGO KGW KHQ KOA KOMO WAVE
WBNB WCAE WCSH WDAF WFAE
WBCB WEEI WFBF WFI WGY
WHD WIBA WJAR WKBW WMAQ
WMC WOC WOW WRC WSAI WSB
WSM WTAG WTAM WTIC WTMJ
WVJ

B — Roses and Drums

KDKA KOIL KPRC KSO KTHS
KWCR KWK WBAL WHAP WBZ
WBZA WENR WGAR WHAM WJR
WJZ WKY WLW WMAL WOL
WREN WSYR

E-5:30 p.m., C-4:30, M-3:30, P-2:30

C — Frank Crumit; Julia Sanderson

CKLW KFII KMBC KMOX KOMA
KTUL WAAB WABC WADC WBNS
WCAO WCAU WDRC WDSU WEAN
WFBL WFBM WGR WHAS WHEC
WHK WIBX WICC WJVS WMAS
WOKO WORC WSPD WVVA

R — Tony Wons

CFCE CRCT KPRC KTHS KVOO
WHAP WBNB WCAE WCSH WDAF
WFAE WEEI WFI WGY WHO WIS
WJAR WKY WMAQ WOAI WOC
WOW WPTF WRC WRVA WTAG
WTAM WTIC WVJ WJNC

B — American Bosch Explorers

KDKA KDYL KFI KFYR KGO KGW
KHQ KOA KOIL KOMO KSO KSTP
KWCR KWK WAPI WAVE WBAL
WBZ WBZA WCKY WDAY WBCB
WENR WGAR WHAM WIBA WJDX
WJR WJZ WKBW WMAL WMC
WREN WSB WSM WSMB WSYR
WTMJ

E-5:45 p.m., C-4:45, M-3:45, P-2:45

B — Terhune Dog Drama

KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KWCR KWK
WBAL WBZ WBZA WENR WGAR

WHAM WJR WJZ WMAL WREN
WSYR

E-6:00 p.m., C-5:00, M-4:00, P-3:00

C — George Gershwin; Louis Katzman

CFRB CKLW KDB KERN KFBK
KFPY KFRC KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KRLL
KSL KVI KWG WAAB WABC
WBBM WBNS WBT WCAO WCAU
WCCO WDRC WDSU WFBL WFBM
WGST WHAS WHEC WHK WJAS
WJVS WKBW WKRC WOKO

E-6:15 p.m., C-5:15, M-4:15, P-3:15

B — Spartan Triolians

KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WENR WHAM
WJR WJZ WMAL WREN

E-6:30 p.m., C-5:30, M-4:30, P-3:30

C — Smilin' Ed McConnell

CKLW KDB KERN KFAB KFBK
KFPY KFRC KGB KHJ KLZ KMJ
KMOX KOIN KOL KRLL KSL KVI
KWG WAAB WABC WBBM WBNS
WBRW WBT WCAU WCCO WDRC
WDSU WEAN WFBL WFBM WFAE
WGST WHAS WHK WHF WICC
WISN WJAS WJVS WKBW WKRC
WLAC WLWB WLWB WORC WQAM
WREC WVVA

R — Armco Iron Master

KPRC KSD KTBS KVOO WBAF
WBNB WCAE WDAF WFAE WFBF
WGY WHO WKY WLIT WLW
WMAQ WOAI WOC WOW WRC
WTAM WVJ

B — Compana Grand Hotel

KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KSTP KWCR
KWK WBAL WBZ WBZA WBCB
WENR WGAR WHAM WJR WJZ
WMAL WREN WSYR WTMJ

E-6:45 p.m., C-5:45, M-4:45, P-3:45

C — Voice of Experience

CKLW KMBC KMOX WAAB WABC
WBBM WBT WCAO WCAU WCCO
WDRC WEAN WFBL WHAS WHK
WJAS WJVS WKBW WKRC WNAC
WOWO WVVA

E-7:00 p.m., C-6:00, M-5:00, P-4:00

B — Jack Benny; Don Bestor

KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KPRC KSO KSTP
KWCR KWK WBAL WHAP WBZ
WBZA WBCB WGAR WHAM WIBA
WJDX WJR WJZ WKY WLS WLW
WMAL WMC WOAI WREN WSB
WSM WSMB WSYR WTMJ

C — Alexander Woolcott

KDB KERN KFBK KFPY KFRC
KGB KHJ KLZ KMBC KMOX
KOIN KOL KSL KVI KWG WAAC
WBBM WCAO WCAU WCCO WDRC
WFBL WGR WHAS WHK WJAS
WJVS WKRC WNAC WOKO

E-7:30 p.m., C-6:30, M-5:30, P-4:30

B — Joe Penner; Ozzie Nelson

KDKA KDYL KFI KFYR KGO
KGW KHQ KOA KOIL KOMO KPRC
KSO KSTP KTAR KVOO KWCR
KWK WBAL WBZ WBZA WDAY
WBCB WFAA WFLA WGAR WHAM
WIBA WIOD WJAX WJDX WJR
WJZ WKY WLS WMAL WMC WOAI
WPTF WREN WRVA WSB WSM
WSMB WSYR WTMJ

C — California Melodies

CKAC KLRA KLZ KMBC KTRH
WABC WADC WBIG WBNS WCAO

WCCO WDAE WDBJ WDBO WDRC
WDSU WEAN WFBL WFBM WFAE
WHK WHF WICC WLWB WLWB
WMT WNAC WNAX WOKO WORC
WPG WREC WSJS WSPD

E-7:45 p.m., C-6:45, M-5:45, P-4:45

R — Fitch Program; Wendell Hall

CFCE KSD WBNB WCAE WCSH
WFAE WFBF WGY WHO WJAR
WKBW WLIT WMAQ WOC WOW
WRC WSAI WTAG WTAM WTIC
WVJ

C — Mrs. Franklin D. Roosevelt

CKLW KDB KERN KFBK KFPY
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KSL KVI KWG
WABC WADC WBBM WCAO WCAU
WDRC WEAN WFBL WFBM WGR
WHAS WHK WJAS WJVS WNAC
WOKO WSPD WTRC

E-8:00 p.m., C-7:00, M-6:00, P-5:00

C — Hall of Fame

CKLW KDB KERN KFAB KFBK
KFPY KFRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOL
KOMA KRLL KSL KTRH KTSa
KTUL KVI KWG WAAB WABC
WADC WBBM WBRW WBT WCAO
WCAU WCCO WDRC WDSU WEAN
WFBL WFBM WGR WGST WHAS
WHK WJAS WJVS WKRC WOKO
WOWO WSPD

R — Chase and Sanborn Hour

CFCE CRCT KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR KVOO WAPI
WAVE WBNB WBZ WBZA WCAE
WCSH WDAF WDAY WFAE WBCB
WFAA WFLB WFLA WGY WHO
WIOD WIS WJAR WJAX WJDX
WKY WLIT WLW WMAQ WMC
WOAI WOC WOW WPTF WRC
WRVA WSB WSM WSMB WTAG
WTAM WTIC WTMJ WVJ WJNC

B — General Motors Symphony

KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WCKY WGAR
WHAM WJR WJZ WLS WREN
WSYR

E-9:00 p.m., C-8:00, M-7:00, P-6:00

C — Ford Symphony

CFRB CKLW KDB KERN KFBK
KFH KFPY KFRC KGB KGKO
KHJ KLRA KLZ KMBC KMJ
KMOX KOIN KOIN KOL KOMA
KRLL KSCJ KSL KTRH KTSa
KTUL KVI KVOO KWKH WABC
WACO WADC WALA WBBM WBIG
WBNS WBRW WBT WCAO WCAU
WCCO WDAE WDBJ WDBO WDNC
WDDO WDRC WDSU WEAN WFBL
WFBM WFAE WGLC WGR WGST
WHAS WHBC WHK WHF WIBW
WIBX WICC WISN WJAS WJVS
WKBH WKBN WKRC WLAC
WLWB WLWB WMAS WMBR WMT
WNAC WNAX WNOX WOKO WORC
WOWO WQAM WSBT WSPA WSJS
WSPD WTOG WVVA

R — Manhattan Merry-Go-Round

CFCE KDYL KFI KGO KGW KHQ
KOA KOMO KSD KSTP WDAF
WFAE WBCB WFBF WFI WGY
WHO WJAR WMAQ WOC WOW
WRC WSAI WTAG WTAM WTIC
WTMJ WVJ

B — Silken Strings; Charles Previn

KDKA KDYL KFI KGO KGW KHQ
KOA KOAI KOIL KOMO KFRC KSO

SUNDAY (Continued)

KSTP KWCN KWK WBAL WBAP
WBZ WBZA WEBC WGAR WHAM
WIBA WJR WJZ WKY WLS WLW
WMAL WREN WSYR WTMJ

E-9:30 p.m., C-8:30, M-7:30, P-6:30

C — Gulf Headliners

CKLW KLRA KRLD KTRH K TSA
WABC WACO WADC WALA WBIG
WBNS WBRG WBT WCAO WCAU
WDAE WDBJ WDBO WDOJ WDRC
WDSU WEAN WFEA WGST WHAS
WHIC WHK WJAS WJSV WKRC
WLAC WLWZ WMAS WMBG WMBR
WNAC WOKO WORC WOWO WQAM
WREC WSPD WTOC

R — Album of Familiar Music

CFCF CRCT KDYL KFI KGO
KGW KHQ KOA KOMO KPRC KSD
KSTP KVOO WBNB WCAE WCSH
WDAF WFAF WEEI WFAA WFBR
WFI WFLA WGY WHO WIOD WIS
WJAR WJAX WJDX WKY WMAQ
WMC WOAI WOC WOW WPTF
WRC WRVA WSAI WSB WSM
WSMB WTAG WTAM WTMJ WWJ
WWNC

B — Walter Winchell

KDKA KOIL KSO KWCN KWK
WBAL WBZ WBZA WENR WGAR
WHAM WJR WJZ WLW WMAL
WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00

C — Wayne King, See Monday

E-10:30 p.m., C-9:30, M-8:30, P-7:30

C — Dramatic Guild

CKAC CKLW KFH KGKO KHJ
KLRA KLZ KMBC KOH KRLD
KSCJ KTRH K TSA KVOR KWKH
WABC WACO WADC WALA WBIG
WBNS WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDNB WDOJ
WDRC WDSU WEAN WFLB WFBM
WFEA WGLC WGR WHIC WHIP
WIWV WIGC WISN WJAS WJSV
WKRC WLAC WLWV WLWZ WMAS
WMBD WMBR WMT WNAX WNOX
WOKO WOIC WPG WQAM WREC
WST WSFA WSJS WSPD WTOC

R — Pontiac Program; Jane Froman

KDYL KFI KFSD KFYR KGIL
KGIR KGO KGW KHQ KOA KOMO
KPRC KSTP KTAR KTBS KTHS
WAPI WAVE WBAP WBNB WCAE
WCSH WDAF WDAY WFAF WEBC
WEEI WFBR WFI WFLA WGY
WHO WIBA WIOD WIS WJAR
WJAX WJDX WKBF WKY WLW
WMAQ WMC WOAI WOC WOW
WPTF WRC WRVA WSB WSM
WSMB WSOC WTAG WTAM WTIC
WTMJ WWJ WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00

C — Little Jack Little

CFRB CKAC CKLW KFH KGKO
KLRA KLZ KOH KRLD KSCJ
KTRH K TSA KVOR KWKH WABC

WACO WADC WBBM WBNS WBT
WCAO WCAU WCCO WDAE WDBJ
WDBO WDNB WDOJ WDRC WDSU
WEAN WFLB WFEA WGLC WGR
WHIC WHK WHR WIBV WISN
WJAS WJSV WKBG WLAC WLWV
WLWZ WMAS WMBD WMBR WMT
WNAC WNAX WNOX WOKO WORC
WPG WQAM WREC WSBT WSFA
WSJS WSDP WTOC

R — Fitch Program; Wendell Hall

KDYL KFI KFYR KGO KGW KHQ
KOA KOMO KPRC KSTP KTBS
KTHS WAPI WAVE WBAP WDAF
WDAY WEBC WIBA WJDX WKY
WMC WOAI WSB WSM WSMB
WTMJ

E-11:15 p.m., C-10:15, M-9:15, P-8:15

B — Walter Winchell

KDYL KFI KFSD KGHL KGIR
KGW KHQ KOA KOMO KPO KPRC
KTAR KTBS KTHS WAPI WAVE
WBAP WJDX WKY WMC WSB
WSM WSMB

E-11:30 p.m., C-10:30, M-9:30, P-8:30

C — Leon Belasco and Orchestra

CKAC KLRA KLZ KRLD KTRH
K TSA KWKH WABC WBNS WDBJ
WDSU WFLB WFBM WHK WLWV
WMBR WMT WOKO WREC WSPD

B — Jack Benny; Don Bestor

KDYL KFI KFSD KGHL KGIR
KGO KGW KHQ KOA KOMO KPO
KTAR

Frank Parker may be slight in build but he's one of radio's really athletic singers. Perhaps that is why he's always in the pink of condition. His favorite sport is polo and he plays it with a vengeance. But it isn't generally known that Parker is an accomplished boxer, a good gymnast and an expert swimmer. When he can't find time to play a bang-up game with the mallet he invariably finds time between rehearsals to put on the gloves for a fast two or three rounds, then tapers off with a plunge in a midtown Manhattan pool. And incidentally Frank spends more time remembering his lines for that Jack Benny-Jello show Sunday nights than he does rehearsing his songs.

* * *

For the Cantor fans—Eddie will be back on the air starting Sunday, February 3, at 8:00 p. m. EST, this time advertising Pebeco Toothpaste over the CBS. Rubinoff and his violin will also be there.

Helen Pickens, of the Pickens Sisters, is married to an Italian engineer. In Italy family titles are bestowed only upon the eldest son. Therefore, Helen's husband, a younger brother is title-less although his older brother is a count. Jane and Patti Pickens have a lot of fun reminding Helen that her husband is "no count."

* * *

If you think tenors are sissies, don't let Donald Novis hear you say it. Every day he takes a couple of hours in a gym. Furthermore he used to be an amateur boxer on the Pacific Coast. Donald has been married for two years to the former Julietta Burnett, a soprano he met in a Pasadena church choir.

* * *

Jack Benny recently received a letter from China addressed to NBC. Jack was quite pleased to receive fan mail from the Orient and asked a Chinese student to translate it. The letter, he learned, came from his former laundry man asking him for a loan of five dollars.

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

C—Columbia; R—National (Red); B—National (Blue)

*These features are correct at the time of going to press,
but changes are being made daily.*

CONCERTS

Armco Iron Master, 6:30 p.m. Sunday, R
Chase and Sanborn, 8:00 p.m. Sunday, R
Ford Concert, 9:00 p.m. Sunday, C
General Motors Symphony, 8:00 p.m. Sunday, B
N. Y. Philharmonic, 3:00 p.m. Sunday, C
Radio City Music Hall, 12:30 p.m. Sunday, B
Swift Hour, 8:00 p.m. Saturday, R

DANCE BANDS

Victor Arden, 8:30 p.m. Wednesday, C
Robert Armbruster, 9:45 p.m. Sat., C; 8:15 p.m. Fri., B
Leon Belasco, 9:30 p.m. Friday, B; 11:30 p.m. Sunday;
11:15 p.m. Wed., C
Ben Bernie, 9:00 p.m. Tuesday, R
Don Bestor, 7:00 and 11:30 p.m. Sunday, B
Frank Black, 10:30 p.m. Sunday, R; 9:00 p.m. Saturday,
B
Henry Busse, 11:30 p.m. Tuesday, C
Jack Denny, 10:30 p.m. Wednesday, B
Eddie Duchin, 9:30 p.m. Tuesday, R
Jan Garber, 8:00 p.m. Monday, B
Lud Gluskin, 9:30 p.m. Monday, C
Al Goodman, 8:30 p.m. Friday, B; 9:30 p.m. Monday, R
Glen Gray, 10:00 p.m. Tuesday; 9:00 and 11:30 p.m.
Thursday; 11:15 p.m. Mon.; 11:30 p.m. Sat., C
Phil Harris, 9:00 p.m. Friday, B
Joe Haymes, 11:15 p.m. Tues.; 12:00 mid. Sat., C
Lennie Hayton, 9:00 and 12:00 p.m. Wednesday, R
Richard Himber, 8:00 p.m. Monday, R; 9:30 and
11:00 p.m. Saturday, C
Isham Jones, 9:30 p.m. Tuesday, C
Art Kassel, 1:45 p.m. Sunday, C
Louis Katzman, 6:00 p.m. Sunday, C
Al Kavelin, 6:00 p.m. Friday, C
Wayne King, 8:30 p.m. Tues. and Wed., R; 10:00 p.m.
Sunday and Monday, C
Let's Dance, 10:30 p.m. Saturday, R
Little Jack Little, 1:30 and 11:00 p.m. Sunday; 11:15
p.m. Thurs., C
Guy Lombardo, 10:00 p.m. Wednesday, R
Abe Lyman, 9:00 p.m. Friday, R; 8:30 p.m. Tuesday, C
Freddy Martin, 5:00 p.m. Sunday, C
Leon Navara, 6:30 p.m. Saturday, C
Ozzie Nelson, 7:30 p.m. Sunday, B; 11:30 p.m. Wed.;
11:15 p.m. Friday, C
Raymond Palge, 7:30 p.m. Sunday, C
Charles Previn, 9:00 p.m. Sunday, B
Leo Reisman, 8:00 and 11:30 p.m. Tuesday, R
Harry Reser, 4:30 p.m. Sunday, R
Willard Robison, 7:15 p.m. Mon., Wed. and Fri., B
Rudy Vallee, 8:00 p.m. Thursday, R
Fred Waring, 9:30 p.m. Thursday, C
Paul Whitman, 10:00 p.m. Thursday, R

DIALOG

Fred Allen, 9:00 and 12:00 p.m. Wednesday, R
Amos 'n' Andy, 7:00 and 11:00 p.m. daily, except
Sat. and Sun., B
Phil Baker, 9:30 p.m. Friday, B
Jack Benny, 7:00 and 11:30 p.m. Sunday, B
Block and Sully, 9:30 p.m. Monday, C
Easy Aces, 8:00 p.m. Wed., Thurs. and Fri., C
George and Gracie, 9:30 p.m. Wednesday, C
Walter O'Keefe, 10:00 p.m. Tuesday; 9:00 and 11:30
p.m. Thursday, C
Joe Penner, 7:30 p.m. Sunday, B
Pick and Pat, 9:30 p.m. Friday, R
Uncle Ezra, 7:45 p.m. Mon.; Wed., Fri., R
Ed Wynn, 9:30 p.m. Tuesday, R

DRAMA

Bar X Days, 8:00 p.m. Monday, C
Billy Batchelor, 6:45 p.m. daily, except Sat. and Sun.,
R; 8:15 p.m. daily, except Sat. and Sun., C
Dangerous Paradise, 7:45 p.m. Mon., Wed. and Fri., B
Red Davis, 7:30 p.m. Mon., Wed., and Fri., B
Death Valley Days, 9:00 p.m. Thursday, B
Dramatic Guild, 10:30 p.m. Sunday, C
Dream Drama, 4:45 p.m. Sunday, R
Eno Crime Clues, 8:00 p.m. Tues. and Wed., B
First Nighter, 10:00 p.m. Friday, R
Grand Hotel, 6:30 p.m. Sunday, B
Sherlock Holmes, 4:00 p.m. Sunday, B
Warden Lawes, 9:00 p.m. Wednesday, B
Lux Program, 2:30 p.m. Sunday, B
Myrt and Marge, 7:00 and 11:00 p.m. daily, except
Sat. and Sun., C
One Man's Family, 10:30 p.m. Wednesday, R
The O'Neills, 7:30 p.m., Mon., Wed., Fri., C
Mary Pickford, 8:00 p.m. Wednesday, R
Princess Pat Players, 9:30 p.m. Monday, B
Irene Rich, 8:00 p.m. Friday, B
Buck Rogers, 6:00 and 7:30 p.m. Mon. to Thurs.,
inc., C
Roses and Drums, 5:00 p.m. Sunday, B
Sally of the Talkies, 3:00 p.m. Sunday, R
The Shadow, 6:30 p.m. Mon. and Wed., C
Societyland Sketches, 7:00 p.m. Saturday, C
Terhune Dog Dramas, 5:45 p.m. Sunday, B
True Story Court, 8:30 and 11:30 p.m. Friday, C

PIANO

Fray and Braggiotti, 8:15 p.m. Thursday, C
George Gerahwin, 6:00 p.m. Sunday, C
Ohman and Arden, 9:30 p.m. Sunday, R

POPULAR PROGRAMS

A & P Gypsies, 9:00 p.m. Monday, R
Album Familiar Music, 9:30 p.m. Sunday, R
Gene Arnold's Commodores, 2:30 p.m. Sunday, R
Miss Bab-o's Surprise, 1:30 p.m. Sunday, R
Bernard and Dumont, 7:30 p.m. Thurs. R; 10:00 p.m.
Friday, B
Major Bowes, 11:30 a.m. Sunday, R
Byrd Expedition, 10:00 p.m. Wednesday, C
Carborundum Band, 10:00 p.m. Saturday, C
Carefree Carnival, 8:30 p.m. Monday, B
Chesterfield Program, 9:00 p.m. Mon., Wed. and Sat.,
C
Cities Service Concert, 8:00 p.m. Friday, R
Cokate House Party, 9:30 p.m. Monday, R
Coutented Program, 10:00 p.m. Monday, R
Emerson Drug Program, 8:30 p.m. Friday, B
Fleischmann Variety, 8:00 p.m. Thursday, R
Forty-Five Minutes in Hollywood, 10:00 p.m. Thurs-
day, C
Forum of Liberty, 8:30 p.m. Thursday, C
Gems of Melody, 7:15 p.m. Thursday, B
Gibson Family Musical, 9:30 p.m. Saturday, R
Gulf Headliners, 9:30 p.m. Sunday, C
Hall of Fame, 8:00 p.m. Sunday, C
Hammerstein's Music Hall, 2:30 p.m. Sunday, C
Hollywood Hotel, 9:30 p.m. Friday, C
Household Musical, 7:30 p.m. Tuesday, B
Land of Beginning, 4:30 p.m. Sunday, B
Liax Time, 6:00 p.m. Saturday, C
Manhattan Merry-Go-Round, 9:00 p.m. Sunday, R
March of Time, 9:00 p.m. Friday, C
Maxwell House Show Boat, 9:00 p.m. Thursday, R
Maybelline Musical, 3:30 p.m. Sunday, R
Music Appreciation, 6:30 p.m. Tuesday, C

National Barn Dance, 9:30 and 11:00 p.m. Saturday, B
 O'Flynn's Musical Drama, 10:30 p.m. Friday, C
 Palmolive Beauty Box, 10:00 p.m. Tuesday, R
 Pontiac Program, 10:30 p.m. Sunday, R
 Rhythm Symphony, 4:00 p.m. Sunday, R
 Roxy and His Gang, 8:00 p.m. Saturday, C
 Saturday Revue, 10:30 p.m. Saturday, C
 Sentinels Serenade, 5:00 p.m. Sunday, R
 Sinclair Minstrels, 9:00 p.m. Monday, B
 Songs You Love, 9:00 p.m. Saturday, R
 Spartan Triolians, 6:15 p.m. Sunday, B
 Voice of Firestone, 8:30 and 11:30 p.m. Monday, R
 Tony Wons, 4:30 and 5:30 p.m. Sunday, R

RELIGIOUS

Church of the Air, 1:00 p.m. Sunday, C
 Elder Michaux, 11:00 p.m. Saturday, C
 Salt Lake Choir, 11:30 a.m. Sunday, C

SINGERS

Mildred Bailey, 7:15 p.m. Mon., Wed., Fri., B
 Mary Courtland, 8:45 p.m. Sat., C; 8:15 p.m. Friday, B
 Bing Crosby, 9:00 p.m. Tuesday, C
 Mary Eastman, 10:30 p.m. Wednesday, C
 Jane Froman, 10:30 p.m. Sunday, R
 Tito Gulzar, 12:30 p.m. Sunday, C
 Wendell Hall, 7:45 and 11:00 p.m. Sunday, R
 Annette Hanshaw, 10:00 p.m. Tuesday; 9:00 and 11:30
 p.m. Thurs., C
 Pat Kennedy, 1:45 p.m. Sunday, C
 Ralph Kirbery, 2:00 p.m. Sunday, R
 Lazy Dan, 2:00 p.m. Sunday, C
 Elizabeth Lennox, 8:30 p.m. Wednesday, C
 Everett Marshall, 8:30 p.m. Wednesday, C
 Nino Martini, 9:00 p.m. Wednesday, C
 Martha Mears, 9:30 p.m. Friday, B
 James Melton, 9:00 and 12:00 p.m. Wednesday, R
 Frank Munn, 9:30 p.m. Sunday; 9:00 p.m. Friday, R;
 8:00 p.m. Tuesday, C
 Joey Nash, 8:00 p.m. Mon., R; 9:30 and 11:00 p.m.
 Sat., C
 Gertrude Niesen, 9:30 p.m. Monday, C
 Donald Novis, 10:00 p.m. Thursday, C

Frank Parker, 9:00 p.m. Monday, R; 7:00 and 11:30
 p.m. Sunday, B
 Rosa Ponselle, 9:00 p.m. Monday, C
 Virginia Rea, 9:30 p.m. Sunday, R
 Harry Richman, 10:30 p.m. Wednesday, B
 Carson Robison, 8:00 p.m. Monday, C
 Lanny Ross, 9:00 p.m. Thursday, R; 8:30 and 11:30
 p.m. Wednesday, B
 Sanderson-Crumit, 5:30 p.m. Sunday, C
 Vivienne Segal, 9:00 p.m. Friday, R; 8:30 p.m. Tues-
 day, C
 Mary Small, 1:30 p.m. Sunday, R
 Smilin' Ed McConnell, 6:30 p.m. Sunday, C
 Kate Smith, 8:30 p.m. Monday, C
 Grete Stueckgold, 9:00 p.m. Saturday, C
 Gladys Swarthout, 8:30 and 11:30 p.m. Sunday; 10:00
 p.m. Tuesday, R
 Conrad Thibault, 9:00 p.m. Thursday, R
 John Charles Thomas, 9:30 p.m. Wednesday, B
 Lawrence Tibbett, 8:30 p.m. Tuesday, B
 Fats Waller, 10:30 p.m. Tuesday, C

TALKS

American Bosch Explorers, 5:30 p.m. Sunday, B
 Becker's Dog Chats, 2:15 p.m. Sunday, B
 Dale Carnegie, 1:00 p.m. Sunday, R
 Boake Carter, 7:45 p.m. daily, except Sat. and Sun., C
 Rev. Charles E. Coughlin, 4:00 p.m. Sunday
 Health Talks, 10:30 p.m. Monday, C
 Edwin C. Hill, 8:15 and 11:15 p.m. Mon., Wed., Fri.;
 8:30 p.m. Thursday, C
 H. V. Kaltenborn, 6:30 p.m. Friday, C
 John B. Kennedy, 8:30 p.m. Tues; 10:30 p.m. Wed.;
 9:00 p.m. Sat., B
 Lawyer and Public, 7:45 p.m. Saturday, C
 Mrs. Franklin D. Roosevelt, 7:45 p.m. Sunday, C
 Madame Sylvia, 10:15 p.m. Wednesday, B
 Lowell Thomas, 6:45 p.m. daily, except Sat. and
 Sun., B
 Voice of Experience, 6:45 p.m. Sunday; 11:30 p.m.
 Wednesday, C
 Walter Winchell, 9:30 and 11:15 p.m. Sunday, B
 Alexander Woolcott, 7:00 p.m. Sunday, C

KEY TO SYMBOLS

As Shown in the Index by
 Frequencies and Dial Numbers

Frequency is given in kilocycles; wavelength in meters. Night power is shown in watts in third column. Daytime power is shown in parenthesis in fourth column in kilowatts, thus (25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column. Time Zones: A—Atlantic, E—Eastern, C—Central, M—Mountain, P—Pacific, L—Local. A.M. time is shown in light face type.

Second Column Symbols

- a Verifies reception for return postage.
- b Verifies only occasionally.
- c Does not verify.
- d Verification 10c; letter 25c.
- e Sends Ekko stamp for 10c.
- f Sends Ekko stamp for 5c.
- g Sends Ekko stamp for postage.
- h Sends own station stamp for 10c.
- i Sends own station stamp for 5c.
- j Sends own station stamp for postage.
- k Has no stamps.
- m Verifies for 5c.
- z No information available.

Fourth Column Symbols

- B National "Blue" network.

- C Columbia network.
- D Daytime only.
- Dn Daytime with occasional evening hours.
- F Canadian Radio Brdcsig. Commission.
- N National "Red" and "Blue" networks.
- P Has construction permit only.
- R National "Red" network.
- S Sunday only.
- Sy Synchronized.
- X Has permit to increase power.
- Y Has permit to change location.
- Z Has permit to change frequency.

- a-b-c. Small letters show stations using same trans-
mitter.
- 1-2-3. Figures denote stations sharing time.
- No information.

Time on the Air

The time is given in accordance with the "24-hour clock." Noon is always 12:00, but midnight may be either 0:00 or 24:00. To change to time of your own clock, subtract twelve. Thus, 18:00-24:00 is 6:00 p. m. to midnight. 23:00-0:30 is 11:00 p. m. to 12:30 a. m. A signi-
 fies Atlantic Standard Time (AST). E is Eastern Standard Time (EST). C is Central Standard
 Time (CST). P is Pacific Standard Time (PST).

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Thursday's Time on the Air

540 kilocycles 555.2 meters

CJRM ak 1000 F

Moose Jaw, Sask.

M-7-23

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KCYS.
600

550 kilocycles 545.1 meters

CFNB ak 500 F
 KFUF ae 500 2 (1)
 KFYZ ae 1000 N (2.5)
 KOAC ak 1000
 KSD ak 1000 2R (5)
 KTSA ak 1000 C
 TISO ak 250
 WDEV ae 500 D
 WGR ae 1000 C
 WKRC ak 1000 C (2.5)
 WSWA z 500 DP

Fredericton, N. B.
 St. Louis, Mo.
 Bismarck, N. D.
 Corvallis, Ore.
 St. Louis, Mo.
 San Antonio, Texas
 San Jose, C. R.
 Waterbury, Vt.
 Buffalo, N. Y.
 Cincinnati, Ohio
 Staunton, Va.

A-8:10-24
 C-7-8; 12:15-12:40; 15-15:40; 22-23
 C-7-24
 C-9-22
 C-7-14; 15-23:30
 C-7-14; 15-23:30
 E-7:30-10; 11:30-14; 15-19
 E-7:30-24
 E-7-1
 E-.....

DIAL

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560 kilocycles 535.4 meters

KFDM ak 500 (1)
 KLZ ae 1000 C (2.5)
 KTAB ak 1000
 KWTO ak 1000 D
 TGW ak 10000 565
 WFI ae 500 1B (1)
 WIND ak 1000 (2.5)
 WIS ae 1000 N (2.5)
 WLIT ak 500 1B (1)
 WQAM ae 1000 C
 XEAO ak 250 (.15)

Beaumont, Texas
 Denver, Colo.
 San Francisco, Calif.
 Springfield, Mo.
 Guatemala City
 Philadelphia, Pa.
 Gary, Ind.
 Columbia, S. C.
 Philadelphia, Pa.
 Miami, Fla.
 Mexicali, B. C.

C-7:15-14; 16-22
 M-6:45-23:30
 P-7-1
 C-6-17:45
 C-12-14:30; 18:30-19:30; 21-23
 E-6:45-9; 9:45-11; 13-14; 15-16:30; 18-24
 C-7-1
 E-8-24
 E-9-9:45; 11-13; 14-15; 16:30-18
 E-7:30-24
 P-8-22

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570 kilocycles 526.0 meters

KGKO ak 250 C (1)
 KMTR ak 500
 KVI ak 1000
 WKBN ak 500 1C
 WMCB ak 500
 WNAX ak 1000 C (2.5)
 WOSU ak 750 1 (1)
 WSYR ak 250 B
 WWNC ae 1000 N

Wichita Falls, Texas
 Hollywood, Calif.
 Tacoma, Wash.
 Youngstown, Ohio
 New York, N. Y.
 Yankton, S. D.
 Columbus, Ohio
 Syracuse, N. Y.
 Asheville, N. C.

C-7:30-23:30
 P-6:45-23:30
 P-6-24
 E-7:30-9; 11-13; 15-24
 E-7-1
 C-6-24
 E-9-11; 19-23:30
 E-7:30-1
 E-7:30-0:30

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580 kilocycles 516.9 meters

CHRC ak 100 F
 CKCL ae 100 F
 CKUA ak 500
 KMJ ak 500 C
 KSAC ak 500 2 (1)
 WCHS ak 500 (1)
 WDBO ae 250 C (1)
 WIBW ak 1000 C2 (2.5)
 WTAG ae 500 R (1)

Quebec, Que.
 Toronto, Ont.
 Edmonton, Alta.
 Fresno, Calif.
 Manhattan, Kans.
 Charleston, W. Va.
 Orlando, Fla.
 Topeka, Kans.
 Worcester, Mass.

E-9-0:30
 E-8-23:30
 M-13-14:15; 19-21
 P-7-24
 C-9-30-10:30; 12:30-14; 16:30-17:30
 E-7-23
 E-7:30-24
 C-6-9:30; 10:30-12:30; 14-16:30; 17:30-24
 E-8-24

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590 kilocycles 508.2 meters

KHO ak 1000 N (2.5)
 WEEI ak 1000 R
 WKZO ae 1000 D
 WOW ae 1000 R (2.5)
 XEPN ak 5000

Spokane, Wash.
 Boston, Mass.
 Kalamazoo, Mich.
 Omaha, Neb.
 PiedrasNegras, Coah.

P-6:45-24
 E-.....
 E-7:30-18
 C-6:30-0:30
 C-5-24

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600 kilocycles 499.7 meters

CFCF ae 500
 CFEO ak 100 F
 CJOR ak 500
 FON z 250 609
 KFSD ae 1000 N
 WCAC ak 500 2
 WCAO ae 500 C (1)
 WICC ae 250 2 C (1)
 WMT af 1000 C (2.5)
 WREC ak 1000 C (2.5)

Montreal, Que.
 Chatham, Ont.
 Vancouver, B. C.
 St. Pierre, Miquelon
 San Diego, Calif.
 Storrs, Conn.
 Baltimore, Md.
 Bridgeport, Conn.
 Waterloo, Iowa
 Memphis, Tenn.

E-8-24
 E-7:30-9; 11-13:30; 17-23
 P-7:30-23:15
 L-Silent
 P-7-24
 E-12:30-13; 19-20
 E-7-24
 E-7:45-12:30; 13-1
 C-7-24
 C-7-24

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INDEX BY FREQUENCIES AND DIAL NUMBERS

With Thursday's Time on the Air

610 kilocycles 491.5 meters

CMCF ak 250 Havana, Cuba
 KFRC ak 1000 C (2.5) San Francisco, Calif.
 KZRM ak 50000 618.5 Manila, P. I.
 WDAF ak 1000 R (2.5) Kansas City, Mo.
 WIP ae 1000 (1) Philadelphia, Pa.
 WJAY ae 500 D Cleveland, Ohio
 XFX ak 500 Mexico City, D. F.

E--12-14; 18-20; 21-23
 P--7-24
 L--6:30-7:30; 12:15-13:15; 17-22:30
 C--6:30-24
 E--7-15
 E--6:47-15
 C--7-12; 16:30-22:30

620 kilocycles 483.6 meters

KGW ak 1000 N (2.5) Portland, Ore.
 KTAR ae 1000 N Phoenix, Ariz.
 WFLA ae 1000 Na (2.5) Clearwater, Fla.
 WHJB ak 250 P Greensburg, Pa.
 WLBZ ak 500 C (1) Bangor, Maine
 WSUN ae 1000 Na (2.5) St. Petersburg, Fla.
 WTMJ ae 1000 N (5.) Milwaukee, Wis.
 z 250 P Pittsburgh, Pa.

P--7-24
 M--7-23:15
 E--7:30-24
 E--7-sunset
 E--8-24
 E--7:30-24
 C--6:45-0:30
 E--.....

630 kilocycles 475.9 meters

CFCY ae 1000 F Char't'w'n, P.E.I.
 CJGX ak 500 F Yorkton, Sask.
 CKOV ak 100 F Kelowna, B. C.
 CMBY z 250 635 Havana, Cuba
 KFRU ak 500 I Columbia, Mo.
 KGFX ak 200 D Pierre, S. D.
 WGBF ae 500 I Evansville, Ind.
 WMAL ak 250 B (.5) Washington, D. C.
 WOS ak 500 1D Jefferson City, Mo.
 WPRO ak 250 Providence, R. I.

A--12-13:30; 18-23:30
 C--8:30-9:15; 10:30-12; 19:30-21:30
 P--8-10; 11:30-13:30; 17:30-22:30
 E--.....
 C--6-9; 16-sunset; 19-20
 C--9:30-sunset
 C--7-23
 E--6:45-1
 C--9-16
 E--8-1:15

640 kilocycles 468.5 meters

KFI ak 50000 N Los Angeles, Calif.
 WAIU ae 500 B Columbus, Ohio
 WOI ae 500 D Ames, Iowa
 XEOX ak 250 Saltillo, Coah.

P--6:30-24
 E--6:15-17:30
 C--6:45-17
 C--.....

650 kilocycles 461.3 meters

WSM ae 50000 N Nashville, Tenn.

C--6:30-24

660 kilocycles 454.3 meters

WAAW ak 500 D Omaha, Neb.
 WEAF ak 50000 R New York, N. Y.
 XEAL z 1000 Mexico City, D. F.

C--6-18:15
 E--6:45-1
 C--.....

670 kilocycles 447.5 meters

WMAQ ck 50000 N Chicago, Ill.

C--7-1

680 kilocycles 440.9 meters

CMAF ak 1000 Havana, Cuba
 CMCO z 1000 Havana, Cuba
 HJN ak 500 681 Bogota, Colombia
 KFEO ae 2500 D St. Joseph, Mo.
 KPO ak 50000 N San Francisco, Calif.
 RDN z 500 San Salvador, E. S.
 VAS ak 2000 685 Glace Bay, N. S.
 VOWR ck 500 681 St. John's, Nfld.
 WPTF ae 1000 DnN Raleigh, N. C.

E--17:30-23
 E--.....
 L--12-13:30; 19-21
 C--6-17:45
 P--7:30-24
 L--.....
 A--23-23:10; 0-0:10
 L--11-18:30
 E--7:30-sunset

690 kilocycles 434.5 meters

CFRB ae 10000 C Toronto, Ont.
 CJCJ ak 100 F Calgary, Alta.
 NAA ak 1000 Arlington, Va.
 XET ck 500 Monterrey, N. L.

E--8-0:30
 M--.....
 E--10:10-10:15; 11:55-12; 21:55-22
 C--12-14; 16-22

700 kilocycles 428.3 meters

WLW ak 50000 N Cincinnati, Ohio

E--6:30-3

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Thursday's Time on the Air

710 kilocycles 422.3 meters

KMPC	ae	500	Dn	Beverly Hills, Calif.
KPCB	ae	250	.....	Seattle, Wash.
TIFB	z	30	714	San Jose, C. R.
WOR	ak	5000	.....	Newark, N. J.
XEN	ak	1000	711	Mexico City, D. F.

P	-6:45-0:30
P	-5:30-sunset; 22-4
C	-6-10
E	-6:45-0:30
C	-9-12; 13-16; 17-24

720 kilocycles 416.4 meters

CMK	ae	3150	725	Havana, Cuba
KZEG	ak	1000	.....	Manila, P. I.
WGN	ck	50000	.....	Chicago, Ill.

E	-11-13; 19-24
L	-7:30-12:15; 13:15-17
C	-7-1:30

KCYS.
800

730 kilocycles 410.7 meters

CFPL	ak	100	F	London, Ont.
CJCA	ah	500	F	Edmonton, Alta.
CKAC	ak	5000	C	Montreal, Que.

E	-8:15-10:30; 12-13:30; 17-23:30
M	-7:30-14; 15:30-23
E	-7:30-1

DIAL

740 kilocycles 405.2 meters

KMMJ	ae	1000	D	Clay Center, Neb.
KTRB	ak	250	D	Modesto, Calif.
WHEB	ak	250	D	Portsmouth, N. H.
WSB	ah	50000	N	Atlanta, Ga.

C	-5-18
P	.....
E	-8-13:30; 15:15-18
C	-6:55-24

750 kilocycles 399.8 meters

CMCW	dk	150	755	Havana, Cuba
KGU	aj	2500	N	Honolulu, T. H.
WJR	ak	10000	B	Detroit, Mich.
XEAM	z	50	.....	Nuevo Laredo, Tams.

E	-12-18; 1-3
L	-6:30-22:30
E	-6-24
C	.....

760 kilocycles 394.5 meters

KXA	ae	250	(.5)	Seattle, Wash.
WBAL	ae	10000	BSy	Baltimore, Md.
WEW	ae	1000	D	St. Louis, Mo.
WJZ	ck	50000	BSy	New York, N. Y.
XEBC	ak	5000	.....	Agua Caliente, L. C.

P	.....
E	-21-24
C	-8-17
E	-8-1
P	.....

770 kilocycles 389.4 meters

CMRS	ak	150	775	Havana, Cuba
KFAB	ae	5000	CSy	Lincoln, Neb.
WBBM	ae	25000	CSy	Chicago, Ill.

E	-10-12; 15:30-18
C	-6-17:45; 20:30-21:30; 22-24
C	-6:50-2:15

780 kilocycles 384.4 meters

CHWK	ak	100	F	Chilliwack, B. C.
KELW	ae	500	2	Burbank, Calif.
KFDY	ae	1000	D	Brookings, S. D.
KFQD	ck	250	.....	Anchorage, Alaska
KGHL	ak	1000	N (2.5)	Billings, Mont.
KTM	ak	500	2 (1)	Los Angeles, Calif.
WEAN	ae	500	C (2.5)	Providence, R. I.
WMC	aj	1000	N (2.5)	Memphis, Tenn.
WTAR	ae	500	N (1)	Norfolk, Va.
XEYZ	z	10000	.....	Mexico City, D. F.

P	-12-13:30; 18-22:30
P	-10-13; 17-20; 4-6
C	-12:30-14
L	-18-24
M	-8-23
P	-6-10; 13-17; 20-4
E	-7:30-1
C	-7-24
E	-7-24
C	-10-23

790 kilocycles 379.5 meters

CMJK	ak	150	.....	Camaguey, Cuba
KGO	ak	7500	N	San Francisco, Calif.
WGY	ak	50000	R	Schenectady, N. Y.

E	-11:30-12:30; 17-23
P	-7-24
E	-6:45-1

800 kilocycles 374.8 meters

TIGP	z	75	.....	San Jose, C. R.
WBAP	ak	50000	Na	Fort Worth, Tex.
WFAA	ak	50000	Na	Dallas, Tex.
WTBO	ae	250	D	Cumberland, Md.

C
C	-8:30-10:30; 12:30-15; 17:30-18:30; 19-22
C	-6:45-8:30; 10:30-12:30; 15-17:30; 20-23:30
E	-6-19:15

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KGBU ak 500 Ketchikan, Alaska
 KHJ ae 1000 C (2.5) Los Angeles, Calif.
 KSEI ck 250 (5) Pocatello, Idaho
 WBEN ae 1000 R Buffalo, N. Y.
 WXAX aeh 1000 N Jacksonville, Fla.
 WKY ae 1000 N Oklahoma City, Ok.
 WBLI ak 2500 D Stevens Point, Wis.
 WMFI z 500 DP New Haven, Conn.

L
 P-7-1
 M-7:3-23
 E-6:45-24
 E-7-1
 C-6:45-24
 C-8-16
 E-

910 kilocycles 329.6 meters

CJAT ak 250 F Trail, B. C.
 CMHW z 100 Cienfuegos, Cuba
 CRGM ak 5000 F Montreal, Que.
 TIGR z 75 911 San Jose, C. R.

P-8-22:30
 E-11-13; 18:30-21:30
 E-
 C-16:30-22

920 kilocycles 325.9 meters

HHK ae 1000 Port-au-Prince, Haiti
 KPFL ak 500 2 Denver, Colo.
 KOMO ak 1000 N Seattle, Wash.
 KPRC ae 1000 N (5) Houston, Texas
 KVOA ak 500 2 Denver, Colo.
 WAAF ak 500 D Chicago, Ill.
 WBOS ae 500 D Babson Park, Mass.
 WPEN ak 250 (.5) 1 Philadelphia, Pa.
 WRAX ak 250 1 (.5) Philadelphia, Pa.
 WSPA ae 1000 D Spartanburg, S. C.
 WWJ ak 1000 R Detroit, Mich.
 XEAA z 200 Mexicali, B. C.
 XEKL z 500 Leon, Guan.
 XEOK z 2500 Tijuana, B. C.

E-Silent
 M-6-8:30; 10-12:30; 15-16:30; 21-24
 P-7-24
 C-6:30-24
 M-8:30-10; 12:30-15; 16:30-18; 19:30-21; 0-1
 C-6-Sunset
 E-8:30-16:30
 E-7:30-22
 E-7:30-22
 E-5:30-22
 E-7-24
 P-12-14; 18-20
 C-10:30-16; 17-23
 P-
 E-

KCYS.
970
DIAL

930 kilocycles 322.4 meters

CFAC ak 100 F Calgary, Alta.
 CFCH ak 100 F North Bay, Ont.
 CFLC ae 100 F Prescott, Ont.
 CHNS ae 1000 F Halifax, N. S.
 CKPC ae 100 F Brantford, Ont.
 CKPR ak 50 F Fort William, Ont.
 CMJF z 200 Camaguey, Cuba
 CMW ak 1400 Havana, Cuba
 KGBZ ak 1000 2 (2.5) York, Neb.
 KMA ak 1000 2 (2.5) Shenandoah, Iowa
 KROW ak 500 (1) Oakland, Calif.
 WBRC ak 1000 C Birmingham, Ala.
 WDBJ ae 1000 C Roanoke, Va.

M-7:30-22:30
 E-12-13:30; 17:30-23:30
 E-8-10; 12-14; 17-19:30
 A-10:30-13:30; 18-24
 E-7-24
 E-
 E-
 E-
 C-5-6; 7:30-9; 11-12:30; 14-15:30; 17-24
 C-6-7:30; 9-11; 12:30-14; 15:30-17
 P-7-1
 C-7-23
 E-8-24

940 kilocycles 319.0 meters

CMKM z 100 Manzanillo, Cuba
 KOIN ak 1000 C (2.5) Portland, Ore.
 VOAS ak 100 St. John's, Nfld.
 WAAT ae 500 D Jersey City, N. J.
 WAVE ak 1000 N Louisville, Ky.
 WGSB ae 1000 R (2.5) Portland, Maine
 WDAY ae 1000 N (2.5) Fargo, N. D.
 WHA ak 2500 D Madison, Wis.
 XEFO ak 5000 Mexico City, D. F.

E-
 P-6:30-24
 L-11-12:30; 16-17:30
 E-6:30-18
 C-7-24
 E-8-24
 C-7-24
 C-8-Sunset
 C-11-15; 18-24

950 kilocycles 315.6 meters

GMGD ah 500 955 Havana, Cuba
 GMHD dk 250 Caibarien, Cuba
 CRCS ak 100 F Chicoutimi, Que.
 KFWB ak 1000 (2.5) Hollywood, Calif.
 KMCB ae 1000 C (2.5) Kansas City, Mo.
 VONF ak 5000 St. John's, Nfld.
 WRC ae 500 R (1) Washington, D. C.

E-12-23:30
 E-20-21
 E-18; 15-23
 P-7-23:30
 C-6:25-24
 L-12-14; 18-21
 E-6:30-1

960 kilocycles 312.3 meters

CKY ak 15000 F Winnipeg, Man.
 CMJL z 50 Camaguey, Cuba
 XEAW ak 10000 Reynosa, Tams.
 YVIRC ak 5000 Caracas, Venez.

C-8:30-14; 16-24
 E-
 C-17-1
 L-12-13:30; 18-22

970 kilocycles 309.1 meters

CMGF ak 100 971.5 Matanzas, Cuba

E-15-17; 20-22:30

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KJR	z	5000	N	Seattle, Wash.	P-7-30-24
WCFL	ae	1500	B	Chicago, Ill.	C-7-24
WIBG	ak	100	D	Glenside, Pa.	E-6-Sunset
XES	dk	250	.....	Tampico, Tams.	C-9:30-14:30; 17-22

980 kilocycles 303.9 meters

KDKA	bk	50000	B	Pittsburgh, Pa.	E-7-1
XEAE	ak	200	.....	Mexicala, B. C.	P-9-24
XEU	ak	250	.....	Veracruz, Ver.	C-7-9; 10-14; 17-23

990 kilocycles 302.8 meters

WBZ	ak	50000	BSy	Boston, Mass.	E-7-1
WBZA	ak	1000	BSy	Springfield, Mass.	E-7-1
XEAF	z	250	.....	Nogales, Son.	M-.....
XEK	ak	100	.....	Mexico City, D. F.	C-11-16; 18-2

1000 kilocycles 299.8 meters

CMBZ	ak	100	1005	Havana, Cuba	E-7-12; 18-24
KFVD	ak	250	Dn	Los Angeles, Calif.	P-6:30-Sunset; 22-24
WHO	ak	50000	R	Des Moines, Iowa	C-7-24
WORK	ak	1000	.....	York, Pa.	E-8-17:30

1010 kilocycles 296.9 meters

CHML	ae1	50	F	Hamilton, Ont.	E-8-13:30; 16:30-23
CHWC	ak	500	3F	Regina, Sask.	M-7-9; 10-11; 12-13; 15:30-23
CKCD	ak	100	.....	Vancouver, B. C.	P-7:30-23:30
CKAK	ak	500	3F	Regina, Sask.	M-9-10; 11-12; 13-15:30; 17:30-23
CKCO	z	100	.....	Ottawa, Ont.	E-6-23
CKIC	ak	50	.....	Wolfville, N. S.	A-12-13; 18-19
CKWX	ak	100	.....	Vancouver, B. C.	P-7-19:30; 21:30-24
CMJO	ak	50	.....	Ciego de Avila, Cuba	E-9-13; 18-22
KGGF	ak	1000	2	Coffeyville, Kans.	C-7-19:15
KOW	ae	1000	.....	San Jose, Calif.	P-6:30-22
TIGA	z	30	1014	Cartago, C. R.	C-.....
WHN	ae	1000	.....	New York, N. Y.	E-7:30-1
WNAD	ae	500	2 (1)	Norman, Okla.	C-14-16; 19:15-21:15
WNOX	ak	1000	C (2)	Knoxville, Tenn.	C-6:45-24

1020 kilocycles 293.9 meters

KYW	ak	10000	R	Philadelphia, Pa.	C-6:45-1
XEJ	ak	250	.....	Juarez, Chih.	C-10-14; 17-23:30

1030 kilocycles 291.1 meters

CFCN	ak	10000	F	Calgary, Alta.	M-.....
CKLW	ae	5000	C	Windsor, Ont.	E-6:45-1
CMBC	de	150	1035	Havana, Cuba	E-.....
CMHI	ak	150	1037	Santa Clara, Cuba	E-11-12; 20-21
CMKC	z	150	1034	Santiago, Cuba	E-.....
XEB	ak	10000	.....	Mexico City, D. F.	C-9-24

1040 kilocycles 288.3 meters

CMGH	ak	15	.....	Matanzas, Cuba	E-14-15; 17-18; 19:30-20:30
KRLD	ae	10000	C	Dallas, Texas	C-6:30-24
KWJ	ak	500	.....	Portland, Ore.	P-6-Sunset; 21-3:15
WKAR	ak	1000	D	East Lansing, Mich.	E-12-12:30; 14-15
WTIC	ak	50000	R	Hartford, Conn.	E-7-24

1050 kilocycles 285.5 meters

CMJG	z	50	.....	Camaguey, Cuba	E-.....
CRCK	z	1000	F	Quebec, Que.	E-.....
KFBI	ak	5000	Dn	Ablene, Kans.	C-5-19
KNX	ak	50000	.....	Hollywood, Calif.	P-7-23:30

1060 kilocycles 282.8 meters

CMCB	ak	150	.....	Havana, Cuba	E-13-16; 20-24
KTHS	ae	10000	N	Hot Springs, Ark.	C-7-24
WBAL	ae	10000	B	Baltimore, Md.	E-7-21
WJAG	ak	1000	D	Norfolk, Neb.	C-7-Sunset
XEA	ak	125	Guadalajara, Jal.	C-8-30-9; 18-23

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1070 kilocycles

KJBS ak 100 Dn
WCAZ dk 100 D
WDZ ak 100 D
WTAM ck 5000 R

280.2 meters

San Francisco, Calif. P-0-Sunset
Carthage, Ill. C-9:30-14
Tuscola, Ill. C-7:30-15:30
Cleveland, Ohio E-6:30-1

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1080 kilocycles

WBT ae 5000 C
WCBF ak 5000 IDN
WMBI ae 5000 IDN
XEMA z 50

277.6 meters

Charlotte, N. C. E-7:30-24
Waukegan, Ill. C-7:30-10:30; 13:30-14:30; 15:30-24
Chicago, Ill. C-7:7:30; 10:30-13:30; 14:30-15:30
Tampico, Tams. C-.....

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1090 kilocycles

CMGI z 30 1094
KMOX ak 5000 C
WESG ak 1000

275.1 meters

Colon, Cuba E-.....
St. Louis, Mo. C-5:30-24
Elmira, N. Y. E-7:30-18:30

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1100 kilocycles

CMCY ak 500
CMHA z 50 1103
CRCV ak 1000 F
KGDH ak 250 D
KWKH ae 10000 C
TIRCA ak 500
WLWL ae 5000 I
WPG ak 5000 1C
XEFG ak 250 1105

272.6 meters

Havana, Cuba E-.....
Sagua la Grande, C. E-.....
Vancouver, B. C. P-11-15:15; 17:30-23
Stockton, Calif. P-6-Sunset; 0-6
Shreveport, La. C-.....
San Jose, C. R. C-.....
New York, N. Y. E-18-20
Atlantic City, N. J. E-9-18; 20-1
Mexico City, D. F. C-.....

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1110 kilocycles

KSOO ak 1000 Dn (2.5)
WRVA ae 5000 N

270.1 meters

Stour Falls, S. D. C-6:30-18:30
Richmond, Va. E-7-24

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1120 kilocycles

CHLP z 100
CHSJ ae 100 F
CKOC ae 500 F (1)
CMCG z 150 1125
GMHJ ae 40 1125
KFIO ak 100 D
KFSG ag 500 a
KRKD ae 500 a (2.5)
KRSC ck 100 D
WDEL ak 250 (.5)
WISN ae 500 (1)
WTAW ae 500
XENT ck 50000
WMFH z 500 DP

267.7 meters

Montreal, Que. E-9-14; 17-24
St. John, N. B. A-.....
Hamilton, Ont. E-7:45-13:30; 16-24
Havana, Cuba E-9-12; 18-24
Cienfuegos, Cuba E-11-13; 17-21
Spokane, Wash. P-6-17
Los Angeles, Calif. P-6:30-7:15; 19:30-24
Los Angeles, Calif. P-7:45-19:30
Seattle, Wash. P-6-Sunset
Wilmington, Del. E-9-22
Milwaukee, Wis. C-.....
College Station, Tex. C-11:50-12:30
Nuevo Laredo, Tams. C-7:30-24
Boston, Mass. E-.....

15		
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1130 kilocycles

KSL ae 50000 C
WJJD ak 20000 Dn
WVOV ag 1000 D

265.3 meters

Salt Lake City, Utah M-6:30-24
Chicago, Ill. C-6-18:45
New York, N. Y. E-8-18

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1140 kilocycles

KVOO ak 25000 1N
WAPI ae 5000 1N

263.0 meters

Tulsa, Okla. C-6:30-17:45; 21-24
Birmingham, Ala. C-6-21

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1150 kilocycles

CMBG z 225
CMJH ak 50
WHAM ae 50000 B
XEH ak 250
XEZW z 100

260.7 meters

Havana, Cuba E-.....
Ciego de Avila, Cuba E-8-8:30; 10-15; 17:30-22:30
Rochester, N. Y. E-8-1
Monterrey, N. L. C-9-20
Mexico City, D. F. C-.....

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1160 kilocycles

WOWO ae 10000 1C
WVVA ak 5000 1C
XED ck 500

258.5 meters

Fort Wayne, Ind. C-7-18:45; 19:30-22
Wheeling, W. Va. E-6:30-20:30; 23-1
Guadalajara, Jal. C-8-9; 12-15:30; 19-23

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KCYS.
1160
DIAL

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1170 kilocycles	256.3 meters	
CMJE z 50	Camaguey, Cuba E-.....	
COA z 500 1175	Havana, Cuba E-.....	
WCAU ae 5000 C	Philadelphia, Pa. E-8-1	

1180 kilocycles	254.1 meters	
KEX ak 5000 2N	Portland, Ore. P-6:30-17:30; 20-24	
KOB ae 10000 2	Albuquerque, N. M. M-11-21	
VE9EK ak 10 1185	Montmagny, Que. E-Silent	
WDGY ak 1000 D (2.5)	Minneapolis, Minn. C-6:30-20:15	
WINS ae 1000	New York, N. Y. E-7-19:30	
WMAZ ak 1000	Macon, Ga. E-7-19	
XEFA z 500	Mexico City, D. F. C-.....	

1190 kilocycles	252.0 meters	
HIJ z 15 1195	Santo Domingo, D. R. E-.....	
WATR ak 100 D	Waterbury, Conn. E-9-17:15	
WOAI ak 5000 N	San Antonio, Texas C-6:55-13:45; 15-23:30	
WSAZ ak 1000	Huntington, W. Va. E-7-18:45	

1200 kilocycles	249.9 meters	
CHAB ak 100 F	Moose Jaw, Sask. M-7:30-22	
CKTB ak 100 F	St. Catharines, Ont. E-8-13:30; 16-23:30	
CMCJ ak 400	Havana, Cuba E-.....	
KADA ak 100 D	Ada, Okla. C-.....	
KBTM ak 100 D	Jonesboro, Ark. C-6-17	
KFJB ak 100 (.25)	Marshalltown, Iowa C-6-9; 12-15; 18-21	
KFXD ae 100	Nampa, Idaho M-7-21	
KFXJ ak 100 (.25)	Grand Junction, Col. M-9-21	
KGDE ak 100 (.25)	Fergus Falls, Minn. C-7-21	
KGEK ak 100	Sterling, Colo. M-11:30-13:30	
KGJF ae 100	Los Angeles, Calif. P-24 hours	
KGHI ak 100 (.25)	Little Rock, Ark. C-8-13; 15-22	
KGVO ak 100	Missoula, Mont. M-8-22	
KMLB ak 100	Monroe, La. C-.....	
KOOS ae 100 (.25)	Marshfield, Ore. P-8-19	
KSUN ck 100 D	Lowell, Ariz. M-Sunrise-Sunset	
KVOS ak 100	Bellingham, Wash. P-7:30-22:30	
KWG ak 100 C	Stockton, Calif. P-7-24	
WABI ak 100	Bangor, Maine E-9-14; 18-22	
WBZ ak 100	Ponca City, Okla. C-6:30-21:45	
WBHS z 100	Huntsville, Ala. C-.....	
WBNO ck 100 1	New Orleans, La. C-12-17 20-23	
WCAT ak 100 D	Rapid City, S. D. M-12:30-13:30	
WCAZ ak 100	Burlington, Vt. E-12-13	
WCLO ak 100	Janesville, Wis. C-7-20	
WFAM ak 100 8	South Bend, Ind. C-6:30-24	
WFBE ak 100 (.25)	Cincinnati, Ohio E-7-23	
WHBC ak 100 2	Canton, Ohio E-7-9; 12-15; 18-21	
WHBY ak 100 (.25)	Green Bay, Wis. C-7:30-23	
WIBX ak 100 (.3)	Utica, N. Y. E-8-24	
WIL ak 100 (.25)	St. Louis, Mo. C-7-23	
WJBC ak 100 6	Bloomington, Ill. C-9-12:30; 15-19:30	
WJBL ae 100 6	Decatur, Ill. C-6:30-9; 12:30-15; 19:30-22	
WJWB ak 100 1	New Orleans, La. C-8-12; 17-20	
WKBO ak 100 3	Harrisburg, Pa. E-8-11; 15-24	
WKJC ae 100 3 (.25)	Lancaster, Pa. E-11-15; 18-21	
WLVA ak 100 (.25)	Lynchburg, Va. E-7-14; 17-22	
WMPC ak 100	Lapeer, Mich. E-10-14; 15:30-18	
WNBO ae 100 2	Washington, Pa. E-9-12; 15-18; 21-24	
WRBL ak 100	Columbus, Ga. C-7-21	
WWAE ae 100 8	Hammond, Ind. C-7-8:30; 11-13; 16-24	
YV3RC ak 1000	Caracas, Venez. L-11-14; 17-22:30	
10-AK ak 15	Stratford, Ont. E-12-13; 17:30-19	
10-BP ak 25	Wingham, Ont. E-12-13; 19:15-22	
10-BU ak 50	Canora, Sask. C-.....	

1210 kilocycles	247.8 meters	
CHNC ak 100 F	New Carlisle, Que. A-12:30-13:30; 18-24	
CKBI ak 100 F	Prince Albert, Sask. M-.....	
CKCH ak 100 F	Hull, Que. E-11:30-13:15; 17:30-23	
CKMC ak 50	Cobalt, Ont. E-.....	
CMJI ak 150	Ciego de Avila, Cuba E-.....	

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KASA	ck	100	Elk City, Okla.	C-6-8; 9-13:30; 14:30-20
KDLR	ak	100	Devils Lake, N. D.	C-8-14:15; 18-20
KFJL	ak	100	.....	Klamath Falls, Ore.	P-8:30-21
KFOR	ak	100	(.25)C	Lincoln, Neb.	C-7-22:30
KFPW	ak	100	.....	Fort Smith, Ark.	C-6-14; 17:30-21:30
KFVS	ae	100	6 (.25)	Cape Girardeau, Mo.	C-9-12; 16-19:30; 21-24
KFXM	ak	100	9	San Bernardino, Cal.	P-6-24
KGY	ak	100	.....	Olympia, Wash.	P-7-19:30
KIEM	ak	100	.....	Eureka, Calif.	P-7:30-22
KPPC	ak	50	9	Pasadena, Calif.	P-Silent
KWEA	z	100	.....	Shreveport, La.	C-.....
KWTV	z	100	.....	Hilo, Hawaii	L-.....
KWTN	ak	100	.....	Watertown, S. D.	C-7-21
WALR	ak	100	.....	Zanesville, Ohio	E-.....
WBAX	ae	100	1	Wilkes Barre, Pa.	E-7-12; 18-24
WBBL	ak	100	7S	Richmond, Va.	E-Silent
WBRB	ak	100	3	Red Bank, N. J.	E-9-11; 17-19
WBBS	ak	100	2	Springfield, Ill.	C-11-15-15; 18:45-21
WCOL	ak	100	.....	Columbus, Ohio	E-8-23
WCRW	ae	100	4	Chicago, Ill.	C-11-14; 17-19
WEBQ	ae	100	6 (.25)	Harrisburg, Ill.	C-6-9; 12-16; 19:30-21
WEDC	ae	100	4	Chicago, Ill.	C-8:30-10; 15:30-17; 19-20; 22-23; 0-2
WFAS	ak	100	3	White Plains, N. Y.	E-13-15; 21-24
WGBB	ae	100	3	Freeport, N. Y.	E-19-21
WGCM	ae	100	(.25)	Gulfport, Miss.	C-9-13; 19-21
WGNV	ak	100	3	Chester, N. Y.	E-7:30-9; 11-13
WHBF	ak	100	(.25)	Rock Island, Ill.	C-7:30-23
WHBU	ak	100	.....	Anderson, Ind.	C-7-21
WIBU	ak	100	.....	Poynette, Wis.	C-7-19
WJBY	ak	100	.....	Gadsden, Ala.	C-9-21
WJEL	ah	100	D	Hagerstown, Md.	E-7-Sunset
WJFM	z	100	(.25)	Lansing, Mich.	E-.....
WJW	ak	100	.....	Akron, Ohio	E-9-23:30
WKOK	ak	100	1	Sunbury, Pa.	E-12-18
WMBG	ak	100	7C (.25)	Richmond, Va.	E-7-24
WMFG	z	100	P	Hibbing, Minn.	C-.....
WOCL	ae	50	.....	Jamestown, N. Y.	E-10:30-22:30
WOMT	ae	100	.....	Manitowoc, Wis.	C-7-21
WODX	ae	100	D	Thomasville, Ga.	E-8-21
WSBC	ae	100	4	Chicago, Ill.	C-6-8:30; 10-11; 14-15:30; 20-22; 23-24
WSIX	ak	100	.....	Springfield, Tenn.	C-6-14:30; 17-20:30
WSOC	ak	100	N (.25)	Charlotte, N. C.	E-7-24
WTAX	ak	100	2	Springfield, Ill.	C-.....
XEE	z	50	.....	Durango, Colo.	C-.....
XEFJ	ak	100	.....	Monterrey, N. L.	C-11-14; 18-22
XEFV	ak	100	.....	Juarez, Chih.	M-9-15; 17-22
XEMZ	z	30	.....	Tijuana, B. C.	P-.....
XETH	ak	100	Puebla, Pue.	C-8:30-11; 13-15; 19-24

KCYS.

1240

DIAL

1220 kilocycles 245.8 meters

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CMHK	z	50	1225	Cruces, Cuba	E-10-11:30
KFKU	ae	1000	a	Lawrence, Kas.	C-14:30-15; 18-18:30
KTW	ak	1000	S2	Seattle, Wash.	P-20-22
KWSC	ae	1000	2 (2)	Pullman, Wash.	P-6-45-8; 10:30-19:30
WCAD	ak	500	D	Canton, N. Y.	E-12:30-13:30; 15-16
WCDA	ae	1000	R	Pittsburgh, Pa.	E-6-45-1
WCDAE	ae	1000	C (2.5)	Tampa, Fla.	E-8-24
WREN	ak	1000	Ba	Lawrence, Kas.	C-7-24

1230 kilocycles 243.8 meters

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CJOC	ak	100	F	Lethbridge, Alta.	M-8-14; 16:30-22
CMCA	z	150	2	Havana, Cuba	E-12-14; 17-23
KGBX	ak	500	.....	Springfield, Mo.	C-17:45-22
KGGM	ak	250	(.5)	Albuquerque, N. M.	M-6-12; 16-20
KYA	ae	1000	N	San Francisco, Calif.	P-7-24
WFBM	ae	1000	1C	Indianapolis, Ind.	C-6:30-24
WNAC	ak	1000	C (2.5)	Boston, Mass.	E-6:30-1

1240 kilocycles 241.8 meters

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CJCB	ak	1000	F	Sydney, N. S.	A-10-13:30; 18-23:30
CMHB	z	30	1245	San Spiritus, Cuba	E-.....
KGCU	ak	250	1	Mandan, N. D.	M-12-17; 18:45-21
KLPM	ak	250	1	Minot, N. D.	C-7-13; 18-19:45
KTAT	ak	1000	C	Fort Worth, Texas	C-7-24
KTFI	ae	1000	(1.5)	Twin Falls, Idaho	M-5:45-23:15

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<p>WKAQ ae 1000 WXYZ ak 1000 XEAI z 100</p>	<p>San Juan, P. R. E-11:15-13:30; 17:15-21 Detroit, Mich. E-7-24 Mexico City, D. F. C-.....</p>	
1250 kilocycles 239.9 meters		
<p>CMCU ak 150 1255 KFOX ae 1000 WCAL ah 1000 2 (2.5) WDSU ak 1000 C WHBI ak 1000 1 (2.5) WLB ak 1000 2 WNEW ae 1000 1 (2.5) WTCN ak 1000 2</p>	<p>Havana, Cuba E-12-18 Long Beach, Calif. P-6-24 Northfield, Minn. C-9:45-10:15; 20-22 New Orleans, La. C-7-24 Newark, N. J. E-14-17; 20-22 Minneapolis, Minn. C-10:45-12:30; 19-20 Newark, N. J. E-7-4 Minneapolis, Minn. C-6:15-9:45; 22:35-24</p>	
1260 kilocycles 238.0 meters		
<p>CFRN ak 100 KOIL ak 1000 B (2.5) KPAC ak 500 D KRGV ak 500 KUOA ak 1000 D KVOA ak 500 WLBW ae 1000 C WNBX ak 1000 D WTOC ae 1000 C</p>	<p>Edmonton, Alta. M-7:30-13:30; 15-16; 17:30-20 Council Bluffs, Iowa C-6-1 Port Arthur, Texas C-..... Weslaco, Texas C-7-21 Fayetteville, Ark. C-7-13; 16-19 Tucson, Ariz. M-6-9; 12-15; 18-21 Dayton, Ohio E-7-1 Springfield, Vt. E-7:15-Sunset Savannah, Ga. E-7-1</p>	
1270 kilocycles 236.1 meters		
<p>CMCP z 150 HIX ak 1000 KGCA ak 100 2D KOL ae 1000 C (2.5) KVOR ae 1000 C KWLC ak 100 2D WASH ak 500 a WFBR ae 500 R WJDX ae 1000 N (2.5) WOOD ak 500 a XFB ak 1000</p>	<p>Havana, Cuba E-..... Santo Domingo, D.R. E-11:40-20:10 Decorah, Iowa C-8:30-9:45; 10:45-11:30; 12:30-14:30 Seattle, Wash. P-6:45-24 Colorado Spgs., Colo. M-7-23 Decorah, Iowa C-7:30-8:30; 9:45-10:45; 11:30-12:30; 14:30-15:30 Grand Rapids, Mich. E-7-24 Baltimore, Md. E-7-24 Jackson, Miss. C-7-23 Grand Rapids, Mich. E-7-24 Jalapa, Ver. C-8-9; 13-14:30; 20-23:30</p>	
1280 kilocycles 234.2 meters		
<p>CMCO z 150 KFBB ae 1000 (2.5) WCAM ae 500 1 WCAP ae 500 1 WDOD ae 1000 C (2.5) WIBA ae 500 N (1) WORC ak 500 C WRR ak 500 WTNJ ak 500 1</p>	<p>Havana, Cuba E-..... Great Falls, Mont. M-8-22 Camden, N. J. E-14-19 Asbury Park, N. J. E-8:30-13; 20-24 Chattanooga, Tenn. C-7-23:30 Madison, Wis. C-7:30-24 Worcester, Mass. E-8-24 Dallas, Texas C-7-23 Trenton, N. J. E-8-8:30; 13-14; 17-20</p>	
1290 kilocycles 232.4 meters		
<p>KDYL ak 1000 N KLCN z 100 D WEBC ae 1000 N (2.5) WJAS ak 1000 C (2.5) WNBZ z 50 D WNEL ak 500 P</p>	<p>Salt Lake City, Utah M-6:30-1 Blytheville, Ark. C-10:30-16:30 Superior, Wis. C-7-24 Pittsburgh, Pa. E-7:30-0:30 Saranac Lake, N. Y. E-..... San Juan, P. R. A-.....</p>	
1300 kilocycles 230.6 meters		
<p>CMKJ z 20 HIZ z 10 KALE ak 500 3C KFAC ak 1000 KFH ak 1000 C2 KEJR ag 500 3 VOAC z 40 WBRR ae 1000 1 WEVD ak 1000 1 WFAB ae 1000 1 WFBC ak 1000 (1) WHAZ ae 500 1 WIOD ae 1000 N</p>	<p>Guantanamo, Cuba E-..... Santo Domingo, D.R. E-..... Portland, Ore. P-7-10:30; 14:30-17; 18-19; 20-23 Los Angeles, Calif. P-7-24 Wichita, Kans. C-7-24 Portland, Ore. M-10:30-14:30; 17-18 St. John's, Nfld. L-..... Brooklyn, N. Y. E-6:30-7; 10-12; 18-20 New York, N. Y. E-7-9; 15-18; 20-21; 22-23; 0-1 New York, N. Y. E-9-10; 12-15; 21-22 Greenville, S. C. E-7:30-14:30; 17:30-22:30 Troy, N. Y. E-Silent Miami, Fla. E-8-24</p>	
1310 kilocycles 228.9 meters		
<p>CHCK ak 50</p>	<p>Charlottetown, P.E.I. A-12-13:30; 17-21</p>	

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CJKL	z	100	Kirkland Lake, Ont.	E-.....
CJLS	z	100	Yarmouth, N. S.	A-.....
KCKV	ak	50	Quebec, Que.	E-12-14; 18-30-23
KCRJ	ak	100	D	Jerome, Ariz.	M-7:30-9:30; 12-13; 16:30-18
KFBK	ak	100	C	Sacramento, Calif.	P-8-24
KFPL	dkh	100	.....	Dublin, Texas	C-6-15; 18-21
KFPM	ae	15	.....	Greenville, Texas	C-7:45-9; 1-14:45; 18-21
KFXR	ak	100	(.25)	Oklahoma City, Ok.	C-7:30-22
KFYO	ak	100	(.25)	Lubbock, Texas	C-7-21
KGCX	ak	100	(.25)	Wolf Point, Mont.	M-7:30-9; 11:30-15; 18-19
KGEZ	aj	100	.....	KallsPELL, Mont.	M-8-21
KGFW	ak	100	.....	Kearney, Neb.	C-7-13:30; 15:30-21
KIT	ak	100	(.25)	Yakima, Wash.	P-7-22
KIUJ	z	100	P	Santa Fe, N. Mex.	M-.....
KMED	ck	100	(.25)	Medford, Ore.	P-8-20
KRMD	ak	100	.....	Shreveport, La.	C-7-21
KTSM	ak	100	.....	El Paso, Texas	M-6:30-13; 15-22
KXRO	ak	100	.....	Aberdeen, Wash.	P-7:30-22
WAML	ak	100	.....	Laurel, Miss.	C-7-10; 11-14; 16-21:30
WBEO	ae	100	.....	Marquette, Mich.	C-9:30-13:15; 17-19
WBOW	ak	100	.....	Terre Haute, Ind.	C-7-23
WBRE	ak	100	.....	Wilkes Barre, Pa.	E-8-21:45
WGLS	ae	100	.....	Joliet, Ill.	C-Silent
WDAH	ak	100	S	El Paso, Texas	M-Silent
WEBR	ae	160	(.25)	Buffalo, N. Y.	E-7-24
WEXL	ak	50	.....	Royal Oak, Mich.	E-8-4
WFBG	ae	100	3	Altoona, Pa.	E-10:30-16:30; 19:15-22
WFDG	am	100	.....	Flint, Mich.	E-7-24
WGH	ak	100	.....	Newport News, Va.	E-7-13
WHAT	ak	100	4	Philadelphia, Pa.	E-9-11:30; 13-16; 21-24
WJAC	ae	100	3	Johnstown, Pa.	E-9-10:30; 16:30-18:15; 21:15-22:15
WLBC	ak	50	6 (.1)	Muncie, Ind.	C-7-22
WLNH	ak	100	D	Laconia, N. H.	E-8-17
WMBO	ak	100	.....	Auburn, N. Y.	E-9-21
WMIFF	z	100	PD	Plattsburg, N. Y.	E-.....
WNBH	ae	100	(.25)	New Bedford, Mass.	E-7:45-23:20
WOL	ae	100	(.25)	Washington, D. C.	E-7-24
WRAW	ak	100	.....	Reading, Pa.	E-7-13; 16-22
WROL	ak	100	.....	Knoxville, Tenn.	C-7-24
WSAJ	ae	100	.....	Grove City, Pa.	E-19:15-20:15
WSGN	ak	100	(.25)	Birmingham, Ala.	C-6-22
WSJS	ak	100	C	Winston-Salem, N.C.	E-7:45-24
WTSL	ah	100	4	Philadelphia, Pa.	E-7-9; 11:30-13; 16-21
WTJS	ak	100	(.25)	Jackson, Tenn.	C-7-13; 16-22
WTRC	ak	50	6 (.1)	Elkhart, Ind.	C-8-19:30
XECW	z	10	.....	Mexico City, D. F.	C-.....
XEFC	ak	100	.....	Merida, Yuc.	C-11-12
XEFW	ak	250	.....	Tampico, Tams.	C-9-11; 12-14:30; 17-21
XETB	z	125	.....	Torreón, Coah.	C-.....
XEX	ak	125	.....	Monterrey, N. L.	C-8-21

1320 kilocycles 227.1 meters

CMCK	z	100	P	Havana, Cuba	E-.....
COX	z	200	1325	Havana, Cuba	E-.....
KGHF	ak	500	.....	Pueblo, Colo.	M-7-22
KGMB	ak	250	C	Honolulu, T. H.	L-6-22:30
KID	ae	250	(.5)	Idaho Falls, Idaho	M-6-23
KSO	ak	500	H (1)	Des Moines, Iowa	C-5:30-1
WADC	ae	1000	C (2.5)	Akron, Ohio	E-9-24
WSMB	ak	500	N	New Orleans, La.	C-7-24

KCYS.
1340
DIAL

1330 kilocycles 225.4 meters

KGB	ag	1000	C (2.5)	San Diego, Calif.	P-7-1
KMO	ak	250	.....	Tacoma, Wash.	P-6:45-23
KSCJ	aj	1000	1C (2.5)	Sioux City, Iowa	C-7:30-23
KTRH	ak	500	C (2.5)	Houston, Texas	C-6:30-24
WDRG	ae	1000	C (2.5)	Hartford, Conn.	E-8-24
WSAI	ak	1000	R (2.5)	Cincinnati, Ohio	E-7-24
WTAQ	ae	1000	I	Eau Claire, Wis.	C-7-20

1340 kilocycles 223.7 meters

KFPY	ak	1000	C	Spokane, Wash.	P-7-24
KGDY	ak	250	D	Huron, S. D.	C-.....
KGNO	ak	250	Dodge City, Kans.	C-7-20
WCOA	ak	500	C	Pensacola, Fla.	C-9-22

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WFEA	ae	500	C (1)	Manchester, N. H.	E-9-23
WSPD	ae	1000	C (2.5)	Toledo, Ohio	E-7-1
XFD	z	250	Orizaba, Ver.	C-.....

1350 kilocycles 222.1 meters

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CMBD	z	150	Havana, Cuba	E-18-23
KIDO	ak	1000	(2.5)	Boise, Idaho	M-7:30-22
KWK	ak	1000	B (2.5)	St. Louis, Mo.	C-6:30-1
WAWZ	ae	250	1	Zarephath, N. Y.	E-6-9; 17-18:30
WBNX	ae	250	1	New York, N. Y.	E-6-7:30; 9-13

1360 kilocycles 220.4 meters

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CMJP	ak	75	Moron, Cuba	E-10-12; 20-22
CMKF	z	30	1363	Holquin, Cuba	E-.....
KGER	ak	1000	Long Beach, Calif.	P-7-23
KGIR	ak	1000	N (2.5)	Butte, Mont.	M-8-23:15
WCSC	ae	500	(1)	Charleston, S. C.	E-8-15:30; 18-23
WFBL	ak	1000	C (2.5)	Syracuse, N. Y.	E-7-1
WGES	ae	500	1	Chicago, Ill.	C-7-12; 17-20; 23-1
WQBC	ak	500	(1)	Vicksburg, Miss.	C-.....
WSBT	ak	500	1	South Bend, Ind.	C-6:30-24

1370 kilocycles 218.8 meters

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CKCW	z	100	P	Moncton, N. B.	A-.....
CMGE	z	30	1375	Cardenas, Cuba	E-.....
COK	z	25	1375	Havana, Cuba	E-.....
KCRC	ak	100	2 (.25)	Enid, Okla.	C-7-9; 11-14; 17-19:45
KERN	ak	100	.....	Bakersfield, Calif.	P-7-24
KFGO	ak	100	.....	Boone, Iowa	C-.....
KFJM	ak	100	(.25)	Grand Forks, N. D.	C-8-20
KFJZ	ae	100	.....	Fort Worth, Texas	C-7-23
KFRO	z	100	DP	Longview, Texas	C-.....
KGAR	ae	100	(.25)	Tucson, Ariz.	M-7-13; 16-22
KGFG	bk	100	2	Oklahoma City, Ok.	C-9-11; 14-19; 19:45-22
KGFL	ak	100	4	Roswell, N. M.	M-6-9:30; 14-19:30
KGKL	ak	100	(.25)	San Angelo, Texas	C-8-21:30
KIGA	ak	100	4	Clovis, N. M.	M-9:30-14; 19:30-21:30
KLUF	z	100	(.25)	Galveston, Texas	C-.....
KMAC	ak	100	5	San Antonio, Texas	C-7-8:30; 10-11; 12-13:30; 16-18; 19-20; 22-0:30
KONO	ak	100	5	San Antonio, Texas	C-6-7; 8:30-10; 11-12; 13:30-16; 18-19; 20-22
KRE	ak	100	.....	Berkeley, Calif.	P-6-24
KRKO	ak	50	1	Everett, Wash.	P-7:30-12; 16:30-20
KSLM	z	100	D	Salem, Ore.	P-.....
KUJ	ak	100	.....	Walla Walla, Wash.	P-6:30-22
KVL	ak	100	1	Seattle, Wash.	P-6-9; 12-15; 18-21
KWKC	z	100	.....	Kansas City, Mo.	C-.....
KWYO	ak	100	.....	Sheridan, Wyo.	M-7-22:30
WABY	ak	100	.....	Albany, N. Y.	E-7:30-1
WAGF	ak	100	D	Dothan, Ala.	C-8-17:15
WBTM	ak	100	(.25)	Danville, Va.	E-7-14; 17-22
WCBM	ae	100	(.25)	Baltimore, Md.	E-.....
WDAS	ae	100	(.25)	Philadelphia, Pa.	E-9-23
WGL	ak	100	C	Fort Wayne, Ind.	C-8-13; 16:45-24
WHBD	ak	100	.....	Mount Orab, Ohio	E-8-11:30; 12-21
WHBQ	ak	100	.....	Memphis, Tenn.	C-7:55-14; 16-22:30
WHDF	ak	100	(.25)	Calumet, Mich.	E-7-9; 11:30-13:30; 17:30-20:30
WIBM	ak	100	(.25)	Jackson, Mich.	E-7-24
WJTL	ae	100	.....	Atlanta, Ga.	E-.....
WLLH	ak	100	(.25)	Lowell, Mass.	E-12-15; 18-21
WMBR	ak	100	C	Jacksonville, Fla.	E-7-24
WMFD	z	100	DP	Wilmington, N. C.	E-.....
WOC	z	100	C	Davenport, Iowa	C-.....
WPFB	ak	100	.....	Hattiesburg, Miss.	C-7:30-9:30; 11-13; 18-20
WQDM	ae	100	D	St. Albans, Vt.	E-.....
WRAK	ak	100	(.25)	Williamsport, Pa.	E-7:30-20
WRDO	ae	100	.....	Augusta, Maine	E-7:30-13:30; 15-21
WRJN	ak	100	.....	Racine, Wis.	C-8:50-14:30; 16-22:30
WSVS	ak	50	D	Buffalo, N. Y.	E-8:30-10; 14-15
XEFE	z	100	.....	Nuevo Laredo, Tams.	C-.....
XEFZ	ae	100	.....	Mexico City, D. F.	C-.....
XEI	ak	125	Morelia, Mch.	C-14-15:30; 21-22
XEZZ	z	100	San Luis Potost, SLP	C-9:30-15; 17-22

1380 kilocycles 217.3 meters

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CMJC	z	150	1382	Camaguey, Cuba	E-.....
KOH	ak	500	C	Reno, Nev.	P-8-24

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KQV ak 500 2C
 WALA ae 500 C (1)
 WKBH z 1000
 WMFE ae 250 PD
 WSMK ak 200 C

Pittsburgh, Pa.
 Mobile, Ala.
 LaCrosse, Wis.
 New Britain, Conn.
 Dayton, Ohio

E-7-24
 C-8-23
 C-7:30-14; 17-22
 E-.....
 E-7:20; 22-24

1390 kilocycles 215.7 meters

CJRC ck 100
 HIH ak 15 1395 San
 KLRA ae 1000 C (2.5)
 KOY ae 500 (1)
 WHK ae 1000 C (2.5)

Winnipeg, Man.
 San Ped. de Macoris, DR
 Little Rock, Ark.
 Phoenix, Ariz.
 Cleveland, Ohio

C-8-10:15; 11-14; 16-23:30
 E-.....
 C-6:30-23
 M-.....
 E-7:30-24

1400 kilocycles 214.2 meters

CMCR z 150
 KLO ae 500 C
 KTUL ak 250 (.5) C
 TGX ak 150
 WARD ak 500 2
 WBBC ae 500 2 (1)
 WKBF ak 500 N (1)
 WLTH ak 500 2
 WVFW ak 500 2

Havana, Cuba
 Ogden, Utah
 Tulsa, Okla.
 Guatemala City, Gt.
 Brooklyn, N. Y.
 Brooklyn, N. Y.
 Indianapolis, Ind.
 Brooklyn, N. Y.
 Brooklyn, N. Y.

E-12-13; 16-18; 20-21
 M-7-24
 C-6:30-24
 C-.....
 E-13:30-15:45; 21-22:30
 E-11:30-13:30; 19:30-21
 C-6:30-24
 E-11:30-13:30; 18-19:30
 E-15:45-18; 22:30-24

1410 kilocycles 212.6 meters

CKFC ak 50 5
 CKMO ag 100 5
 KGRS ae 1000 1 (2.5)
 WAAB ak 500 C
 WBCM ae 500
 WDAG ae 1000 1 (2.5)
 WHBL ae 500 4
 WHIS ak 250 2
 WRBX ae 250 2 (.5)
 WROK ak 500 4
 WSFA ak 500 C (1)

Vancouver, B. C.
 Vancouver, B. C.
 Amarillo, Texas
 Boston, Mass.
 Bay City, Mich.
 Amarillo, Texas
 Sheboygan, Wis.
 Bluefield, W. Va.
 Roanoke, Va.
 Rockford, Ill.
 Montgomery, Ala.

P-15-16:30
 P-.....
 C-6-8; 10-12:30; 15-16:30; 18-19:30; 21-22
 E-8-23
 E-8-24
 C-8-10; 12:30-15; 16:30-18; 19:30-24
 C-6-10; 13-16:30; 18-19:30
 E-7-9; 12-15; 18-20
 E-9-12; 15-18; 20-23
 C-10-13; 16:30-18; 19:30-22:30
 C-6:30-22:30

1420 kilocycles 211.1 meters

CKGB ak 100
 CKNC ak 100 F
 CMBX ak 150 1425
 KABC ak 100
 KABR z 100 DP
 KBPS aj 100 4
 KCMC ak 100
 KFIZ ak 100
 KGFF ak 100
 KGGC ak 100
 KGIW ak 100 1
 KGIX ak 100 P
 KIDW z 100 1
 KORE ae 100
 KUMA ak 100
 KXL ae 100 4 (2.5)
 WACO ak 100 C
 WAGM ae 100
 WAZL ak 100 2
 WEEL ak 100 3
 WEHC ae 100 3 (2.5)
 WEHS ak 100 a
 WELL ak 50
 WGFC ak 100
 WHDL ak 100 D
 WHFC ae 100 a
 WILM aj 100 2
 WJBO z 100 D
 WJMS ak 100
 WKBI ak 100
 WLAP ak 100 (2.5)
 WLBF ak 100
 WMAS ak 100 C (2.5)
 WMBC ae 100 (2.5)
 WMBH ak 100 (2.5)
 WNRA ak 100 D
 WPAD ak 100 (2.5)
 XEFB ak 100
 z 100 P

Timmins, Ont.
 Toronto, Ont.
 Havana, Cuba
 San Antonio, Texas
 Aberdeen, S. Dak.
 Portland, Ore.
 Texarkana, Ark.
 Fond du Lac, Wis.
 Shawnee, Okla.
 San Francisco, Cal.
 Alamosa, Colo.
 Las Vegas, Nev.
 Lamar, Colo.
 Eugene, Ore.
 Yuma, Ariz.
 Portland, Ore.
 Waco, Texas
 Presque Isle, Maine
 Hazleton, Pa.
 Rocky Mount, N. C.
 Charlottesville, Va.
 Cicero, Ill.
 Battle Creek, Mich.
 Albany, Ga.
 Olean, N. Y.
 Cicero, Ill.
 Wilmington, Del.
 Baton Rouge, La.
 Ironwood, Mich.
 Cicero, Ill.
 Lexington, Ky.
 Kansas City, Kans.
 Springfield, Mass.
 Detroit, Mich.
 Joplin, Mo.
 Muscle Shoals, Ala.
 Paducah, Ky.
 Monterrey, N. L.
 Daytona Beach, Fla.

E-12-13:30; 17-19:30
 E-8-23:15
 E-.....
 C-7-22:30
 C-.....
 P-Silent
 C-7-14; 16-21
 C-10-13; 16-22
 C-7:30-15; 17-21
 P-9-13; 16-23
 M-10-13; 17-19; 22-23
 M-.....
 M-8-10; 13-17; 19-22
 P-7:45-22:45
 M-7-9; 11-13; 18-22
 P-8-24
 C-8-17
 E-11-13; 16-19
 E-10:30-14:30; 16-22
 E-7-21
 E-7-13:05; 16-1
 C-16-18
 E-7:30-23
 C-7-16:45
 E-7-17 - 1-21-35-41
 C-7-13:30; 18-21; 23-1
 E-7-11; 14-17; 21-24
 C-.....
 C-7:30-19:30
 C-13:30-16; 21-23
 C-7-23
 C-7-22
 E-7:30-24
 E-7:30-24
 C-7:30-14; 18-21:30
 C-7-13; 16-22
 C-7-9:30; 11-14; 16-22:30
 E-10-14; 18-22:30
 E-.....

*m-on 2/on on k/r/e
 100-30/ums 1/300 vey
 good on b.c. on*

**CKYS.
 1420
 DIAL**

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1430 kilocycles	209.7 meters	
KECA ak 1000 (5)	Los Angeles, Calif.	P-7-23
KGNF ak 500 D (1)	North Platte, Neb.	C-7-Sunset
KWCR ak 250 B (.5)	Cedar Rapids, Iowa	C-7-24
WBNS ae 500 C (1)	Columbus, Ohio	E-6:15-24
WHEC ae 500 C (1)	Rochester, N. Y.	E-8-24
WHP ak 500 C (1)	Harrisburg, Pa.	E-8:30-1
WNBR ae 500	Memphis, Tenn.	C-7-13; 15-22
WOKO ae 500 C (1)	Albany, N. Y.	E-8-1

1440 kilocycles	208.2 meters	
KDFN ak 500	Casper, Wyo.	M-7:30-13:30; 15-21
KLS ae 250 D	Oakland, Calif.	P-8-Sunset
KXYZ ak 500	Houston, Texas	C-6:30-13; 14:30-23
WBIG ae 500 C (1)	Greensboro, N. C.	E-7:30-23
WCBA aj 500 a	Allentown, Pa.	E-7-1
WMBD ae 500 3C (1)	Peoria, Ill.	C-6-11; 20-24
WSAN aj 500 a	Allentown, Pa.	E-13-23
WTAD ak 500 3	Quincy, Ill.	C-11-20
XEFI ae 250	Chihuahua, Chih.	C-.....

1450 kilocycles	206.8 meters	
CFCT ae 75	Victoria, B. C.	P-8-12:30; 17:30-20:15
CKX ak 500 F	Brandon, Man.	C-.....
KTBS ck 1000 N	Shreveport, La.	C-7-24
WGAR ak 500 B (1)	Cleveland, Ohio	E-6:30-1
WHOM ae 250	Jersey City, N. J.	E-8-24
WSAR ae 250	Fall River, Mass.	E-8:15:30; 17-22
WTFI ak 500	Athens, Ga.	E-9-21

1460 kilocycles	205.4 meters	
KSTP ae 10000 N (25)	St. Paul, Minn.	C-7-0:30
WJSV ak 10000 C	Washington, D. C.	E-6:30-1

1470 kilocycles	204.0 meters	
WLAC ak 5000 C	Nashville, Tenn.	C-6:30-24

1480 kilocycles	202.6 meters	
KOMA ak 5000 C	Oklahoma City, Ok.	C-7-24
WKBW ae 5000 C	Buffalo, N. Y.	E-9-1

1490 kilocycles	201.2 meters	
WCKY ae 5000 B	Covington, Ky.	E-7-24

1500 kilocycles	199.9 meters	
CHGS ae 50 F	Summerside, P.E.I.	A-7:30-8:30; 10:30-14; 16-23
CMCN z 250	Havana, Cuba	E-.....
KDB ak 100 C	Santa Barbara, Calif.	P-7:30-24
KGFI ak 100 (.25)	Corpus Christi, Tex.	C-7-15; 18-22
KGFK ak 100	Moorhead, Minn.	C-8-21
KGKB ak 100	Tyler, Texas	C-8-10; 12-13; 17-20:30
KKKY ck 100	Scottsbluff, Neb.	M-9-13:30; 17:30-21
KNOW ak 100	Austin, Texas	C-7:30-14; 16-22
KOTN ak 100 D	Pine Bluff, Ark.	C-7-17:30
KPJM ak 100	Prescott, Ariz.	M-8-13:30; 17:30-20
KPO ak 100	Wenatchee, Wash.	P-6:30-22:30
KREG ak 100	Santa Ana, Calif.	P-9-23
KXO ae 100	El Centro, Calif.	P-7-14; 16-21
WCNW ak 100 I (.25)	Brooklyn, N. Y.	E-14-20
WDNC ak 100 C	Durham, N. C.	E-7:30-24
WGAL ae 100 (.25)	Lancaster, Pa.	E-9-22
WHEF z 100 (.25)	Kosciusko, Miss.	C-6-24
WJBK ae 100 (.25)	Detroit, Mich.	E-7-Sunset; 21-24
WKBW ae 100	E. Dubuque, Ill.	C-7-21
WKBV ak 100	Richmond, Ind.	C-10-12; 18-22
WKBZ ak 100	Muskegon, Mich.	E-9-21
WKUE ak 100 Y	LaGrange, Ga.	C-10-12; 15-18
WMBQ ae 100 I	Brooklyn, N. Y.	E-9-11; 12-14; 20-22
WMEX ak 100 (.25)	Boston, Mass.	E-9-1

INDEX BY LOCATIONS

WNBF	ae	100	.....	Binghamton, N. Y.	E-7-22
WOPJ	ae	100	.....	Bristol, Tenn.	E-6:30-22:30
WRDW	ak	100	.....	Augusta, Ga.	E-8-21
WRGA	ak	100	.....	Rome, Ga.	C-7-10; 12-15; 18-21
WSYB	ak	100	.....	Rutland, Vt.	E-10-13; 17-21
WWRL	ak	100	1 (.25)	Woodside, N. Y.	E-8-9; 11-12; 22-0:30
WWSW	ae	100	(.25)	Pittsburgh, Pa.	E-8-24

1510 kilocycles 198.6 meters

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CFRC	ak	100	Kingston, Ont.	E-.....
CKCR	ak	100	Waterloo, Ont.	E-8:30-13:30; 16:30-23

1530 kilocycles 196.0 meters

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WIXBS	z	1000	Waterbury, Conn.	E-8:30-23:30
W9XBY	z	1000	Kansas City, Mo.	C-7-1

1550 kilocycles 193.4 meters

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W2XR	z	1000	Long Isl. City, N. Y.	E-16-19
W6XAI	z	1000	Bakersfield, Calif.	P-.....

INDEX BY LOCATIONS

Frequency in kilocycles in second column. Night power in watts in third column. Net work affiliations in fourth column: C Columbia, R National Red, B National Blue, N National Red and Blue, F Canadian.

<p>ALABAMA</p> <p>Birmingham</p> <p>WAPI 1140 5000 N</p> <p>WBRC 930 1000 C</p> <p>WSGN 1310 100</p> <p>Dothan</p> <p>WAGF 1370 100</p> <p>Gadsden</p> <p>WBJY 1210 100</p> <p>Huntsville</p> <p>WBHS 1200 100</p> <p>Mobile</p> <p>WALA 1380 500 C</p> <p>Montgomery</p> <p>WSFA 1410 500 C</p> <p>Muscle Shoals</p> <p>WNRA 1420 100</p> <p>ALASKA</p> <p>Anchorage</p> <p>KFOD 780 250</p> <p>Ketchikan</p> <p>KGBU 900 500</p> <p>ARIZONA</p> <p>Jerome</p> <p>KCRJ 1310 100</p> <p>Lowell</p> <p>KSUN 1200 100</p> <p>Phoenix</p> <p>KOY 1390 500</p> <p>KTAR 620 1000 N</p> <p>Prescott</p> <p>KPJM 1500 100</p> <p>Tucson</p> <p>KGAR 1370 100</p> <p>KVOA 1260 500</p> <p>Yuma</p> <p>KUMA 1420 100</p> <p>ARKANSAS</p> <p>Blytheville</p> <p>KLCN 1290 100</p> <p>Fayetteville</p> <p>KUOA 1260 1000</p> <p>Fort Smith</p> <p>KFPW 1210 100</p> <p>Hot Springs</p> <p>KTHS 1060 10000 N</p>	<p>Jonesboro</p> <p>KBTM 1200 100</p> <p>Little Rock</p> <p>KARK 890 250</p> <p>KGHI 1200 100</p> <p>KLRA 1390 1000 C</p> <p>Pine Bluff</p> <p>KOTN 1500 100</p> <p>Texarkana</p> <p>KCMC 1420 100</p> <p>CALIFORNIA</p> <p>Bakersfield</p> <p>KERN 1370 100 C</p> <p>W6XAI 1550 1000</p> <p>Berkeley</p> <p>KRE 1370 100</p> <p>Beverly Hills</p> <p>KMPK 710 500</p> <p>Burbank</p> <p>KELW 780 500</p> <p>E! Centro</p> <p>KXO 1500 100</p> <p>Eureka</p> <p>KIEM 1210 100</p> <p>Fresno</p> <p>KMJ 580 500 C</p> <p>Glendale</p> <p>KIEV 850 250</p> <p>Hollywood</p> <p>KFWB 950 1000</p> <p>KMTR 570 1000</p> <p>KNX 1050 50000</p> <p>Long Beach</p> <p>KFOX 1250 1000</p> <p>KGER 1360 1000</p> <p>Los Angeles</p> <p>KECA 1430 1000</p> <p>KFAC 1300 1000</p> <p>KFI 640 50000 N</p> <p>KFSQ 1120 500</p> <p>KFVD 1000 250</p> <p>KGFJ 1200 100</p> <p>KHJ 900 1000 C</p> <p>KRDK 1120 500</p> <p>KTM 780 500</p> <p>Modesto</p> <p>KTRB 740 250</p> <p>Oakland</p> <p>KLS 1440 250</p>	<p>KLX 880 1000</p> <p>KROW 930 1000</p> <p>Pasadena</p> <p>KPPC 1210 50</p> <p>Sacramento</p> <p>KFBK 1310 100 C</p> <p>San Bernardino</p> <p>KFXM 1210 100</p> <p>San Diego</p> <p>KFSB 600 1000 N</p> <p>KGB 1330 1000 C</p> <p>San Francisco</p> <p>KFRC 610 1000 C</p> <p>KGGC 1420 100</p> <p>KGO 790 7500 N</p> <p>KJBS 1070 100</p> <p>KPO 680 50000 N</p> <p>KTAB 560 1000</p> <p>KYA 1230 1000 N</p> <p>San Jose</p> <p>KQW 1010 1000</p> <p>Santa Ana</p> <p>KREG 1500 100</p> <p>Santa Barbara</p> <p>KDB 1500 100 C</p> <p>Stockton</p> <p>KGDM 1100 250</p> <p>KWG 1200 100 C</p> <p>COLORADO</p> <p>Alamosa</p> <p>KGIW 1420 100</p> <p>Colorado Springs</p> <p>KVOR 1270 1000 C</p> <p>Denver</p> <p>KFEL 920 500</p> <p>KLZ 560 1000 C</p> <p>KOA 830 50000 N</p> <p>KPOF 880 500</p> <p>KVOD 920 500</p> <p>Grand Junction</p> <p>KFXJ 1200 100</p> <p>Greeley</p> <p>KFKA 880 500</p> <p>Lamar</p> <p>KIDW 1420 100</p> <p>Pueblo</p> <p>KGHF 1320 500</p>	<p>Sterling</p> <p>KGEC 1200 100</p> <p>CONNECTICUT</p> <p>Bridgeport</p> <p>WICC 600 250 C</p> <p>Hartford</p> <p>WDRC 1330 1000 C</p> <p>WTIC 1040 50000 R</p> <p>New Britain</p> <p>WMFE 1380 250</p> <p>New Haven</p> <p>WMFI 900 500</p> <p>Storrs</p> <p>WCAC 600 500</p> <p>Waterbury</p> <p>WATR 1190 100</p> <p>WIXBS 1530 1000</p> <p>DELAWARE</p> <p>Wilmington</p> <p>WDEL 1120 250</p> <p>WILM 1420 100</p> <p>DISTRICT OF COLUMBIA</p> <p>Washington</p> <p>WJSV 1460 10000 C</p> <p>WMAL 630 250 B</p> <p>WOL 1310 100</p> <p>WRC 950 500 R</p> <p>FLORIDA</p> <p>Clearwater</p> <p>WFLA 620 1000 N</p> <p>Daytona Beach</p> <p>..... 1420 100</p> <p>Gainesville</p> <p>WRUF 830 5000</p> <p>Jacksonville</p> <p>WJAX 900 1000 N</p> <p>WMBR 1370 100 C</p> <p>Miami</p> <p>WIOD 1300 1000 N</p> <p>WQAM 560 1000 C</p> <p>Orlando</p> <p>WDBO 580 250 C</p> <p>Pensacola</p> <p>WCOA 1340 500</p> <p>St. Petersburg</p> <p>WSUN 620 1000 N</p>
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INDEX BY LOCATIONS

Tampa WDAE 1220 1000 C	Rock Island WHBF 1210 100 Springfield WCBS 1210 100 WTAX 1210 100 Tuscola WDZ 1070 100 Urbana WILL 890 250 Waukegan WCBF 1080 5000	WREN 1220 1000 B Manhattan KSAC 580 500 Topeka WIBW 580 1000 C Wichita KFH 1300 1000 C	MICHIGAN Battle Creek WELL 1420 50 Bay City WBCM 1410 500 Calumet WHDF 1370 100 Detroit WIBK 1500 100 WJR 750 10000 B WMBG 1420 100 WWJ 920 1000 R WXYZ 1240 1000 East Lansing WKAR 1040 1000 Flint WDFE 1310 100 Grand Rapids WASH 1270 500 WOOD 1270 500 Ironwood WJMS 1420 100 Jackson WIBM 1370 100 Kalamazoo WKZO 590 1000 Lansing WJLM 1210 100 Lapeer WMPC 1200 100 Marquette WBEO 1310 100 Muskegon WKBZ 1500 100 Royal Oak WEXL 1310 50		
GEORGIA Albany WGPC 1420 100 Athens WTFI 1450 500 Atlanta WGST 890 500 C WJTL 1370 100 WSB 740 50000 N Augusta WRDW 1500 100 Columbus WRBL 1200 100 LaGrange WKEU 1500 100 Macon WMAZ 1180 1000 Rome WRGA 1500 100 Savannah WTOC 1260 1000 C Thomasville WQDX 1210 100	INDIANA Anderson WHBU 1210 100 Elkhart WTRC 1310 50 Evansville WGBF 630 500 Fort Wayne WGL 1370 100 C WOWO 1160 10000 C Gary WIND 560 1000 Hammond WWAE 1200 100 Indianapolis WFBM 1230 1000 C WKBF 1400 500 N Muncie WLBC 1310 100 Richmond WKBV 1500 100 South Bend WFAM 1200 100 WSBT 1360 500 C Terre Haute WBOW 1310 100 West Lafayette WBAA 890 1000	KENTUCKY Covington WCXY 1490 5000 B Lexington WLAP 1420 100 Louisville WAVE 940 1000 N WHAS 820 50000 C Paducah WPAD 1420 100 LOUISIANA Baton Rouge WJBO 1420 100 Monroe KMLB 1200 100 New Orleans WBNO 1200 100 WDSU 1250 1000 C WJBW 1200 100 WSMB 1320 500 N WWL 850 10000 Shreveport KRMD 1310 100 KCBS 1450 1000 N KWEA 1210 100 KWKH 1100 10000 C	HAWAII Hilo KHFV 1210 100 Honolulu KGMB 1320 250 C KGU 750 2500 N IDAHO Boise KIDO 1350 1000 Idaho Falls KID 1320 250 Nampa KFXD 1200 100 Pocatello KSEI 900 250 Twin Falls KTFI 1240 500 ILLINOIS Bloomington WJBC 1200 100 Carthage WCAZ 1070 100 Chicago WAAF 920 500 WBBM 770 25000 C WCFL 970 1500 B WCRW 1210 100 WEDC 1210 100 WENR 870 50000 N WGES 1360 500 WGN 720 50000 WJJD 1130 20000 WLS 870 50000 N WMAQ 670 50000 N WMBI 1080 5000 WBCB 1210 100 Cicero WEHS 1420 100 WHFC 1420 100 WKBI 1420 100 Decatur WJBL 1200 100 East Dubuque WKBB 1500 100 Harrisburg WEBQ 1210 100 Joliet WCLS 1310 100 Peoria WMBD 1440 500 C Quincy WTAD 1440 500 Rockford WROK 1410 500	MAINE Augusta WRDO 1370 100 Bangor WABI 1200 100 WLBZ 620 500 C Portland WCSH 940 1000 R Presque Isle WAGM 1420 100 MARYLAND Baltimore WBAL 1060 10000 B WCAO 600 500 C WCBM 1370 100 WFBR 1270 500 R Cumberland WTBO 800 250 Hagerstown WJEJ 1210 100 MASSACHUSETTS Babson Park WBOS 920 500 Boston WAAB 1410 500 C WBZ 990 50000 B WEEI 590 1000 R WHDH 830 1000 WMEX 1500 100 WNAE 1230 1000 C WFMH 1120 500 Fall River WSAR 1450 250 Lowell WLLH 1370 100 New Bedford WNBH 1310 100 Springfield WBZA 990 1000 B WMAA 1420 100 C Worcester WORC 1280 500 C WTAG 580 500 R	MINNESOTA Fergus Falls KGDE 1200 100 Hibbing WMFG 1210 100 Minneapolis WCCO 810 50000 C WDGY 1180 1000 WLB 1250 1000 WTCN 1250 1000 Moorhead KGFK 1500 100 Northfield WCAL 1250 2500 St. Paul KSTP 1460 10000 N MISSISSIPPI Gulfport WGCM 1210 100 Hattiesburg WFFB 1370 100 Jackson WJDJ 1270 1000 N Kosciusko WHEF 1500 100 Laurel WAML 1310 100 Meridian WCOC 880 500 Vicksburg WQCB 1360 500 MISSOURI Cape Girardeau KFVS 1210 100 Columbia KFRR 630 500 Jefferson City WOS 630 500 Joplin WMBH 1420 100 Kansas City KMBC 950 1000 C
KANSAS Abilene KFBI 1050 5000 Coffeyville KGGF 1010 1000 Dodge City KGN0 1340 250 Kansas City WLBK 1420 100 Lawrence KFKU 1220 1060	IOWA Ames WOI 640 5000 Boone KFGQ 1370 100 Cedar Rapids KWCR 1430 250 B Council Bluffs KOIL 1260 1000 B Davenport WOC 1370 100 C Decorah KGCA 1270 100 KWLC 1270 100 Des Moines KSO 1320 500 B WHO 1000 50000 R Iowa City WSUI 880 500 Marshalltown KFJB 1200 100 Shenandoah KFNF 890 500 KMA 930 1000 Sioux City KSCJ 1330 1000 C Waterloo WMT 600 1000 C				

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KWKC 1370 100	Zarephath	Woodside	Ponce City
WDAF 610 1000 R	WAWZ 1350 250	WWRL 1500 100	WBBZ 1200 100
WHB 860 500	NEW MEXICO	NORTH CAROLINA	Shawnee
W9XB 1530 1000	Albuquerque	Ashville	KGFF 1420 100
St. Joseph	KGGM 1230 250	WVNC 570 1000 N	Tulsa
KFEO 680 2500	KOB 1180 10000	Charlotte	KTUL 1400 250 C
St. Louis	Clovis	WBT 1080 50000 C	KVOO 1140 25000 N
KFUD 550 500	KICA 1370 100	WSOC 1210 100 N	OREGON
KMOX 1090 50000 C	Roswell	Durham	Corvallis
KSD 550 1000 R	KGFL 1370 100	WDNC 1500 100 C	KOAC 550 1000
KWK 1350 1000 B	Santa Fe	Greensboro	Eugene
WEW 760 1000	KIUJ 1310 100	WBIG 1440 500 C	KORE 1420 100
WIL 1200 100	NEW YORK	Raleigh	Klamath Falls
Springfield	Albany	WPTF 680 5000 N	KEJI 1210 100
KBX 1230 500	WABY 1370 100	Rocky Mount	Marshfield
KWTO 560 1000	WOKO 1430 500 C	WEED 1420 100	KOOS 1200 250
MONTANA	Auburn	Wilmington	Medford
Billings	WMBO 1310 100	WMFD 1370 100	KMED 1310 100
KGHL 780 1000 N	Binghamton	Winston-Salem	Portland
Butte	WNBF 1500 100	WSJS 1310 100 C	KALE 1300 500 C
KGIR 1360 1000 N	Brooklyn	NORTH DAKOTA	KBPS 1420 100
Great Falls	WARD 1400 500	Bismarck	KEX 1180 5000 N
KFBB 1280 1000	WBBC 1400 500	KFYR 550 1000 N	KEJR 1300 500
KallsPELL	WBBR 1300 1000	Devils Lake	KGW 620 1000 N
KGEZ 1310 100	WCNW 1500 100	KDLR 1210 100	KOIN 940 1000 C
Missoula	WLTH 1400 500	Fargo	KWJJ 1040 500
KGVO 1200 100	WMBQ 1500 100	WDAY 940 1000 N	KXL 1420 100
Wolf Point	WVFW 1400 500	Grand Forks	Salem
KGCX 1310 100	Buffalo	KFJM 1370 100	KSLM 1370 100
NEBRASKA	WBN 900 1000 R	Mandan	PENNSYLVANIA
Clay Center	WEBR 1310 100	KGCU 1240 250	Allentown
KMMJ 740 1000	WGR 550 1000 C	Minot	WCBA 1440 500
Kearney	WKWB 1480 5000 C	KLPM 1240 250	WSAN 1440 500
KGFW 1310 100	WSVS 1370 50	OHIO	Altoona
Lincoln	Canton	Akron	WFBG 1310 100
KFAB 770 5000 C	WCAD 1220 500	WADC 1320 1000 C	Clarion
KFOR 1210 100 C	Chester	WJW 1210 100	WWPA 850 250
Norfolk	WGNV 1210 100	Canton	Glenside
WJAG 1060 1000	Elmira	WHBC 1200 100	WIBG 970 100
North Platte	WESG 1090 1000	Cincinnati	Greensburg
KGNE 1430 500	Freeport	WBE 1200 100	WHJB 620 250
Omaha	WGBB 1210 100	WKRC 550 1000 C	Grove City
WAAW 660 500	Jamestown	WLW 700 500000 N	WSAJ 1310 100
WOW 590 1000 R	WOCL 1210 50	WSAI 1330 1000 R	Harrisburg
Scottsbluff	Long Island City	Cleveland	WHP 1430 500 C
KGKY 1500 100	W2XR 1550 1000	WGAR 1450 500 B	WKBO 1200 100
York	New York	WHK 1390 1000 C	Hazleton
KGBZ 930 1000	WABC 860 50000 C	WJAY 610 500	WAZL 1420 100
NEVADA	WBNX 1350 250	WTAM 1070 50000 R	Johnstown
Las Vegas	WBOQ 860 50000	Columbus	WJAC 1310 100
KGIX 1420 100	WEAF 660 50000 R	WAIU 640 500 B	WGAL 1500 100
Reno	WEVD 1300 1000	WBSN 1430 500 C	WKJC 1200 100
KOH 1380 500 C	WFAB 1300 1000	WCOL 1210 100	Philadelphia
NEW HAMPSHIRE	WHN 1010 1000	WOSU 570 750	KYW 1020 10000 R
Laconia	WINS 1180 1000	Dayton	WCAU 1170 50000 C
WLNH 1310 100	WJZ 760 50000 B	WLBW 1260 1000 C	WDAS 1370 100
Manchester	WLWL 1100 5000	WSMK 1380 200 C	WFI 560 500 B
WEA 1340 500 C	WMCA 570 500	Mount Orab	WHAT 1310 100
Portsmouth	WNYC 810 1000	WBHD 1370 100	WIP 610 1000
WHEB 740 250	WOV 1130 1000	Toledo	WLIT 560 500 B
NEW JERSEY	Olean	WSPD 1340 1000 C	WPEN 920 250
Asbury Park	WHDL 1420 100	Youngstown	WRAX 920 250
WCAP 1280 500	Plattsburg	WKBN 570 500 C	WTEL 1310 100
Atlantic City	WMFF 1310 100	Zanesville	Pittsburgh
WPG 1100 5000 C	Rochester	WALR 1210 100	KDKA 980 50000 B
Camden	WHAM 1150 50000 B	OKLAHOMA	KOV 1380 500 C
WCAM 1280 500	WHEC 1430 500 C	Ada	WCAE 1220 1000 R
Jersey City	Saranac Lake	KADA 1200 100	WJAS 1290 1000 C
WAAT 940 500	WNBZ 1290 50	Elk City	WWSW 1500 100
WHOM 1450 250	Schenectady	KASA 1210 100	..... 620 250
Newark	WGY 790 50000 R	Enid	Reading
WHBI 1250 250	Syracuse	KCRC 1370 100	WBEU 830 1000
WNEW 1250 1000	WFLB 1360 1000 C	Norman	WRAW 1310 100
WOR 710 5000	WSYR 570 250 B	WNAD 1010 500	Scranton
Red Bank	Troy	Okahoma City	WGBI 880 500
WBRB 1210 100	WHAZ 1300 500	KFXR 1310 100	WQAN 880 250
Trouton	Utica	KGFG 1370 100	
WTNJ 1280 500	White Plains	KOMA 1480 5000 C	
	WFAS 1210 100	WKY 900 1000 N	

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Sunbury WKOK 1210 100	Austin KNOW 1500 100	Norfolk WTAR 780 500 N	Poynette WIBU 1210 100
Washington WNBO 1200 100	Beaumont KFDM 560 500	Petersburg WPHR 880 500	Racine WRJN 1370 100
Wilkes-Barre WBAX 1210 100	College Station WTAW 1120 500	Richmond WBBL 1210 100	Sheboygan WHBL 1410 500
WBRB 1310 100	Corpus Christi KGFI 1500 100	WMBG 1210 100 C	Stavens Point WLBL 900 2500
Williamsport WRAK 1370 100	Dallas KRLD 1040 10000 C	WRVA 1110 5000 N	Superior WEBC 1290 1000 N
York WORK 1000 1000	WEA 800 50000 N	Roanoke WDBJ 930 1000 C	WYOMING
PHILIPPINES	WRR 1280 500	Staunton WRSX 1410 250	Casper KDFN 1440 500
Manila KZEG 720 1000	Dublin KFPL 1310 100	WSVA 550 500	Sheridan KWYO 1370 100
KZMR 618.5 50000	El Paso KTSM 1310 100	WASHINGTON	CANADA
PORTO RICO	WDAH 1310 100	Aberdeen KXRO 1310 100	ALBERTA
San Juan SKAQ 1240 1000	Fort Worth KRJZ 1370 100	Bellingham KVOS 1200 100	Calgary CFAC 930 100 F
WNEL 1290 500	KTAT 1240 1000 C	Everett KRKO 1370 50	CFCN 1030 10000 F
RHODE ISLAND	WBAP 800 50000 N	Olympia KGY 1210 100	CJCM 690 100 F
Providence WEAN 780 500 C	Galveston KLUF 1370 100	Pullman KWSC 1220 1000	Edmonton CFRN 1260 100
WJAR 890 500 R	Greenville KPFM 1310 15	Seattle KJR 970 5000 N	CJCA 730 500 F
WPRO 630 250	Houston KPRC 920 1000 N	KOL 1270 1000 C	CKUA 580 500
SOUTH CAROLINA	KTRH 1330 1000 C	KOMO 920 1000 N	Lethridge CJOC 1230 100 F
Charleston WCSC 1360 500	KXYZ 1440 500	KPCB 710 250	BRITISH COLUMBIA
Columbia WIS 560 1000 N	Longview KFRQ 1370 100	KRSC 1120 100	Chilliwack CHWK 780 100 F
Greenville WBC 1300 1000	Lubbock KFYO 1310 100	KRW 1220 1000	Kamloops CFJC 880 100 F
WFBT 1300 1000	Port Arthur KPAC 1260 500	KVLA 1370 100	Kelowna CKOV 630 100 F
Spartanburg WSPA 920 1000	San Angelo KGKL 1370 100	KXA 760 250	Trail CJAT 910 250 F
SOUTH DAKOTA	San Antonio KABC 1420 100	Spokane KFIO 1120 100	Vancouver CJOR 600 500
Aberdeen KABR 1420 100	KMAC 1370 100	KFPY 1340 1000 C	CKGD 1010 100
Brookings KFDY 780 1000	KNSO 1370 100	KGA 900 1000 N	CKFK 1410 50
Huron KGDY 1340 250	KPTA 550 1000 C	KHO 590 1000 N	CKMO 1410 100
Pierre KGFY 630 200	WOL 1190 50000 N	Tacoma KMO 1330 250	CKWX 1010 100
Rapid City WCAT 1200 100	Tyler KGKB 1500 100	KVI 570 1000 C	CRCV 1100 1000 F
Sioux Falls KSOO 1110 1000	Waco WACO 1420 100 C	Walla Walla KUJ 1370 100	Victoria CFCT 1450 75
Vermillion KUSD 890 500	Wasco KRGV 1260 500	Wenatchee KPO 1500 100	MANITOBA
Watertown KWTN 1210 100	Wichita Falls KGKO 570 500 C	Yakima KIT 1310 100	Brandon CKX 1450 500 F
Yankton WNAX 570 1000 C	UTAH	WEST VIRGINIA	Winnipeg CJRC 1390 100
TENNESSEE	Ogden KLO 1400 500 C	Bluefield WHIS 1410 250	CKY 960 15000 F
Bristol WOPI 1500 100	Salt Lake City KDYL 1290 1000 N	Charleston WCHS 580 500	NEW BRUNSWICK
Chattanooga WDOD 1280 1000 C	KSL 1130 50000 C	Fairmont WMMN 890 250	Fredericton CFNB 550 500 F
Jackson WTJS 1310 100	VERMONT	Huntington WSAZ 1190 1000	Moncton CKCW 1370 100
Knoxville WNOX 1010 1000 C	Burlington WCAX 1200 100	Wheeling WWVA 1160 5000 C	St. John CHSJ 1120 100 F
WROL 1310 100	Rutland WSYB 1500 100	WISCONSIN	NOVA SCOTIA
Memphis WBQB 1370 100	St. Albans WQDM 1370 100	Eau Claire WTAQ 1330 1000	Glace Bay VAS 685 2000
WMC 780 1000 N	Springfield WNBX 1260 1000	Fond du Lac KFIZ 1420 100	Halifax CHNS 930 1000 F
WNRB 1430 500	Waterbury WDEV 550 500	Green Bay WBWB 1200 100	Sydney CJCB 1240 1000 F
WREC 600 1000 C	VIRGINIA	Janesville WCLO 1200 100	Wolfville CKIK 1010 50
Nashville WLAC 1470 5000 C	Arlington NAA 690 1000	LaCrosse WKBH 1380 1000	Yarmouth CJLS 1310 100
WSM 650 50000 N	Charlottesville WEHC 1420 100	Madison WHA 940 2500	ONTARIO
Springfield WSIX 1210 100	Danville WBTM 1370 100	WIBA 1280 1000 N	Brantford CKPC 930 100 F
TEXAS	Lynchburg WLV 1200 100	Mantowoc WOMT 1210 100	Chatham CFCO 600 100 F
Amarillo KGRS 1410 1000	Newport News WGH 1310 100	Milwaukee WISN 1120 250 C	
WDAG 1410 1000		WTMJ 620 1000 N	

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Cobalt		Yorkton		XEFO	940 5000	Cardenas	
CKMC	1210 50	CJGX	630 500 F	XEFZ	1370 100	CMGE	1375 30
Fort William		NEWFOUNDLAND		XEK	990 100	Ciego de Avila	
CKPR	930 50 F	St. John's		XEN	710 1000	CMJH	1150 50
Hamilton		VOAC	1300 40	XEO	940 5000	CMJI	1210 150
CHML	1010 50 F	VOAS	940 100	XEP	820 500	CMJO	1010 50
CKOC	1120 500 F	VOGY	840 400	XETW	820 500	Cienfuegos	
Kingston		VONF	950 5000	XEW	890 50000	CMHJ	1125 40
CFRC	1510 100	VOWR	681 500	XEWZ	1150 100	CMHW	910 100
Kirkland Lake		MIQUELON		XEXX	845 500	Colon	
CJKL	1310 100	St. Pierre		XEYZ	780 10000	CMGI	1094 30
London		FQN	609 250	XFL	610 1000	Crucos	
CFPL	730 100 F	CENTRAL AMERICA		DURANGO		CMHK	1225 50
North Bay		COSTA RICA		Durango		Guantanamo	
CFCH	930 100 F	Cartago		XEE	1210 50	CMKJ	1300 20
Ottawa		TIGA	1014 30	GUANAJUATO		Havana	
CKCO	1010 100	San Jose		Leon		CMAF	680 1000
CRCO	880 1000 F	TIGR	912 75	XEAZ	1420 7	CMBC	1035 150
Prescott		TIFB	714 30	XEKL	920 500	CMBD	1350 150
CFLC	930 100	TIGP	800 75	JALISCO		CMBG	1150 225
St. Catharines		TIRCA	1100 500	Guadalajara		CMBS	775 150
CKTB	1200 100 F	TISO	550 250	SEA	1060 125	CMBX	1425 150
Sault Ste. Marie		TIVL	835 30	XED	1160 500	CMBY	635 250
CJIC	890 100	GUATEMALA		MICHOACAN		CMCZ	1005 100
Stratford		Guatemala City		Morelia		CMC	835 500
10-AK	1200 15	TGW	565 10000	XEI	1370 125	CMCA	1230 150
Timmins		TGX	1400 150	NUEVO LEON		CMCB	1060 150
CKGB	1420 100	EL SALVADOR		Monterrey		CMCD	955 250
Toronto		San Salvador		XEFB	1420 100	CMCF	610 250
CFRB	690 10000 C	RDN	680 500	XEFJ	1210 100	CMCG	1125 150
CKCL	580 100 F	MEXICO		XEH	1150 250	CMCJ	1200 400
CKNC	1420 100 F	AGUASCALIENTES		XET	690 500	CMCN	1500 250
CRCT	840 5000 N	Aguascalientes		XEX	1310 125	CMCO	1280 150
Waterloo		XFC	810 350	PUEBLA		CMCP	1270 150
CKCR	1510 100	BAJA CALIFORNIA		Puebla		CMCQ	680 1000
Windsor		Agua Caliente		XETH	1210 100	CMCR	1400 150
CKLW	1030 5000 C	XEA	920 200	SAN LUIS POTOSI		CMCU	1255 150
Wingham		XEAO	560 250	San Luis Potosi		CMCW	755 150
10-BP	1200 25	XEAX	920 200	XEZZ	1370 100	CMCX	865 150
PRINCE EDWARD ISLAND		XEMO	865 2500	SONORA		CMCY	1100 500
Charlottetown		XEMZ	1210 30	Nogales		CMK	725 3150
CFCY	630 1000 F	XEOK	920 250	XEAF	990 250	CMQ	840 340
CHCK	1310 50	CHIHUAHUA		TAMAULIPAS		CMW	930 1400
Summerside		Chihuahua		Nuevo Laredo		CMX	905 1000
CHGS	1500 50 F	XEBE	760 5000	XEAM	750 50	COA	1175 500
QUEBEC		Maxicali		XEFE	1370 100	COK	1375 250
Chicoutimi		XEAA	920 200	XENT	1120 50000	COX	1325 200
CRCS	950 100 F	XEAT	980 250	Reynosa		Holguin	
Hull		XEMO	865 2500	XEAW	960 10000	CMKF	1363 30
CKCH	1210 100 F	XEMZ	1210 30	Tampico		Manzanillo	
Montmagny		XEOK	920 250	XEFW	1310 250	CMKM	940 100
VE9EK	1195 10	COAHUILA		XEFA	1080 50	Matanzas	
Montreal		Chihuahua		XES	970 250	CMGF	971.5 100
CFCF	600 500 N	XEFI	1440 250	VERACRUZ		CMGH	1040 15
CHLP	1120 100	Juarez		Jalapa		Moron	
CKAC	730 5000 C	XEFV	1210 100	XFB	1270 250	CMJP	1360 75
CRCM	910 5000 F	XEJ	1020 250	Orizaba		Sagua la Grande	
New Carlisle		COAHUILA		XFD	1340 350	CMHA	1103 50
CHNC	1210 100 F	Piedras Negras		Veracruz		San Spiritus	
Quebec		XEPN	590 50000	XEU	980 250	CMHB	1245 30
CHQC	580 100 F	Saltito		YUCATAN		Santa Clara	
CKVC	1310 50	XEOX	640 250	Merida		CMHI	1037 150
CRCK	1050 1000 F	Torreón		XEFC	1310 100	Santiago	
SASKATCHEWAN		XETB	1310 125	WEST INDIES		CMKC	1034 150
Canora		D. F.		CUBA		DOMINICAN REPUBLIC	
10-BU	1200 50	Mexico City		Calbarien		San Pedro de Marcoris	
Moose Jaw		XEAI	1240 100	CMHD	950 250	HIH	1395 15
CHAB	1200 100 F	XEAL	660 1000	Camaguey		Santo Domingo	
CJRM	540 1000 F	XEB	1030 10000	CMJC	1382 150	HIJ	1195 15
Prince Albert		XECW	1310 10	CMJE	1170 50	HIX	1270 1000
CKBI	1210 100 F	XEFA	1180 500	CMJF	930 200	HIZ	1300 10
Regina		XEFG	1100 250	CMJG	1050 50	HAITI	
CHWC	1010 500 F			CMJK	790 150	Port-au-Prince	
CKCK	1010 500 F			CMJL	960 50	HHK	920 1000
Saskatoon							
CFQC	840 1000 F						

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CFAC 930 100	Calgary, Alta. Calgary Herald, Southam Bldg.	CJRC 1390 100	Winnipeg, Man. Royal Alexandra Hotel
CFCF 600 500	Montreal, Que. Mt. Royal Hotel	CJRM 540 1000	Moose Jaw, Sask. 311 Main St. No.
CFCH 930 100	North Bay, Ont. Capitol Theatre Bldg.	CKAC 730 5000	Montreal, Que. 980 St. Catherine St. W.
CFCN 1030 10000	Calgary, Alta. Toronto Gen. Trust Bldg.	CKBI 1210 100	Prince Albert, Sask. Canada Bldg.
CFCO 600 100	Chatham, Ont. Wm. Pitt Hotel	CKCD 1010 100	Vancouver, B. C. 142 Hastings St. W.
CFCT 1450 75	Victoria, B. C. 820 View St.	CKCH 1210 100	Hull, Que. Standish Hall Hotel
CFCY 630 1000	Charlottetown, P.E.I. 143 Great George St.	CKCK 1010 500	Regina, Sask. 1853 Hamilton St.
CFJC 880 100	Kamloops, B. C. Wilcox-Hall Bldg.	CKCL 580 100	Toronto, Ont. 444 University Ave.
CFLC 930 100	Prescott, Ont. Victoria Hall	CKCO 1010 100	Ottawa, Ont. 272 Somerset St. W.
CFNB 550 500	Fredericton, N. B. York St.	CKCR 1510 100	Waterloo, Ont. 24 King St. So.
CFPL 730 100	London, Ont. Richmond St.	CKCV 1310 50	Quebec, Que. 254 Ave. Marguerite
CFQC 840 1000	Saskatoon, Sask. 216 First Ave., No.	CKCW 1370 100	Moncton, N. B. Moncton Brdcastg. Co., Ltd.
CFRB 690 10000	Toronto, Ont. 37 Bloor St. W.	CKFC 1410 50	Vancouver, B. C. Hemlock & 12th Ave.
CFRC 1510 100	Kingston, Ont. Queens University	CKGB 1420 100	Timmins, Ont. R. H. Thompson, Press Bldg.
CFRN 1260 100	Edmonton, Alta. Birks Bldg.	CKIC 1010 50	Wolfville, N. S. Acadia University
CHAB 1200 100	Moose Jaw, Sask. Grant Hall Hotel	CKLW 1030 5000	Windsor, Ont. Guaranty Trust Bldg.
CHCK 1310 50	Charlottetown, P.E.I. 36 Upper Hillsboro St.	CKMC 1210 50	Cobalt, Ont. R. L. MacAdam
CHGS 1500 50	Summerside, P. E. I. 190 Water St.	CKMO 1410 100	Vancouver, B. C. 1604 Bekins Bldg.
CHLP 1120 100	Montreal, Que. Sun Life Bldg.	CKNC 1420 100	Toronto, Ont. 805 Davenport Road
CHML 1010 50	Hamilton, Ont. 47 Main St. E.	CKOC 1120 500	Hamilton, Ont. Wentworth Bldg.
CHNC 1210 100	New Carlisle, Que. Dr. Charles Houde	CKOV 630 100	Kelowna, B. C. Okanagan Broadcasters, Ltd., Box 243
CHNS 930 1000	Halifax, N. S. Lord Nelson Hotel	CKPC 930 100	Brantford, Ont. Arcade Bldg.
CHRC 580 100	Quebec, Que. CHRC, Ltd., Victoria Hotel	CKPR 930 50	Fort William, Ont. Royal Edward Hotel
CHSJ 1120 100	St. John, N. B. Admiral Beatty Hotel	CKTB 1200 100	St. Catharines, Ont. E. T. Sandell, Welland House
CHWC 1010 500	Regina, Sask. Kitchener Hotel	CKUA 580 500	Edmonton, Alta. University of Alberta.
CHWK 780 100	Chilliwack, B. C. Wellington Ave.	CKWX 1010 100	Vancouver, B. C. Hotel Georgia
CJAT 910 250	Trail, B. C. Trail Amateur Radio Assn.	CKX 1450 500	Brandon, Man. Rosser Ave.
CJCA 730 500	Edmonton, Alta. 10122-100A St.	CKY 960 15000	Winnipeg, Man. Sherbrooke St.
CJCB 1240 1000	Sydney, N. S. 318 Charlotte St.	CMAF 680 1000	Havana, Cuba 1 y 8 Rept. Miramar
CJ CJ 690 100	Calgary, Alta. New Albertan Bldg.	CMBC 1035 150	Havana, Cuba Domingo Fernandez, Maximo Gomez No. 139
CJGX 630 500	Yorkton, Sask. 188 Grain Exchange Bldg.	CMBD 1350 150	Havana, Cuba Luis Perez Garcia, Centre Gallego
CJIC 890 100	S. Ste. Marie, Ont. 72 Pine St.	CMBG 1150 225	Havana, Cuba John L. Stowers, Hospital No. 100
CJKL 1310 100	Kirkland Lake, Ont. O. J. Thorpe	CMBS 775 150	Havana, Cuba Calzada y H. St., Vedado
CJLS 1310 100	Yarmouth, N. S. Laurie L. Smith, Grand Hotel	CMBX 1425 150	Havana, Cuba Alberto Alvarez, Belascoain No. 32
CJOC 1230 100	Lethbridge, Alta. Marquis Hotel	CMBY 635 250	Havana, Cuba Infanta 132 esq-Jewelair
CJOR 600 500	Vancouver, B. C. G. C. Chandler, Hotel Grosvenor	CMCZ 1005 100	Havana, Cuba Manuely G. Salas, San Rafael No. 14

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	CMC	835	500	Havana, Cuba
				Aguila y Dragones
	CMCA	1230	150	Havana, Cuba
				J. M. Gonzales, Gallano No. 102
	CMCB	1060	150	Havana, Cuba
				Metropolitan Bldg.
	CMCD	955	250	Havana, Cuba
				Calle G y 25, Vedado
	CMCF	610	250	Havana, Cuba
				Raoul Karmian, P. O. Box 647
	CMCG	1125	150	Havana, Cuba
				Emilie Perera, San Miguel No. 62
	CMCJ	1200	400	Havana, Cuba
				Rafael Rodriguez, Estevez No. 4
	CMCK	1320	100	Havana, Cuba
				Manuel Autran G., Vedado
	CMCN	1500	250	Havana, Cuba
				Reina y Ave. Buen Retiro, Mariano
	CMCO	1280	150	Havana, Cuba
				Ass. Detes. del Comercio
	CMCP	1270	150	Havana, Cuba
				Calzada de Luyane No. 132
	CMCQ	680	1000	Havana, Cuba
				Vista Alegre No. 80, Vibora
	CMCR	1400	150	Havana, Cuba
				Milagros No. 35, Vibora
	CMCU	1295	150	Havana, Cuba
				San Francisco No. 13, Vibora
	CMCW	755	150	Havana, Cuba
				Gallano y San Lazaro Sts.
	CMCX	865	150	Havana, Cuba
	CMCY	1100	500	Havana, Cuba
				Manuel D. Autran, Calle G 215, Vedado
	CMGE	1375	30	Cardenas, Cuba
				Genaro Sebatier, Cespedes No. 180
	CMGF	971.5	100	Matanzas, Cuba
				G. Betancourt No. 51
	CMGH	1040	15	Matanzas, Cuba
				B. Byrne No. 113
	CMGI	1094	30	Colon, Cuba
				Armando Linanza, Marti No. 35
	CMHA	1103	50	Sagua la Grande, Cuba
				Abelardo Menocal, Carrillo No. 1
	CMHB	1245	30	San Spiritus, Cuba
				Independencia No. 33
	CMHD	950	250	Caibarien, Cuba
				Manuel Alvarez, M. Escobar 17
	CMHI	1037	150	Santa Clara, Cuba
				Lavis y Paz, Independencia No. 34
	CMHJ	1125	40	Cienfuegos, Cuba
				Romoualde Ugalde, Hotel Bristol
	CMHK	1225	50	Cruces, Cuba
				Heredia No. 61
	CMHW	910	100	Cienfuegos, Cuba
				Arguelles No. 200
	CMJC	1382	150	Camaguey, Cuba
				Feliciano Isaac, Cisneros y G. Gomez
	CMJE	1170	50	Camaguey, Cuba
				Manuel Fernandez, Hnos. Aguerre No. 2
	CMJF	930	200	Camaguey, Cuba
				John L. Stowers, Republica No. 88
	CMJG	1050	50	Camaguey, Cuba
				Jose Antonio Lefran, Maceo No. 1
	CMJH	1150	50	Ciego de Avila, Cuba
				Luis Marauri, Vista Hermosa
	CMJI	1210	150	Ciego de Avila, Cuba
				Gilberto Gessa Lopez, Independencia 95
	CMJK	790	150	Camaguey, Cuba
				Cla. Nacional de Radio, Finlay
	CMJL	960	50	Camaguey, Cuba
				Enrique Artime, Cuba No. 27

	CMJO	1010	50	Ciego de Avila, Cuba
				Jose M. Rey, C. Centra & Maceo
	CMJP	1360	75	Moron, Cuba
				Cesar Canall, Callejas No. 28
	CMK	725	3150	Havana, Cuba
				Hote Plaza
	CMKC	1034	150	Santiago, Cuba
				J. A. Saco, Alta 23
	CMKF	1363	30	Holquin, Cuba
				Libertad esq. Arlas
	CMKJ	1300	20	Guantanamo, Cuba
				Luis Moriote, East Giro 11
	CMKM	940	100	Manzanillo, Cuba
				Jesus Armeste, Merchant y P. Figuerado
	CMQ	840	340	Havana, Cuba
				25 Numero 445, Vedado
	CMW	930	1400	Havana, Cuba
				Troncoso y Gll, Apdo. 1010
	CMX	905	1000	Havana, Cuba
				Casa "Lavin," Ave. de a Republica 99A
	COA	1175	500	Havana, Cuba
				Juan Fernandez, Aguilar 126, Altes
	COK	1375	250	Havana, Cuba
				Rafael Valdez, Marques Gonzales 52
	COX	1325	200	Havana, Cuba
				10 entre 17 y 19, Vedado
	CRCK	1050	1000	Quebec, Que.
				Chateau Frontenac Hotel
	CRCM	910	5000	Montreal, Que.
				1231 St. Catherine St. W.
	CRCO	880	1000	Ottawa, Ont.
				Chateau Laurier Hotel
	CRCS	950	100	Chicoutimi, Que.
				4 Rue Larouche
	CRCT	840	5000	Toronto, Ont.
				805 Davenport Road
	CRCV	1100	1000	Vancouver, B. C.
				C. N. R. Station Bldg.
	FQN	609	250	St. Pierre, Miq.
	HKK	920	1000	Port-au-Prince, Haiti
				Haitian Government
	HIH	1395	15	San Pedro de M., D.R.
				Domingo Dominguez
	HIJ	1195	15	Santo Domingo, D. R.
				Tuto Baez, Hostos 34
	HIX	1270	1000	Santo Domingo, D. R.
				J. R. Saladin, Director General
	HIZ	1300	10	Santo Domingo, D. R.
				Abbes and Garcia
	KABC	1420	100	San Antonio, Texas
				Texas Theatre Bldg.
	KABR	1420	100	Aberdeen, S. Dak.
				Aberdeen Broadcast Co.
	KADA	1200	100	Ada, Okla.
				C. C. Morris
	KALE	1300	500	Portland, Ore.
				Kale, Inc., New Heathman Hotel
	KARK	890	250	Little Rock, Ark.
				N. S. L. Bldg.
	KASA	1210	100	Elk City, Okla.
				E. M. Woody, Casa Grande Hotel
	KBPS	1420	100	Portland, Ore.
				E. 12th & Hoyt Sts.
	KBTM	1200	100	Jonesboro, Ark.
				Jay P. Beard
	KCMC	1420	100	Texarkana, Ark.
				M. P. Mims, Box 865
	KCRC	1370	100	Enid, Okla.
				Enid Radiophone Co., Oxford Hotel
	KCRJ	1310	100	Jerome, Ariz.
				Chas. C. Robinson, Drawer D.

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KDB 1500 100	Santa Barbara, Calif.
15-17 E. Haley St.	
KDFN 1440 500	Casper, Wyo.
Donald Lewis Hathaway	
KDKA 980 50000	Pittsburgh, Pa.
Hotel Wm. Penn	
KDLR 1210 100	Devils Lake, N. D.
K.D.L.R., Inc., 1025 3rd Street	
KDYL 1290 1000	Salt Lake City, Utah
Ezra Thompson Bldg.	
KECA 1430 1000	Los Angeles, Calif.
1000 S. Hope St.	
KELW 780 500	Burbank, Calif.
3702 Magnolia Park Blvd.	
KERN 1370 100	Bakersfield, Calif.
Elk's Club	
KEX 1180 5000	Portland, Ore.
Oregonian Bldg.	
KFAB 770 5000	Lincoln, Neb.
Cornhusker Hotel	
KFAC 1300 1000	Los Angeles, Calif.
E. L. Cord, 645 So. Mariposa	
KFBB 1280 1000	Great Falls, Mont.
Buttrey Broadcast., Inc.	
KFBI 1050 5000	Ablene, Kans.
Box 345	
KFBK 1310 100	Sacramento, Calif.
Sacramento Bee	
KFDM 560 500	Beaumont, Texas
Beaumont Hotel, P. O. Box 2950	
KFDY 780 1000	Brookings, S. D.
South Dakota State College	
KFEL 920 500	Denver, Colo.
Albany Hotel	
KFEQ 680 2500	St. Joseph, Mo.
Schneider Bldg.	
KFGQ 1370 100	Boone, Iowa
924 W. 2nd St.	
KFH 1300 1000	Wichita, Kans.
124 1/2 S. Market St.	
KFI 640 50000	Los Angeles, Calif.
1000 S. Hope St.	
KFIO 1120 100	Spokane, Wash.
213 Riverside Ave.	
KFIZ 1420 100	Fond du Lac, Wis.
18 W. 1st St.	
KFJB 1200 100	Marshalltown, Iowa
1603 W. Main St.	
KFJI 1210 100	Klamath Falls, Ore.
KFJI Broadcasters, Inc., Willard Hotel	
KFJM 1370 100	Grand Forks, N. D.
University of North Dakota	
KFJR 1300 500	Portland, Ore.
622 Lumbermen's Bldg.	
KFJZ 1370 100	Fort Worth, Texas
Texas Hotel	
KFKA 880 500	Greeley, Colo.
Box 735	
KFKU 1220 1000	Lawrence, Kans.
University of Kansas	
KFNF 890 500	Shenandoah, Iowa
407 Sycamore St.	
KFOR 1210 100	Lincoln, Neb.
Howard Shuman, Hotel Lincoln	
KFOX 1250 1000	Long Beach, Calif.
220 E. Anaheim St.	
KFPL 1310 100	Dublin, Texas
C. C. Baxter, Box 176	
KFPM 1310 15	Greenville, Texas
New Furniture Co.	
KFPW 1210 100	Fort Smith, Ark.
Goldman Hotel	

KFPY 1340 1000	Spokane, Wash.
Symons Bldg.	
KFQD 780 250	Anchorage, Alaska
411—4th Ave.	
KFRC 610 1000	San Francisco, Calif.
1000 Van Ness Ave.	
KFRO 1370 100	Longview, Texas
Voice of Longview	
KFRU 630 500	Columbia, Mo.
KFRU, Inc., 9th and Elm Sts.	
KFSD 600 1000	San Diego, Calif.
U. S. Grant Hotel	
KFSG 1120 500	Los Angeles, Calif.
1100 Giendale Blvd.	
KFUO 550 500	St. Louis, Mo.
801 De Mun St.	
KFVD 1000 250	Los Angeles, Calif.
E. L. Cord, 645 S. Mariposa	
KFVS 1210 100	Capo Girardeau, Mo.
Oscar C. Hirsch, Box 275	
KFWB 950 1000	Hollywood, Calif.
Warner Bros. Motion Pictures, Inc.	
KFXD 1200 100	Nampa, Idaho
Frank E. Hurt, 1024 12th Ave., S.	
KFXJ 1200 100	Grand Jct., Colo.
Hilcrest Manor	
KFXM 1210 100	San Bernardino, Calif.
California Hotel	
KFXR 1310 100	Oklahoma City, Okla.
541 Lighttower Bldg.	
KFYO 1310 100	Lubbock, Texas
Kirksey Bros., Hotel Lubbock	
KFYR 550 1000	Bismarck, N. D.
320 Broadway	
KGA 900 1000	Spokane, Wash.
1023 W. Riverside Ave.	
KGAR 1370 100	Tucson, Ariz.
142 S. 6th Ave.	
KGB 1330 1000	San Diego, Calif.
1012—1st St.	
KGBU 900 500	Ketchikan, Alaska
Mile 5, Wards Cove Rd.	
KGBX 1230 500	Springfield, Mo.
KGBX, Inc., C. of C. Bldg.	
KGBZ 930 1000	York, Neb.
KGBZ Broadcasting Co., 715 Grant Ave.	
KGCA 1270 100	Decorah, Iowa
Charles W. Greenley, 201 Water St.	
KGCU 1240 250	Mandan, N. D.
404 W. Main St.	
KGCX 1310 100	Wolf Point, Mont.
E. E. Krebsbach.	
KGDE 1200 100	Fergus Falls, Minn.
C. L. Jaren	
KGDM 1100 250	Stockton, Calif.
E. F. Pfeffer, 42 S. Calif. St.	
KGDY 1340 250	Huron, S. D.
Voice of S. D., Inc., 347 Dakota Ave.	
KGEK 1200 100	Sterling, Colo.
Elmer G. Beehler, 109 W. 2nd St.	
KGER 1360 1000	Long Beach, Calif.
435 Pine Ave.	
KGEZ 1310 100	Kalispell, Mont.
Donald C. Treloar, Box 1	
KGFF 1420 100	Shawnee, Okla.
9th & Bell Sts.	
KGFG 1370 100	Oklahoma City, Okla.
Okla. Broadcasting Co., 1113 N. Broadway	
KGFI 1500 100	Corpus Christi, Texas
Eagle Broadcasting Co., Inc., P. O. Box 1508	
KGFJ 1200 100	Los Angeles, Calif.
Ben S. McGlashan, 1417 S. Figueroa.	

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KGFK 1500 100 Moorhead, Minn. 722 Center Ave.	KJBS 1070 100 San Francisco, Calif. 1380 Bush St.
KGFL 1370 100 Roswell, N. M. KGFL, Inc., 507 N. Main St.	KJR 970 5000 Seattle, Wash. Skinner Bldg.
KGFW 1310 100 Kearney, Neb. Midway Hotel	KLCN 1290 100 Blytheville, Ark. C. L. Lintzenleh, Main and Division St.
KGFX 630 200 Pierre, S. D. Dana McNeil, 510 Summit Ave.	KLO 1400 500 Ogden, Utah 405—25th St.
KGGC 1420 100 San Francisco, Calif. 230 Eddy St.	KLPM 1240 250 Minot, N. D. John B. Cooley, Box 707
KGGF 1010 1000 Coffeyville, Kans. Coffeyville Journal Bldg.	KLRA 1390 1000 Little Rock, Ark. Arkansas Broadcasting Co., Box 550
KGGM 1230 250 Albuquerque, N. M. Franciscan Hotel	KLS 1440 250 Oakland, Calif. Warner Bros., 2201 Telegraph Ave.
KGHF 1320 250 Pueblo, Colo. C. P. Ritchie, 113 Broadway	KLUF 1370 100 Galveston, Texas Geo. R. Clough, 3327 Ave. P.
KGHI 1200 100 Little Rock, Ark. Lloyd Judd Co., Marlon Hotel	KLX 880 1000 Oakland, Calif. Tribune Tower
KGHL 780 1000 Billings, Mont. 5th & N. Broadway	KLZ 560 1000 Denver, Colo. Shirley-Savoy Hotel
KGIR 1360 1000 Butte, Mont. KGIR, Inc., 121 W. Broadway	KMA 930 500 Shenandoah, Iowa Earl E. May Seed & Nursery Co.
KGIW 1420 100 Alamosa, Colo. Leonard E. Wilson, 326 N. Commercial	KMAC 1370 100 San Antonio, Texas W. W. McAllister, Blue Bonnet Hotel
KGIX 1420 100 Las Vegas, Nev. J. M. Heaton, Box 656	KMBC 950 1000 Kansas City, Mo. Pickwick Hotel
KGKB 1500 100 Tyler, Texas 115 S. College	KMED 1310 100 Medford, Ore. Mrs. W. J. Virgin, Sparta Bldg.
KGKL 1370 100 San Angelo, Texas KGKL, Inc., St. Angulus Hotel	KMJ 580 500 Fresno, Calif. Van Ness & Calaveras Sts.
KGKO 570 500 Wichita Falls, Texas 9th St. & Indiana Ave.	KMLB 1000 100 Monroe, La. Francis Hotel
KGKY 1500 100 Scottsbluff, Neb. Hillard Co., Inc., 1517 1/2 Broadway	KMMJ 740 1000 Clay Center, Neb. The M. M. Johnson Co.
KGMB 1320 250 Honolulu, T. H. Honolulu Broadcasting Co., Box 2663	KMO 1330 250 Tacoma, Wash. KMO, Inc., Hotel Winthrop
KGNF 1430 500 North Platte, Neb. Great Plains Broadcasting Co., W. 12th St.	KMOX 1090 50000 St. Louis, Mo. 401 S. 12th St.
KGNO 1340 250 Dodge City, Kans. First Natl. Bank Bldg.	KMPC 710 500 Beverly Hills, Calif. 9631 Wilshire Blvd.
KGO 790 7500 San Francisco, Calif. 111 Sutter St.	KMTR 570 500 Hollywood, Calif. KMTR Radio Corp., 915 N. Formosa Ave.
KGRS 1410 1000 Amarillo, Texas E. B. Gish, Bellaire Park	KNOW 1500 100 Austin, Texas Driskill Hotel
KGU 750 2500 Honolulu, T. H. Kaploiani at South St.	KNX 1050 25000 Hollywood, Calif. West. Broadcast Co., Inc., 1558 N. Vine St.
KGVO 1200 100 Missoula, Mont. Mosby, Inc., 240 N. Higgins	KOA 830 50000 Denver, Colo. General Electric Co., 1370 Krameria St.
KGW 620 1000 Portland, Ore. 325 Adler St.	KOAC 550 1000 Corvallis, Ore. Oregon State Agricultural College
KGY 1210 100 Olympia, Wash. KGY, Inc., 11th and Capitol Way	KOB 1180 10000 Albuquerque, N. M. Albuquerque Journal, Box 667
KHJ 900 1000 Los Angeles, Calif. 7th at Bixel	KOH 1380 500 Reno, Nev. 440 N. Virginia St.
KHQ 590 1000 Spokane, Wash. Sprague Ave. & Post St.	KOIL 1260 1000 Council Bluffs, Iowa Mons Motor Oil Co.
KICA 1370 100 Clovis, N. M. Southwest Broadcasting Co.	KOIN 940 1000 Portland, Ore. KOIN, Inc., New Heathman Hotel
KID 1320 250 Idaho Falls, Idaho Park Ave. & Broadway	KOL 1270 1000 Seattle, Wash. Northern Life Tower
KIDO 1350 1000 Boise, Idaho Hotel Boise	KOMA 1480 5000 Oklahoma City, Okla. Biltmore Hotel
KIDW 1420 100 Lamar, Colo. Lamar Broadcasting Co., Box 688	KOMO 920 1000 Seattle, Wash. Skinner Bldg.
KIEM 1210 100 Eureka, Calif. Redwood Bdstg. Co., Vance Hotel	KONO 1370 100 San Antonio, Texas Mission Broadcast. Co., St. Anthony Hotel
KIEV 850 250 Glendale, Calif. Cannon System, Ltd., Glendale Hotel	KOOS 1200 250 Marshfield, Ore. H. H. Hanseth, Hall Bldg.
KIT 1310 100 Yakima, Wash. 109 1/2 E. Yakima Ave.	KORE 1420 100 Eugene, Ore. 733 Willamette St.
KIUJ 1310 100 Santa Fe, N. Mex. J. H. Speck	KOTN 1500 100 Pine Bluff, Ark. William H. Chaplin, Hotel Pines

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KOY 1390 500 Phoenix, Ariz. 821 N. Central Ave.	KTM 780 500 Los Angeles, Calif. 214 S. Vermont St.
KPAC 1260 500 Port Arthur, Texas Port Arthur College	KTRB 740 250 Modesto, Calif. McTammany & Bates
KPCB 710 100 Seattle, Wash. Tower Bldg.	KTRH 1330 1000 Houston, Texas KTRH Broadcasting Co., Rice Hotel
KPJM 1500 100 Prescott, Ariz. Scott & Sturm, P. O. Box 782	KTSA 550 1000 San Antonio, Texas Southwest Broadcasting Co., Plaza Hotel
KPO 680 50000 San Francisco, Calif. 111 Sutter St.	KTSM 1310 100 El Paso, Texas P. O. Box 1978
KPOF 880 500 Denver, Colo. Pillar Of Fire, 1845 Champa St.	KTUL 1400 250 Tulsa, Okla. National Bank of Tulsa Bldg.
KPPC 1210 50 Pasadena, Calif. 685 E. Colorado St.	KTW 1220 1000 Seattle, Wash. 77th Ave. & Spring St.
KPQ 1500 100 Wenatchee, Wash. KPQ Bldg.	KUJ 1370 100 Walla Walla, Wash. KUJ, Inc., Marcus Whitman Hotel
KPRC 920 1000 Houston, Texas 2204 Shell Bldg.	KUMA 1420 100 Yuma, Ariz. Dr. A. H. Schermann, Box 267
KQV 1380 500 Pittsburgh, Pa. KQV Broadcasting Co., Investment Bldg.	KUOA 1260 1000 Fayetteville, Ark. KUOA, Inc., Washington Hotel
KQW 1010 1000 San Jose, Calif. 87 E. San Antonio St.	KUSD 890 500 Vermillion, S. D. University of South Dakota
KRE 1370 100 Berkeley, Calif. 2345 Channing Way	KVI 570 1000 Tacoma, Wash. W. R. Rust Bldg.
KREG 1500 100 Santa Ana, Calif. 8rd & Sycamore Sts.	KVL 1370 100 Seattle, Wash. KVL, Inc., 5th and Virginia St.
KRGV 1260 500 Weslaco, Texas KRGV, Inc.	KVOA 1260 500 Tucson, Ariz. Cons. Natl. Bank Bldg.
KRKD 1120 500 Los Angeles, Calif. 615 Spring Arcade Bldg.	KVOD 920 500 Denver, Colo. Continental Oil Bldg.
KRKO 1370 50 Everett, Wash. Lee Mudgett, 2814 Rucker Ave.	KVOO 1140 25000 Tulsa, Okla. Wright Bldg.
KRLD 1040 10000 Dallas, Texas KRLD Radio Corp., Adolphus Hotel	KVOR 1270 1000 Colorado Spg., Colo. Mining Exchange Bldg.
KRMD 1310 100 Shreveport, La. Jefferson Hotel	KVOS 1200 100 Bellingham, Wash. 115 W. Magnolia St.
KROW 930 500 Oakland, Calif. 1803 Franklin St.	KWCR 1430 250 Cedar Rapids, Iowa Hotel Montrose
KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club	KWEA 1210 100 Shreveport, La. Spring & Fannin Sts.
KSAC 580 500 Manhattan, Kans. State College of Agriculture	KWFF 1210 100 Hilo, Hawaii Hilo Broadcasting Co., Ltd.
KSCJ 1330 1000 Sioux City, Iowa Perkins Bros. Co., 415 Douglas St.	KWGG 1200 100 Stockton, Calif. Medico-Dental Bldg.
KSD 550 1000 St. Louis, Mo. 12th & Olive Sts.	KWJJ 1040 500 Portland, Ore. 622 S. W. Salmon St.
KSEI 900 250 Pocatello, Idaho Radio Service Corp., 141 S. 6th Ave.	KWK 1350 1000 St. Louis, Mo. Thomas Patrick, Inc., Hotel Chase
KSL 1130 50000 Salt Lake City, Utah Vermont Bldg.	KWKC 1370 100 Kansas City, Mo. 39th & Main Sts.
KSLM 1370 100 Salem, Ore. Oregon Radio, Inc.	KWKH 1100 10000 Shreveport, La. Spring & Fannin Sts.
KSO 1320 500 Des Moines, Iowa Des Moines Register & Tribune	KWLC 1270 100 Decorah, Iowa Luther College
KSOO 1110 1000 Sioux Falls, S. D. Sioux Falls Brdest. Assn., Carpenter Hotel	KWSC 1220 1000 Pullman, Wash. State College of Washington
KSTP 1460 10000 St. Paul, Minn. St. Paul Hotel	KWTN 1210 100 Watertown, S. D. Citizens Bank Bldg.
KSUN 1200 100 Lowell, Ariz. Copper Electrical Co., Drawer C	KWTO 560 1000 Springfield, Mo. KGBX Inc.
KTAB 560 1000 San Francisco, Calif. 5th & Mission Sts.	KWYO 1370 100 Sheridan, Wyo. Big Horn Brdestg. Co.
KTAR 620 1000 Phoenix, Ariz. 116 N. Central Ave.	KXA 760 250 Seattle, Wash. American Radio Tel. Co., 218 Bigelow Bldg.
KTAT 1240 1000 Fort Worth, Texas Ft. Worth Natl. Bank Bldg.	KXL 1420 100 Portland, Ore. KXL Broadcasters, Multnomah Hotel
KTBS 1450 1000 Shreveport, La. Box 1042	KXO 1500 100 El Centro, Calif. F. M. Bowles, Box 140
KTFI 1240 1000 Twin Falls, Idaho Radio Broadcasting Corp., Box 521	KXRO 1310 100 Aberdeen, Wash. KXRO, Inc., Hotel Morek.
KTHS 1060 10000 Hot Springs, Ark. Chamber of Commerce, Box 886	KXYZ 1440 250 Houston, Texas Fannin & Rusk Sts.

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KYA 1230 1000 San Francisco, Calif. 988 Market St.	WAML 1310 100 Laurel, Miss. Southland Radio Corp., Box 26
KYW 1020 10000 Philadelphia, Pa. 310 S. Michigan Ave.	WAPI 1140 5000 Birmingham, Ala. Protective Life Bldg.
KZEG 720 1000 Manila, P. I. Erlanger & Gallinger, Inc.	WARD 1400 500 Brooklyn, N. Y. 427 Flatbush Ave., Ext.
KZRM 618.5 50000 Manila, P. I. 601 Escolta	WASH 1270 500 Grand Rapids, Mich. Grand Rapids Natl. Bank Bldg.
NAA 690 1000 Arlington, Va. United States Navy	WATR 1190 100 Waterbury, Conn. WATR Co. Inc. 47 Grand St.
RDN 680 500 San Salvador, E. S. Republic of El Salvador	WAVE 940 1000 Louisville, Ky. WAVE, Inc., 1525 Brown Hote l
TGW 565 10000 Guatemala, Gua. Gobierno de Guatemala	WAWZ 1350 250 Zarephath, N. J. Pillar of Fire.
TGX 1400 150 Guatemala City	WAZL 1420 100 Hazleton, Pa. Hazleton Broadcasting Service, Inc.
TIGR 912 75 San Jose, C. R. Government of Costa Rica	WBAA 890 1000 West Lafayette, Ind. Purdue University
TIFB 714 30 San Jose, C. R.	WBAL 1060 10000 Baltimore, Md. Lexington Bldg.
TIGA 1014 30 Cartago, C. R.	WBAP 800 50000 Fort Worth, Texas Blackstone Hotel
TIGP 800 75 San Jose, C. R. Gonzalo Pinto H. Apt. 225	WBAX 1210 100 Wilkes-Barre, Pa. John H. Stenger, Jr., 70 S. Main St.
TIRCA 1100 500 San Jose, C. R. Perry Girtton, Apt. 225	WBBC 1400 500 Brooklyn, N. Y. 552-54 Atlantic Ave.
TISO 550 250 San Jose, C. R. P. F. Saborio, Apt. 1354	WBBL 1210 100 Richmond, Va. 1627 Monument Ave.
TIVL 835 30 San Jose, C. R.	WBBM 770 25000 Chicago, Ill. WBBM Broadcasting Corp., Wrigley Bldg.
VAS 685 2000 Glace Bay, N. S. Canadian Marconi Co., Ltd.	WBBR 1300 1000 Brooklyn, N. Y. 124 Columbia Heights
VESEK 1195 10 Montmagny, Que. J. A. Marquis, P. O. Box 52	WBBZ 1200 100 Ponca City, Okla. C. L. Carrell, 407 W. South Ave.
VOAC 1300 40 St. John's, Nfld.	WBCM 1410 500 Bay City, Mich. James E. Davidson, Hotel Wenonah
VOAS 940 100 St. John's N. F. Ayre & Sons, Ltd., Water St.	WBen 900 1000 Buffalo, N. Y. WBen, Inc., Hotel Statler
VOGY 840 400 St. John's, N. F. Newfoundland Hotel	WBEO 1310 100 Marquette, Mich. 146 W. Washington St.
VONF 950 5000 St. John's N. F. DonInlon Broadcasting Co., Ltd., Box 135	WBHS 1200 100 Huntsville, Ala. Virgil V. Evans
VOWR 681 500 St. John's, N. F. Wesley United Church, Box 157	WBIG 1440 500 Greensboro, N. C. Box 408
WAAB 1410 500 Boston, Mass. 21 Brookline Ave.	WBNO 1200 100 New Orleans, La. Hotel Marbero
WAAF 920 500 Chicago, Ill. 836 Exchange Ave.	WBNS 1430 500 Columbus, O. 33 N. High St.
WAAT 940 300 Jersey City, N. J. Bremer Broadcasting Corp., 50 Journal Sq	WBNX 1350 250 New York, N. Y. 260 E. 161st St.
WAAW 660 500 Omaha, Neb. Omaha Grain Exchange	WBOQ 860 50000 New York, N. Y. Atlantic Broadcasting Corp.
WABC 860 50000 New York, N. Y. 455 Madison Ave.	WBOW 1310 100 Terre Haute, Ind. Banks of Wabash, Inc., 19 Beach Block
WABI 1200 100 Bangor, Maine First Universalist Society Park St.	WBRB 1210 100 Red Bank, N. J. 63 Broad St.
WABY 1370 100 Albany, N. Y. Colonial Display House	WBRC 936 1000 Birmingham, Ala. Bankhead Hotel
WACO 1420 100 Waco, Texas Amicable Bldg.	WBRE 1310 100 Wilkes-Barre, Pa. Louis G. Baltimore, 16 N. Main
WADC 1320 1000 Akron, Ohio Allen T. Simmons, P. O. Box 29	WBSO 920 500 Babson Park, Mass. Drawer B
WAGF 1370 100 Dothan, Ala. P. O. Box 25	WBT 1080 50000 Charlotte, N. C. Station WBT, Inc., Wilder Bldg.
WAGM 1420 100 Presque Isle, Me. Aroostook Broadcasting Corp., Main St.	WBTM 1370 100 Danville, Va. Miller Bldg.
WAIU 640 500 Columbus, Ohio Deahler-Wallick Hotel	WBZ 990 50000 Boston, Mass. Hotel Bradford
WALA 1380 500 Mobile, Ala. Battle House	WBZA 990 1000 Springfield, Mass. Hotel Kimball
WALR 1210 100 Zanesville, Ohio First Trust & Sava. Bank Bldg.	WCAC 600 500 Storrs, Conn. Connecticut State College

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WCAD 1220	500	Canton, N. Y. St. Lawrence University
WCAE 1220	1000	Pittsburgh, Pa. 6th Ave. & Smithfield St.
WCAL 1250	1000	Northfield, Minn. St. Olaf College
WCAM 1280	500	Camden, N. J. City of Camden, City Hall
WCAO 600	500	Baltimore, Md. 811 W. Lanvale St.
WCAP 1280	500	Asbury Park, N. J. Convention Hall
WCAT 1200	100	Rapid City, S. D. South Dakota State School of Mines
WCAU 1170	50000	Philadelphia, Pa. WCAU Broadcasting Co., 1622 Chestnut
WCAX 1200	100	Burlington, Vt. 203 College St.
WCAZ 1070	100	Carthage, Ill. 97 1/2 Adams St.
WCBA 1440	500	Allentown, Pa. B. Bryan Musselman, 39-41 10th St.
WCBD 1080	5000	Waukegan, Ill. 75 E. Wacker Drive, Chicago
WCBM 1370	100	Baltimore, Md. Keith Theatre Bldg.
WCBS 1210	100	Springfield, Ill. WCBS, Inc., 208 1/2 S. 5th.
WCCO 810	50000	Minneapolis, Minn. Nicollet Hotel
WCFL 970	1500	Chicago, Ill. 666 Lake Shore Drive
WCHS 580	500	Charleston, W. Va. WOBV, Inc., Ruffner Hotel
WCKY 1490	5000	Covington, Ky. 6th & Madison Sts.
WCLO 1200	100	Janesville, Wis. 200 E. Milwaukee St.
WCLS 1310	100	Joliet, Ill. WCLS, Inc., 301 E. Jefferson St.
WCNW 1500	100	Brooklyn, N. Y. Arthur Faske, 1525 Pitkin Ave.
WCOA 1340	500	Pensacola, Fla. San Carlos Hotel
WCOC 880	500	Meridian, Miss. Box 603
WCOL 1210	100	Columbus, Ohio WCOL Inc., 30 N. High St.
WCRW 1210	100	Chicago, Ill. Clinton R. White, 2756 Pine Grove Ave.
WCSC 1360	500	Charleston, S. C. Francis Marlon Hotel
WCSH 940	1000	Portland, Me. 579 Congress St.
WDAE 1220	1000	Tampa, Fla. Tampa Times Co., Tampa Terrace
WDAF 610	1000	Kansas City, Mo. 1729 Grand Ave.
WDAG 1410	1000	Amarillo, Texas Box 306
WDAH 1310	100	El Paso, Texas Box 1976
WDAS 1370	100	Philadelphia, Pa. WDAS Brcdstg. Co., Inc., Broadwood Hotel
WDAY 940	1000	Fargo, N. D. W.D.A.Y., Inc., Black Bldg., 118 Broadway
WDBJ 930	1000	Roanoke, Va. Times World Corp., P. O. Box 150
WDBO 580	250	Orlando, Fla. 555 N. Orange Ave.
WDEL 1120	250	Wilmington, Del. WDEL, Inc., 10th and King Sts.
WDEV 550	500	Waterbury, Vt. Harry C. Whitehill, Stowe St.
WDGY 1180	1000	Minneapolis, Minn. Dr. Geo. W. Young, 909 W. Broadway
WDNC 1500	100	Durham, N. C. Washington Duke Hotel
WDOD 1280	1000	Chattanooga, Tenn. WDOD Broadcasting Corp., Hotel Patten
WDRC 1330	1000	Hartford, Conn. WDRC, Inc., Corning Bldg., 11 Asylum St.
WDSU 1250	1000	New Orleans, La. WDSU Inc., Hotel Monteleone
WDZ 1070	100	Tuscola, Ill. James L. Bush, Star Store Bldg.
WEAF 660	50000	New York, N. Y. 30 Rockefeller Plaza
WEAN 780	500	Providence, R. I. New Crown Hotel
WEBC 1290	1000	Superior, Wis. Spaulding Hotel, Duluth, Minn.
WEBQ 1210	100	Harrisburg, Ill. 100 E. Poplar St.
WEBR 1310	100	Buffalo, N. Y. Howell Broadcasting Co., Inc., 735 Main
WEDC 1210	100	Chicago, Ill. Emil Denmark, 3860 Ogden Ave.
WEED 1420	100	Rocky Mount, N. C. Wm. Avera Wynne, Box 221
WEEL 590	1000	Boston, Mass. 182 Tremont St.
WEUU 830	1000	Reading, Pa. Berks Broadcasting Co., 533 Penn.
WEHC 1420	100	Charlottesville, Va. 7th & Main Sts.
WEHS 1420	100	Cicero, Ill. WEHS, Inc., 6138 W. Cermak Rd.
WELL 1420	50	Battle Creek, Mich. Enquirer News, 38 W. State St.
WENR 870	50000	Chicago, Ill. 222 N. Bank Drive
WESG 1090	1000	Elmira, N. Y. Mark Twain Hotel
WEVD 1300	500	New York, N. Y. Jewish Daily Forward, Hotel Claridge
WEW 760	1000	St. Louis, Mo. St. Louis University, 221 N. Grand Blvd.
WEXL 1310	50	Royal Oak, Mich. 212 W. 6th St.
WFAA 800	50000	Dallas, Texas Baker Hotel
WFAB 1300	1000	New York, N. Y. Fifth Avenue Broadcasting Corp.
WFAM 1200	100	South Bend, Ind. South Bend Tribune, 225 W. Colfax Ave.
WFAS 1210	100	White Plains, N. Y. Hotel Roger Smith
WFBC 1300	1000	Greenville, S. C. Imperial Hotel
WFBE 1200	100	Cincinnati, Ohio WFBE, Inc., Hotel Sinton
WFBG 1310	100	Altoona, Pa. Gable Broadcasting Co. 12th Av. & 13th St.
WFBL 1360	1000	Syracuse, N. Y. Onondaga Hotel
WFBM 1230	1000	Indianapolis, Ind. 48 Monument Circle
WFBR 1270	500	Baltimore, Md. 7 St. Paul St.
WFDL 1310	100	Flint, Mich. Union Industrial Bldg.
WFEA 1340	600	Manchester, N. H. Carpenter Hotel

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	WFI	560	500	Philadelphia, Pa.
	WFI Broadcasting Co., 801 Market			
	WFLA	620	1000	Clearwater, Fla.
	Box 119			
	WGAL	1500	100	Lancaster, Pa.
	WGAL, Inc., 8 W. King St.			
	WGAR	1450	500	Cleveland, Ohio
	WGAR Broadcasting Co., Hotel Statler			
	WGBB	1210	100	Freeport, N. Y.
	H. H. Carman, 64 S. Grove St.			
	WGFB	630	500	Evansville, Ind.
	519 Vine St.			
	WGBI	880	500	Scranton, Pa.
	116 N. Washington Ave.			
	WGCM	1210	100	Guilford, Miss.
	Great Southern Hotel			
	WGES	1360	500	Chicago, Ill.
	128 N. Crawford Ave.			
	WGH	1310	100	Newport News, Va.
	2813 Washington Ave.			
	WGL	1370	100	Fort Wayne, Ind.
	F. C. Zieg, 213 W. Main St.			
	WGN	720	50000	Chicago, Ill.
	WGN, Inc., Tribune Tower			
	WGNV	1210	100	Chester, N. Y.
	Peter Goelet (Orange County)			
	WGPC	1420	100	Albany, Ga.
	Rylander Theatre Bldg.			
	WGR	550	1000	Buffalo, N. Y.
	Rand Bldg.			
	WGST	890	250	Atlanta, Ga.
	Ansley Hotel			
	WGY	790	50000	Schenectady, N. Y.
	1 River Road			
	WHA	940	2500	Madison, Wis.
	University of Wisconsin			
	WHAM	1150	50000	Rochester, N. Y.
	100 Carlson Road			
	WHAS	820	50000	Louisville, Ky.
	300 W. Liberty St.			
	WHAT	1310	100	Philadelphia, Pa.
	Public Ledger Bldg.			
	WHAZ	1300	500	Troy, N. Y.
	8th St.			
	WHB	860	500	Kansas City, Mo.
	WHB Broadcasting Co., Scarritt Bldg.			
	WHBC	1200	100	Canton, Ohio
	Edw. P. Graham, 319 Tusco St., W.			
	WHBD	1370	100	Mount Orab, Ohio
	F. P. Moler			
	WHBF	1210	100	Rock Island, Ill.
	Hotel Harms			
	WHBI	1250	1000	Newark, N. J.
	100 Shipman St.			
	WHBL	1410	500	Shoboygan, Wis.
	Press Publishing Co., Press Bldg.			
	WHBQ	1370	100	Memphis, Tenn.
	Brdestg. Sta. WNBQ, Inc., Hotel Claridge			
	WHBU	1210	100	Anderson, Ind.
	Anderson Broadcasting Corp., Box 816			
	WHBY	1200	100	Green Bay, Wis.
	WHBY, Inc., Bellin Bldg.			
	WHDF	1370	100	Calumet, Mich.
	Box 643			
	WHDH	830	1000	Boston, Mass.
	Matheson Radio Co., 62 Boylston			
	WHDL	1420	100	Olean, N. Y.
	Exchange Natl. Bank Bldg.			
	WHEB	740	250	Portsmouth, N. H.
	Box 522, 39 Congress St.			
	WHEC	1430	500	Rochester, N. Y.
	WHEC, Inc., 40 Franklin St.			

	WHEF	1500	100	Kosciusko, Miss.
	417 W. Adams St.			
	WHFC	1420	100	Cicero, Ill.
	WHFC, Inc., 6138 W. Cernak Road			
	WHIS	1410	250	Bluefield, W. Va.
	Blair St.			
	WHJB	620	250	Greensburg, Pa.
	Penn-Albert Hotel, 128 Pa. Ave.			
	WHK	1390	1000	Cleveland, Ohio
	1311 Terminal Tower			
	WHN	1010	1000	New York, N. Y.
	1540 Broadway			
	WHO	1000	50000	Des Moines, Iowa
	Central Brdestg. Co., 914 Walnut St.			
	WHOM	1450	250	Jersey City, N. J.
	2870 Boulevard			
	WHP	1430	500	Harrisburg, Pa.
	WHP, Inc., 216 Locust St.			
	WIBA	1280	1000	Madison, Wis.
	111 King St.			
	WIBG	970	100	Glenside, Pa.
	WIBG, Inc., Keewick Bldg.			
	WIBM	1370	100	Jackson, Mich.
	WIBM, Inc., 306 W. Michigan Ave.			
	WIBU	1210	100	Poynette, Wis.
	Wm. C. Forrest, R. F. D. No. 3			
	WIBW	580	1000	Topeka, Kans.
	11th & Topeka Blvd.			
	WIBX	1200	100	Utica, N. Y.
	WIBX, Inc., 1st Natl. Bank Bldg.			
	WICC	600	250	Bridgeport, Conn.
	Southern Conn. Broadcasting Corp.			
	WIL	1200	100	St. Louis, Mo.
	Melbourne Hotel			
	WILL	890	250	Urbana, Ill.
	University of Illinois			
	WILM	1420	100	Wilmington, Del.
	920 King St.			
	WIND	560	1000	Gary, Ind.
	504 Broadway			
	WINS	1180	1000	New York, N. Y.
	110 E. 58th St.			
	WIOD	1300	1000	Miami, Fla.
	Herald Bldg.			
	WIP	610	1000	Philadelphia, Pa.
	Gimbel Bldg.			
	WIS	560	1000	Columbia, S. C.
	Station WIS, Inc., 1811 Main St.			
	WISN	1120	250	Milwaukee, Wis.
	123 W. Michigan St.			
	WJAC	1310	100	Johnstown, Pa.
	WJAC, Inc., Locust St.			
	WJAG	1060	1000	Norfolk, Neb.
	Norfolk Daily News			
	WJAR	890	500	Providence, R. I.
	Outlet Co., Weybossett St.			
	WJAS	1290	1000	Pittsburgh, Pa.
	Chamber of Commerce Bldg.			
	WJAX	900	1000	Jacksonville, Fla.
	City of Jacksonville			
	WJAY	610	500	Cleveland, Ohio
	1224 Huron Road			
	WJBC	1200	100	Bloomington, Ill.
	Kaskaskia Broadcasting Co.			
	WJBK	1500	100	Detroit, Mich.
	6559 Hamilton Ave.			
	WJBL	1200	100	Decatur, Ill.
	Gushard Bldg.			
	WJO	1420	100	Baton Rouge, La.
	Baton Rouge Broadcasting Co., Inc.			
	WJBW	1200	100	New Orleans, La.
	C. C. Carlson, 2743 Dumaine St.			

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WJBY 1210 100 Gadsden, Ala. Gadsden Broadcasting Co., 112 N. 8th St.	WLIT 560 500 Philadelphia, Pa. 8th & Market Sts.
WJDX 1270 1000 Jackson, Miss. Lamar Life Bldg.	WLLH 1370 100 Lowell, Mass. Albert S. Moffat, Box D
WJEF 1210 100 Hagerstown, Md. Lovely Dame Bldg.	WLNH 1310 100 Laconia, N. H. 523 Main St.
WJIM 1210 100 Lansing, Mich. Capital City Brdcastg. Co.	WLS 870 50000 Chicago, Ill. 1230 W. Washington Blvd.
WJJD 1130 20000 Chicago, Ill. WJJD, Inc., 201 N. Wells St.	WLTH 1400 500 Brooklyn, N. Y. 305 Washington St.
WJMS 1420 100 Ironwood, Mich. WJMS, Inc., St. James Hotel	WLVA 1200 100 Lynchburg, Va. 915 Main St.
WJR 750 10000 Detroit, Mich. WJR, Inc., Fisher Bldg.	WLW 700 50000 Cincinnati, Ohio 1329 Arlington St.
WJSV 1460 10000 Washington, D. C. Shoreham Bldg.	WLWL 1100 5000 New York, N. Y. 415 W. 59th St.
WJTL 1370 100 Atlanta, Ga. Oglethorpe University	WMAL 630 250 Washington, D. C. 712—11th St., N. W.
WJW 1210 100 Akron, Ohio WJW, Inc., 41 S. High St.	WMAQ 670 5000 Chicago, Ill. Merchandise Mart
WJZ 750 50000 New York, N. Y. 30 Rockefeller Plaza	WMAS 1420 100 Springfield, Mass. WMA8, Inc., 70 Chestnut St.
WKAQ 1240 1000 San Juan, P. R. Radio Corp. of Porto Rico, P. O. Box 858	WMAZ 1180 1000 Macon, Ga. 211 Cotton Ave.
WKAR 1040 1000 East Lansing, Mich. Michigan State College	WMBC 1420 100 Detroit, Mich. 7310 Woodward Ave.
WKBB 1500 100 East Dubuque, Ill. Richard W. Hoffman	WMBD 1440 500 Peoria, Ill. 114 N. Madison St.
WKBF 1400 500 Indianapolis, Ind. 540 N. Meridian St.	WMBG 1210 100 Richmond, Va. 914 W. Broad St.
WKBH 1380 1000 LaCrosse, Wis. WKBH, Inc., 409 Main St.	WMBH 1420 100 Joplin, Mo. 1334 Roosevelt St.
WKBI 1420 100 Cicero, Ill. WKBI Inc., 6138 W. Cermak Road	WMBI 1080 5000 Chicago, Ill. 153 Institute Place
WKBN 570 500 Youngstown, Ohio 17 N. Champton St.	WMBO 1310 100 Auburn, N. Y. WMBO, Inc., Metcalf Bldg.
WKBO 1200 100 Harrisburg, Pa. Penn Harris Hotel	WMBQ 1500 100 Brooklyn, N. Y. Pau J. G. Gollhofer, 95 Leonard St.
WKBV 1500 100 Richmond, Ind. Knox Radio Corp., Box 308	WMBR 1370 100 Jacksonville, Fla. F. J. Reynolds, Carling Hotel
WKBW 1480 5000 Buffalo, N. Y. Rand Bldg.	WMC 780 1000 Memphis, Tenn. WMC, Inc., Hotel Gayoso
WKBZ 1500 100 Muskegon, Mich. Karl L. Ashbacher & Sons	WMC4 570 500 New York, N. Y. 1607 Broadway
WKEU 1500 100 LaGrange, Ga. Radio Station WKEU, 906 Hill St.	WMEX 1500 100 Boston, Mass. The Northern Corp., Hotel Manger
WKJC 1200 100 Lancaster, Pa. 16 W. King St.	WMFD 1370 100 Wilmington, N. C. Richard Austin Dunlea
WKOK 1210 100 Sunbury, Pa. 1150 N. Front St.	WMFE 1380 250 New Britain, Conn. William J. Sanders
WKRC 550 1000 Cincinnati, Ohio WKRC, Inc., Hotel Alms	WMFF 1310 100 Plattsburg, N. Y. Plattsburg Broadcasting Corp.
WKY 900 1000 Oklahoma City, Okla. Plaza Court Bldg.	WMFG 1210 100 Hibbing, Minn. Head of the Lakes Brdcastg. Co.
WKZO 590 1000 Kalamazoo, Mich. John E. Fetser, Burdick Hotel	WMFI 900 500 New Haven, Conn. Patrick J. Goode
WLAC 1470 5000 Nashville, Tenn. 150—4th Ave. No.	WMMN 890 250 Fairmont, W. Va. A. M. Rowe, Inc., 325 Main St.
WLAP 1420 100 Lexington, Ky. Main & Esplanade	WMPC 1200 100 Lapeer, Mich. 81 Liberty St.
WLB 1250 1000 Minneapolis, Minn. University of Minnesota	WMT 600 500 Waterloo, Iowa 3rd & Lafayette Sts.
WLBC 1310 100 Muncie, Ind. D. A. Burton, Anthony Bldg.	WNAC 1230 1000 Boston, Mass. 21 Brookline Ave.
WLBK 1420 100 Kansas City, Kans. WLBK Broadcasting Co., Huron Bldg.	WNAD 1010 500 Norman, Okla. University of Oklahoma
WLBL 900 2500 Stevens Point, Wis. Wisconsin Dept. of Agriculture and Markets	WNAX 570 1080 Yankton, S. D. House of Gurney, Inc., 2nd and Capital St.
WLBW 1260 1000 Dayton, Ohio 39 S. Ludlow St.	WNB 1500 100 Binghamton, N. Y. Arlington Hotel
WLBZ 620 500 Bangor, Me. Maine Broadcasting Co., Inc., 100 Main	WNBH 1310 100 New Bedford, Mass. 251 Union St.

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WNBO 1200 100 Washington, Pa. 319 E. Beau St.	WQDM 1370 100 St. Albans, Vt. 42 N. Main St.
WNBR 1430 500 Memphis, Tenn. Memphis Broadcasting Co., Hotel DeVoy	WQDX 1210 100 Thomasville, Ga. H. Wimpy, 135 E. Jackson St.
WNBX 1260 1000 Springfield, Vt. WNBX Broadcasting Corp., 39 Main St.	WRAK 1370 100 Williamsport, Pa. WRAK, Inc., 244 W. 4th St.
WNBZ 1290 50 Saranac Lake, N. Y. Smith & Mace, 70 Broadway	WRAW 1310 100 Reading, Pa. Reading Broadcasting Co., 533 Penn St.
WNEL 1290 500 San Juan, P. R. Box 1252	WRAX 920 250 Philadelphia, Pa. WRAX Broadcasting Co., 217 S. Broad St.
WNEW 1250 1000 Newark, N. J. Wodaam Corp., 1060 Broad	WRBL 1200 100 Columbus, Ga. Royal Theatre Bldg.
WNOX 1010 1000 Knoxville, Tenn. WNOX, Inc., Hotel Andrew Johnson	WRBX 1410 250 Roanoke, Va. P. O. Box 2389
WNRA 1420 100 Muscle Shoals, Ala. Kathryn Jones, P. O. Box 486, Sheffield, Ala.	WRC 950 500 Washington, D. C. National Press Bldg.
WNYC 810 1000 New York, N. Y. Centre & Duane Sts.	WRDO 1370 100 Augusta, Ma. WRDO, Inc., Augusta House
WOAI 1190 50000 San Antonio, Texas Southland Industries, Inc., 1038 Navarro	WRDW 1500 100 Augusta, Ga. Virgil V. Evans Co., 309 8th St.
WOC 1370 100 Davenport, Iowa Palmer School of Chiropractic	WREC 600 500 Memphis, Tenn. WREC, Inc., Hotel Peabody
WOCL 1210 50 Jamestown, N. Y. A. E. Newton, 840 N. Main St.	WREN 1220 1000 Lawrence, Kans. Jenny Wren Co., 8th and Vermont St.
WOI 640 5000 Ames, Iowa Iowa State College	WRGA 1500 100 Rome, Ga. 10 Third Ave.
WOKO 1430 500 Albany, N. Y. WOKO, Inc., Hotel Ten Eyck	WRJN 1370 100 Racine, Wis. Racine Broadcasting Corp., Hotel Racine
WOL 1310 100 Washington, D. C. American Broadcasting Co., Annapolis Hotel	WROK 1410 500 Rockford, Ill. 109 So. Water St.
WOMT 1210 100 Manitowoc, Wis. Francis M. Kadow, Box 326	WROL 1310 100 Knoxville, Tenn. Stuart Broadcasting Corp., 524 S. Gay
WOOD 1270 500 Grand Rapids, Mich. Grand Rapids Natl. Bank Bldg.	WRR 1280 500 Dallas, Texas City of Dallas, Southland Life Bldg.
WOPI 1500 100 Bristol, Tenn. 22nd & State Sts.	WRUF 830 5000 Gainesville, Fla. State University
WOR 710 5000 Newark, N. J. 147 Market St.	WRVA 1110 5000 Richmond, Va. Larus & Bros Co., Inc., 22nd and Gary St.
WORC 1280 500 Worcester, Mass. Alfred F. Kleindienst, 60 Franklin St.	WSAI 1330 1000 Cincinnati, Ohio Crosley Radio Corp., 1329 Arlington
WORK 1000 1000 York, Pa. York Broadcasting Co., 15 S. Beaver St.	WSAJ 1310 100 Grove City, Pa. Grove City College, 418 Poplar St.
WOS 630 500 Jefferson City, Mo. State Highway Control, Capitol Bldg.	WSAN 1440 500 Allentown, Pa. WSAN, Inc., 39 10th St.
WOSU 570 750 Columbus, Ohio Ohio State University	WSAR 1450 250 Fall River, Mass. Academy of Music Bldg.
WOV 1130 1000 New York, N. Y. 16 E. 42nd St.	WSAZ 1190 1800 Huntington, W. Va. WSAZ, Inc., P. O. Box 729
WOW 590 1000 Omaha, Neb. Woodmen of the World, 4th and Farnam	WSB 740 50000 Atlanta, Ga. Atlanta Journal, 7 N. Forsyth St.
WOWO 1160 10000 Fort Wayne, Ind. Main Auto Supply Co., 213 W. Main	WSBC 1210 100 Chicago, Ill. Gene T. Dyer, 1258 S. Michigan Ave.
WPAD 1420 100 Paducah, Ky. 2201 Broadway	WSBT 1360 500 South Bend, Ind. South Bend Tribune, 225 W. Colfax Ave.
WPEN 920 250 Philadelphia, Pa. 22nd & Walnut Sts.	WSFA 1410 500 Montgomery, Ala. Jefferson Davis Hotel
WPFB 1370 100 Hattiesburg, Miss. Otis P. Eure, Box 530	WSGN 1310 100 Birmingham, Ala. R. B. Broyles, Tutwiler Hotel
WPG 1100 5000 Atlantic City, N. J. Convention Hall	WSIX 1210 100 Springfield, Tenn. 638 Tire & Vulcanizing Co.
WPHR 880 100 Petersburg, Va. WLBG, Inc., Medical Arts Bldg.	WSJS 1310 100 Winston-Salem, N. C. Winston-Salem Journal Co., 416 N. Marshall
WPRO 630 250 Providence, R. I. Cherry & Webb Bldg., 15 Chestnut	WSM 650 50000 Nashville, Tenn. 301-7th Ave. No.
WPTF 680 5000 Raleigh, N. C. 324 Fayetteville St.	WSMB 1320 500 New Orleans, La. WSMB, Inc., Maison Blanche Bldg.
WQAM 560 1000 Miami, Fla. Miami Bldg. Co., Inc., 327 N. E. 1st Ave.	WSMK 1380 200 Dayton, Ohio WSMK Inc., 4th and Main St.
WQAN 880 250 Scranton, Pa. Scranton Times, 149 Penn Ave.	WSOC 1210 100 Charlotte, N. C. WSOC, Inc., Box 730
WQBC 1360 500 Vicksburg, Miss. Delta Broadcasting Co., Hotel Vicksburg	WSPA 920 1000 Spartanburg, S. C. Virgil V. Evans, Ravenel and Avant St.

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WSPD 1340 1000 Toledo, Ohio Toledo Broadcasting Co., 605 Jefferson	W6XAI 1550 1000 Bakersfield, Calif. Pioneer Mercantile Co.
WSUI 880 500 Iowa City, Iowa State University of Iowa	W9XBY 1530 1000 Kansas City, Mo. First National Television Inc.
WSUN 620 1000 St. Petersburg, Fla. Chamber of Commerce	XEA 1060 125 Guadalupe, Jal. Alberto Palos Souza, Apdo. 197
WSVA 550 500 Staunton, Va. Marlon K. Gilliam	XEAA 920 200 Mexicali, B. C. Apdo. 42
WSVS 1370 50 Buffalo, N. Y. 666 E. Delavan Ave.	XEAE 980 250 Tijuana, B. C. Apt. 42
WSYB 1500 100 Rutland, Vt. Philip Weiss Music Co., 80 West St.	XEAF 990 250 Nogales, Son. Francisco G. Elias, Hotel Central
WSYR 570 250 Syracuse, N. Y. E. Onondaga & S. Warren Sts.	XEAI 1240 100 Mexico City, D. F. Carlos Gonzales Caballero, Insurgentes 366
WTAD 1440 500 Quincy, Ill. Illinois Brdcastg. Corp., State and 6th	XEAL 660 1000 Mexico City, D. F. Apdo. 1903
WTAG 580 500 Worcester, Mass. 18 Franklin St.	XEAM 750 50 Nuevo Laredo, Tams. Edificio Banco Longoria
WTAM 1070 50000 Cleveland, Ohio 1367 E. 6th St.	XEAO 560 250 Mexicali, B. C. Luis L. Castro, C. Altamirano 156
WTAQ 1330 1000 Eau Claire, Wis. Gillette Rubber Co., Hotel Eau Claire	XEAW 960 10000 Reynosa, Tams. Internacional Broadcasting Co., S. A.
WTAR 780 500 Norfolk, Va. WTAR Radio Corp., Wainwright Bldg.	XEAZ 1420 7 Leon, Guan.
WTAW 1120 500 College Station, Tex. Agricultural and Mechanical College	XEB 1030 10000 Mexico City, D. F. El Buen Tono, S. A., Apdo. 79-44
WTAX 1210 100 Springfield, Ill. WTAX, Inc., 416 E. Capitol Ave.	XEBC 760 2500 Agua Caliente, B. C. Agua Caliente Hotel
WTBO 800 250 Cumberland, Md. Associated Brdcastg. Corp., Box 794	XECW 1310 10 Mexico City, D. F. Maria Elena Bravo de Cordero Ave. Juarez 104
WTCN 1250 1000 Minneapolis, Minn. Wesley Temple Bldg.	XED 1160 500 Guadalupe, Jal. Cin. Radiofonografica, Apdo. 197
WTEL 1310 100 Philadelphia, Pa. Broad & Erie Ave.	XEE 1210 50 Durango, Dgo. 20 de Nov. 112 (Apdo. 148)
WTFI 1450 500 Athens, Ga. 133 E. Washington St.	XEFA 1180 500 Mexico City, D. F. Eduardo Limon Segul, Meditarraneo 236
WTIC 1040 50000 Hartford, Conn. 26 Grove St.	XEFB 1420 100 Monterrey, N. L. Jesus Quintanilla, P. O. Box 317
WTJS 1310 100 Jackson, Tenn. Sun Publishing Co., Sun Bldg.	XEFC 1310 100 Merida, Yuc. J. Molina Font. Calle 59, 517
WTMJ 620 1000 Milwaukee, Wis. The Journal Co., 333 W. State St.	XEFE 1370 100 Laredo, Tams. R. T. Carranza, Kin. 4 Carretera Laredo Mt.
WTNJ 1280 500 Trenton, N. J. Trenton Brdcastg. Co., Stacy Treat Hotel	XEFG 1100 250 Mexico City, D. F. Ricardo Gonzales Montero, Tepic 48
WTOC 1260 1000 Savannah, Ga. Savannah Brdcastg. Co., De Soto Hotel	XEFI 1440 250 Chihuahua, Chih. Feliciano Lopez Isles, Ap. 157
WTRC 1310 50 Elkhart, Ind. Truth Radio Corp., Hotel Elkhart	XEFJ 1210 100 Monterrey, N. L. R. Junco de la Vega, P. O. Box 186
WVFW 1400 500 Brooklyn, N. Y. Paramount Brdcastg. Co., 1 Nevins St.	XEFO 940 5000 Mexico City, D. F. Reforma No. 137
WWAE 1200 100 Hammond, Ind. 402 Hammond Bldg.	XEFV 1210 100 Jaurez, Chih. Cordova & Prieto, Ave. Ferrocarril 104
WWJ 920 1000 Detroit, Mich. Evening News Assn., 616 Lafayette Blvd.	XEFW 1310 70 Tampico, Tams. J. E. Martinez, Salvador Diaz Miron 6
WWL 850 10000 New Orleans, La. Loyola University, Roosevelt Hotel	XEFZ 1370 100 Mexico City, D. F. Manuel Zetina, Caizada Nonosco 481
WWNC 570 1000 Asheville, N. C. Citizen Brdcastg. Co., Inc., Flatiron Bldg.	XEH 1150 250 Monterrey, N. L. Tarnava y Cla, P. O. Box 147
WWPA 850 250 Clarion, Pa.	XEI 1370 125 Morelia, Mich. Carlos Gutierrez M., F. J. Madero 545
WWRL 1500 100 Woodside, N. Y. 4130-58th St.	XEJ 1020 250 Juarez, Chih. Juan G. Buttner, P. O. Box 111
WWSW 1500 100 Pittsburgh, Pa. Hotel Schenley	XEK 990 100 Mexico City, D. F. Arturo Martinez, Jalapa No. 61
WWVA 1160 5000 Wheeling, W. Va. Hawley Bldg.	XEKL 920 500 Leon, Guan. 6 de Mayo 26
WXYZ 1240 1000 Detroit, Mich. Madison Theatre Bldg.	XEMA 1080 50 Tampico, Tams. Manuel M. Pler, Aretsanos 10
W1XBS 1530 1000 Waterbury, Conn. 61 Leavenworth St.	XEMO 865 2500 Tijuana, B. C. P. O. Box 202, San Diego, Calif.
W2XR 1550 1000 Long Island City, N. Y. John V. L. Hogan, 41 Park Row, N. Y. City	XENZ 1210 30 Tijuana, B. C. Adolfo Labsatida, Jr., Ave. D, 542

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<p>XEN 710 1000 Mexico City, D. F. Cerveceria Modelo Ave. Juarez 77</p> <p>XENT 1120 50000 Nuevo Laredo, Tams. Box 410, Laredo, Texas</p> <p>XEOK 920 2500 Tijuana, B. C. Carlos de la Sierra, Calle 5 a 312</p> <p>XEOX 640 250 Saltillo, Coah. Victoria No. 4, Altos.</p> <p>XEP 820 500 Mexico City, D. F. Cla Difusora de Mexico S. A., Rembrandt 11</p> <p>XEPN 590 50000 Piedras Negras, Coah. Piedras Negras Brdcastg. Co., Madero 53</p> <p>XES 970 250 Tamaico, Tams. Fernando Sada, Box 309</p> <p>XET 690 500 Monterrey, N. L. P. O. Box 203, Hidalgo</p> <p>XETB 1310 125 Torreon, Coah. Jose A. Berumen, R. Corona 317</p> <p>XETH 1210 100 Puebla, Pue. Ramon Huerta G., Calle 17, Oriente 11</p> <p>XETW 820 500 Mexico City, D. F. Rafael M. Pena, Ave. 16 de Sep. 83</p> <p>XEU 980 250 Veracruz, Ver. Fernando Pazos Sosa, Independencia 98</p> <p>XEW 890 50000 Mexico City, D. F. P. O. Box 2516</p>	<p>XEWZ 1150 100 Mexico City, D. F. Medellin e Insurgentes</p> <p>XEX 1310 125 Monterrey, N. L. L. F. Petit Jean, P. O. Box 10</p> <p>XEXX 845 500 Mexico City, D. F. Av. Pino Suarez 9</p> <p>XEYZ 780 10000 Mexico City, D. F. Angel M. Diez, Ave. Juarez 48</p> <p>XEZZ 1370 100 San Luis Potosi, SLP Emilio Delgado R. Ave. Chicosea 32</p> <p>XFB 1270 1000 Jalapa, Ver. Gobierno del Estado de Veracruz</p> <p>XFC 810 350 Aguascalientes, Ags. Gobierno del Estado de Aguascalientes</p> <p>XFD 1340 350 Orizaba, Ver. Gobierno Estado de Veracruz</p> <p>XFO 940 5000 Mexico City, D. F. Nat. Rev. Party, Ave. Morelos 110</p> <p>XFX 610 1000 Mexico City, D. F. Secretaria de Educacion Publica</p> <p>10-AK 1200 15 Stratford, Ont. M. I. Higgins, 151 Ontario St.</p> <p>10-BP 1200 25 Wingham, Ont. W. T. Cruickshank, Box 65</p> <p>10-BU 1200 50 Canora, Sask. Canora Radio Assn.</p>
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100 Best Shortwave Stations by Call Letters

Frequencies are given in megacycles and the time is Eastern Standard. In this list, the location of the transmitter is given.

<p>Amateur phones are heard between 1.875 and 2.000 megs. 3.900 and 4.000 megs. 7.000 and 7.300 megs. (Foreign only). 14.150 and 14.250 megs.</p> <p>Broadcast Pickup stations: 1.606; 1.622; 1.646; 2.102; 2.150; 2.190; 2.390.</p> <p>CGA4, Drummondville, P. Q., 9.332. Phones London.</p> <p>CJRO, Middlechurch, Man., 6.150. Relays Canadian Radio Com. programs, 8-11 p.m. and 11:30 to midnight.</p> <p>CJRX, Middlechurch, Man., 11.720. Same schedule as CJRO, q. v.</p> <p>COC, Havana, Cuba, 6.010. 4-6 p.m.; 8-9; and 10-11 p.m. daily. Sat., 11:30-12:30 p.m.</p> <p>COH, Havana, Cuba, 9.500. 5-6; 8-9 p.m.</p> <p>CP5, La Paz, Bolivia, 6.080. 8-9 p.m.</p> <p>CTIAA, Lisbon, Portugal, 9.600. Tues., Fri., 4:30-7 p.m.</p> <p>DJA, Zeesen, Germany, 9.560. Sun., 4-5:30 a.m.; Daily, 8-11:30 a.m.; 5:15-9:15 p.m.</p> <p>DJB, Zeesen, Germany, 15.200. 8-11:30 a.m.</p> <p>DJC, Zeesen, Germany, 6.020. Noon to 4:30 p.m.; 5:30-10:45 p.m.</p> <p>DJD, Zeesen, Germany, 11.760. Noon to 4:30 p.m.</p> <p>DJE, Zeesen, Germany, 17.760. Irregularly, Mornings.</p> <p>EAQ, Aranjuez, Spain, 9.862. 5:30-7 p.m.; Sat. noon to 2 p.m.</p>	<p>GBB, Rugby, England, 13.500. Phones Canada.</p> <p>GBS, Rugby, England, 12.150. Phones N.Y.</p> <p>GBU, Rugby, England, 12.240. Phones N. Y.</p> <p>GBV, Rugby, England, 14.440. Phones N. Y. 6-8 p.m.</p> <p>GSA, Daventry, England, 6.050. 10:45 a.m. to 12:45 p.m.; 4:30-5:45 p.m.; 6-8 p.m.</p> <p>GSB, Daventry, England, 9.510. 3-5 a.m.; 7:30 a.m. to 5:45 p.m.</p> <p>GBC, Daventry, England, 9.585. 6-8 p.m.</p> <p>GSD, Daventry, England, 11.750. 3-5 a.m.; 1-4:30 p.m.</p> <p>GSE, Daventry, England, 11.865. 9:15-10:45 a.m.</p> <p>GSF, Daventry, England, 15.140. 6-9 a.m.</p> <p>GSQ, Daventry, England, 17.790. 6-8:30 a.m.</p> <p>HBL, Prangins, Switzerland, 9.595. Sat. 5:30-6:15 p.m.</p> <p>HBP, Prangins, Switzerland, 7.797. Sat. 5:30-6:15 p.m.</p> <p>HCJB, Quito, Ecuador, 8.200. 8:15-10:15 daily except Monday.</p> <p>HC2ET, Guayaquil, Ecuador, 4.600. Fri., Sat., 9:30-11 p.m.</p> <p>HC2RL, Guayaquil, Ecuador, 6.659. Tues. 9:14-11:14 p.m.; Sun. 6:45-7:45 p.m.</p> <p>H111, San Pedro de Macoris, D. R., 6.810. Sunday, 9:30 p.m.</p> <p>H1X, Santo Domingo, D. R., 5.948. Tues. and Fri., 8-10 p.m.</p>	<p>H11A, Santiago de los Caballeros D. R., 6.240. 7:30-9:30 p.m. daily.</p> <p>H1-4-D, Santo Domingo, D. R., 6.500. Irreg., 4:40-7:40 p.m.</p> <p>HJA2, Bogota, Colombia, 5.825.</p> <p>HJA3, Barranquilla, Colombia, 12.830</p> <p>HJB, Bogota, Colombia, 14.930.</p> <p>HJN, Bogota, Colombia, 6.080. Tests irreg.</p> <p>HJ1ABB, Barranquilla Colombia, 6.447. 6-10 p.m.</p> <p>HJ1ABE, Cartagena, Colombia, 6.115. Monday, 10-mid., Wed., 8-10 p.m.</p> <p>HJ1ABG, Barranquilla, Colombia 6.042. 7-10 p.m.</p> <p>HJ2ABC, Cucuta, Norte de Santander, Colombia, "La Voz de Cucuta." 5.975 megs. 6-9 p.m. daily exc. Sunday.</p> <p>HJ3ABD, Bogota, Colombia, 7.406. "Colombia Broadcasting" 6-9 p.m. daily.</p> <p>HJ4ABB, Manizales, Colombia, 7.200. Wed., 8-9 p.m.; Sun., 3-6 p.m.</p> <p>HJ4ABE, Medellin, Colombia, 5.900. 7-11 p.m.</p> <p>HJ5ABD, Cali, Colombia, 6.490. Thurs., Sat., Sun., 7-9 p.m.</p> <p>HJF, Panama City, Panama, 14.545. Phones Hialeah.</p> <p>HSP, Bangkok, Siam, 7.980.</p> <p>HVJ, Vatican City, 15.120. 6-5:15 a.m. daily except Sunday. Occasionally from 10-10:30 a.m.</p> <p>I2RO, Rome, Italy. 5.550; 5.725; 6.070; 6:30-8 p.m., Mon., Wed., Fri.</p>
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AROUND the CLOCK on the SHORT WAVES

MIDNIGHT TO NOON (EST)

GMT	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	COC W3XAL W8XK W9XF	H11A TGX VK2ME W9XF	TGX VK2ME	GSB GSD RV15	DJA DJB GSB GSD JVT RV15 VK3LR	DJA DJB HVJ RNE RV15 JVT VK2ME VK3LR VK3ME YDA	GSF GSG HSJ RV15 JVT VE9GW VK2ME VK3LR VK3ME YDA	GSB GSF GSG PCJ PHI Pont. Rabat RV15 VE9GW VK2ME VK3LR W8XK	DJB GSF GSG PCJ PHI Pont. Rabat. VK2ME W8XK	DJA DJB GSE PCJ PHI Pont. VE9GW W8XK	DJA DJB GSA GSB GSE HVJ PCJ PHI Pont. VE9GW W1XAL W1XAL W8XK W3XAL	DJA DJB GSA GSB GSE PHI Pont. VE9GW W1XAL W1XAL W2XE W8XK W3XL W8XK W9XAA

NOON TO MIDNIGHT (EST)

GMT	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	1:00	2:00	3:00	4:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	DJC DJD EAQ GSA GSB Pont. VE9GW VUB W1XAL W1XAZ W2XE W3XAL W3XAU W3XL W8XK W9XAA	DJC DJD EAQ GSB GSD Pont. VE9GW W1XAZ W3XAU W3XL W8XK W9XAA XEBT	DJC DJD GSB GSD Pont. Rabat VE9GW W1XAZ W3XAU W3XL W8XK W9XAA XEBT	DJC DJD GSB GSD ORK Pont. Rabat RV59 VE9GW W1XAZ W3XAU W3XL W8XK W9XAA XEBT	COC CT1AA DJC DJD GSA GSA GSB HBL HBP H2C2RL HJ1ABB I2RO I2RO Pont. Rabat RV59 VE9GW W1XAL W3XAU W3XL W8XK W9XF W9XAA XEBT YV3RC	COC COH CT1AA DJC DJD EAQ GSA GSA GSB HBL HBP H2C2RL HJ1ABB I2RO I2RO Pont. Rabat RV59 VE9GW W1XAL W3XAU W3XL W8XK W9XF W9XAA XEBT YV3RC	CT1AA DJD DJD EAQ GSA HJ1ABB HJ1ABG I2RO HBP H2C2RL HJ1ABB I2RO Pont. Rabat VE9GW W1XAL W2XE W3XAL W3XAU W8XK W9XAA W9XF XEBT YV2RC YV3RC YV4RC YV5RMO	DJD GSA GSC HC2RL HJ1ABB HJ1ABG I2RO HBP VE9GW W1XAL W1XAZ W2XAF W2XE W3XAL W3XAU W8XK W9XAA W9XF XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJR COC COH CP5 DJC H1X H1X H1X HJ1ABB Pont. VE9GW W1XAL W2XAF W2XE W3XAL W3XAU W8XK W9XAA W9XF XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJR DJC HC2RL OAN4D HIX HJ1ABB OAN4D PRADO VE9GW W1XAZ W2XAF W2XE W3XAL W3XAU W8XK W9XAA W9XF XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJR DJC HC2RL OAN4D Pont. PRADO VE9GW W1XAZ W2XAF W2XE W3XAL W3XAU W8XK W9XAA W9XF XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJR COC Pont. W1XAZ W3XAU W8XK W9XAA W9XF XEBT YV2RC YV3RC YV4RC YV5RMO

6.980:
 9.630: 4-7 p.m. Irreg.
 9.780: 4-7 p.m. Irreg.

JVE, Nazaki, Japan, 15.660. Phones
 Java, nights.

JVF, Nazaki, Japan, 15.620. Phones
 Dixon, 5-11 p.m.

JVH, Nazaki, Japan, 14.600. Phones
 Europe, 2-6 a.m.

JVQ, Nazaki, Japan, 7.470. Phone.

JVT, Nazaki, Japan, 6.750: 4-8 a.m.

KAY, Manila, P. I., 14.980. Phones
 Dixon.

KKH, Kahuku, T. H., 7.520. Phones
 Dixon.

KFZ, Main Base, Little America,
 5.740; 6.650; 6.660; 6.670; 8.820;
 8.840; 11.850; 13.185; 13.200;
 13.245; 13.260.

KKP, Kahuku, T. H., 16.030. Phones
 Dixon.

KNRA, "Seth Parker", 6.160; 6.660;
 6.670; 8.230; 8.820; 8.840; 13.200

KWO, Dixon, Calif., 15.415. Phones
 Hawaii and Manila.

KWU, Dixon, Calif., 15.355. Phones
 Japan.

KWX, Dixon, Calif., 7.610. Phones
 Hawaii.

LCL, Jelo, Norway, 9.550: 11
 a.m.-5 p.m.

LSX, Monte Grande, Argentina,
 10.350. Phones New York and
 Byrd.

OAX4D, Lima, Peru, 5.780: Wed.,
 9-11:30 p.m.

ORK, Ruysselede, Belgium, 10.330.
 2:45-4:15 p.m.

PCJ, Hilversum, Netherlands,
 15.220: 7:30-10:30 a.m., Mon.,
 Thur., Fri. 7:30-11:30 a.m.
 Sat., Sun.

PHI, Hilversum, Netherlands, 11.725.
 7:30-10 a.m.

Police Stations, on frequencies: 1.596;
 1.634; 1.642; 1.658; 1.666; 1.674;
 1.682; 1.706; 1.712; 2.382; 2.406;
 2.414; 2.416; 2.422; 2.430; 2.442;
 2.450; 2.452; 2.458; 2.466; 2.474;
 2.482; 2.490.

PRADO, Riobamba, Ecuador, 6.618.
 Thurs., 9-11:30 p.m.

PRF5, Rio de Janeiro, Brazil, 9.505.
 5:30-6:15 p.m.

Radio Coloniale, Pontoise, France,
 11.710: 1:15-5 p.m.; 5:15-9 p.m.;
 10 p.m. to midnight.
 11.905: 11:15 a.m. to 5 p.m.
 15.243: 7:30-11 a.m.

Rabat, Morocco, 8.035. Sun., 11 a.m.
 to noon, 2-7 p.m.
 12.830. Sun., 7-9 a.m.

RKI, Moscow, U.S.S.R., 7.520.
 Phones USA.

RNE, Moscow, U.S.S.R., 12.000.
 Sun., 6 a.m. and 10 a.m.

RV15, Khabarovsk, U.S.S.R., 4.273.
 3-9 a.m.

RV59, Moscow, U.S.S.R., 5.996.
 3-6 p.m.

TGW, Guatemala City, Guatemala,
 5.940, 5:30-6:30; 8-10 p.m.

TGX, Guatemala City, Guatemala
 5.937. Sun., 1-3 a.m.; other days,
 8-12 p.m.

TIEP, San Jose, Costa Rica, 6.710.
 7-10 p.m.

TYA, Pontoise, France, 12.215.
 Phones Algeria.

VE9GW, Bowmanville, Ont., 6.095.
 Sun., noon to 8 p.m.; Mon., Tues.,
 Wed., 2-11 p.m.; Thur., Fri.,
 Sat., 6 a.m. to 11 p.m.

VE9HX, Halifax, N. S., 6.110.
 5-11 p.m.

VK2ME, Pennant Hills, Australia,
 9.585. Mid. to 2 a.m. and 4:30-
 8:30 a.m., Sundays only.

VK3R, Melbourne, Australia, 9.580.
 Daily exc. Sun. 4-8 a.m.

VK3ME, Braybank, Australia, 9.503.
 Wed., 5-6:30 a.m., Sat. 5-7 a.m.

VUB, Bombay, India, 9.565. Testing
 from noon to 1 p.m.

WOO, Ocean Gate, N. J., 4.273;
 4.753; 8.560; 12.840. Phones
 Ships.

W1XAL, Boston, Mass., 11.790.
 Wed., 5-6 p.m. and Sun., 6:30-
 8:30 p.m.

W1XAZ, Millis, Mass., 9.570. 6 a.m.
 to midnight.

W2XAD, Schenectady, N. Y., 15.340.
 2:30-3:30 p.m.

W2XAF, Schenectady, N. Y., 9.530.
 7:40-11 p.m.

W2XE, Wayne, N. J., 6.120. 6-11 p.m.
 11.830. 3-5 p.m.

W2XU, 15.270. 11 a.m. to 1 p.m.

W3XAL, Boundbrook, N. J., 6.100.
 Mon., Wed., Sat., 5 p.m. to
 midnight.
 17.780. Daily exc. Fri., 8 a.m. to
 2 p.m.

W3XAU, Newton Sq., Pa., 6.060.
 8 p.m. to 11 p.m.
 9.590. Noon to 11 p.m.

W3XL, Boundbrook, N. J., 17.310.
 Fri., 11 a.m. to 5 p.m.

WSXAL, Mason, Ohio, 6.060. Ir-
 regular.

WSXK, Saxonburg, Pa., 6.140. 4:30
 p.m. to 12:30 a.m.
 11.870. 4:30-10 p.m.
 15.210. 10 a.m. to 5:15 p.m.
 21.540. 7 a.m. to 2 p.m.

W9XAA, Chicago, Ill., 6.080. Sun.,
 11:30 a.m. to 9 p.m.
 Tues., Thur., Sat., 4-12 p.m.
 Mon., Wed., Fri., 4:30-7 p.m.

W9XF, Downer's Grove, Ill., 6.100.
 Daily exc. Sat. and Sun., 4:30.
 8 p.m.; 9:30 p.m. to 2 a.m.

The Verdict of the Jury

"This is my fourth year with RADEX. I think I have at one time or another bought almost every radio magazine on the market, but RADEX is the best of them all."

K. S. Branch, 9 Florence St., Baldwin, N. Y.

"I have always found that RADEX has the most correct information, presents it sooner than any other magazine and in more attractive and usable form than any other magazine."

Thomas Quaid, Phillips University, Enid, Okla.

"I have been a radio fan since 1920. I have had several different radio magazines, but have yet to find one that comes up to RADEX."

J. L. Cooper, 1043 Sherburn St., Winnipeg, Man.

"When the news stands try to sell me some other radio magazine 'just as good as RADEX' they just waste their time."

Whitney Smith, 53 West End Ave., Pontiac, Mich.

"With its last minute tips, helpful hints, chats with radio artists, programs of the chain stations and the index of stations every month—RADEX is the perfect radio magazine."

Chas. Rife, 1330 Jefferson, Kansas City, Mo.

"I had tried various radio magazines and logs, but none of them were very satisfactory; then I got hold of RADEX and found it contained all the information I wanted."

Ralph Torgersen, 5501 North Sawyer Ave., Chicago, Ill.

"By all means renew my subscription to RADEX for I could not do without it now."

Dr. S. W. Staads, 1129 Corning St., Los Angeles, Calif.

"May your magazine sell forever. I have several more people buying it since I gave them one of my copies."

Jimmie Manners, 523 Brunswick Ave., Trenton, N. J.

"I have been a steady RADEX reader for over two years and find that I just can't do without it. It has been a wonderful help to me in my radio reception."

Aaron Barinbaum, 2312 Colorado St., Houston, Texas.

"Without RADEX we would be absolutely lost down here. Nationals of all lands here swear by it. I have as yet seen no radio magazine that is even on the same street as the good old RADEX."

A. R. Angus, La Ceiba, Spanish Honduras.

Sunday, 4:30-7 p.m. and 9 p.m. to 2 a.m.
 EBT, Mexico City, D. F., 6.010.
 Relays XEB, 10 a.m. to 11 p.m.
 XGL, Shanghai, China, 7.960.
 XGN, Shanghai, China, 16.380.
 XGO, Shanghai, China, 7.575.
 YDA, Bandoeng, Java, 6.116. A NITROM station.
 yNA, Managua, Nicaragua, 14.480. Phones Hialeah.

YNLF, Managua, Nicaragua, 6.950. 7-8; 10-11 p.m.
 YVQ, Maracay, Venezuela, 6.672. Relays Caracas BC stations occasionally.
 YVR, Maracay, Venezuela, 9.168. Phones Madrid.
 YVQ, Maracay, Venezuela, 6.672.
 YV2RC, Caracas, Venezuela, 6.112. 5:15-10 p.m.
 YV3RC, Caracas, Venezuela, 6.150. 5-10 p.m.

YV4RC, Caracas, Venezuela, 6.375: 4:30-10:30 p.m.
 YV5RMO, Maracay, Venezuela, 5.850: 5:15-10:15 p.m.
 YV6RV, Valencia, Venezuela, 6.030. "La Voz de Carabobo."
 ZFB, St. George, Bermuda, 10.060.
 ZFS, Nassau, Bahamas, 4.513.
 The Cadena Indo-Americano includes stations: HJIABH, PRADO, TIEP, YNLF, YV4RC, YV5RMO.

THE MONTH'S CHANGES

FREQUENCIES

680 CMCQ Havana, Cuba, from 1450
 755 CMCW Havana, Cuba, from 540
 775 CMBS Havana, Cuba, from 915
 905 CMX Havana, Cuba, from 765
 1000 WORK York, Pa., from 1320
 1035 CMBC Havana, Cuba, from 1040
 1100 CMCY Havana, Cuba, from 1316
 1125 CMCQ Havana, Cuba, from 1475
 1150 CMBG Havana, Cuba, from 1375
 1230 KGBX Springfield, Mo., from 1310
 1325 COX Havana, Cuba, from 1100
 1375 COK Havana, Cuba, from 1150

POWER

550 KSD St. Louis, Mo., 500 to 1000
 610 WIP Philadelphia, Pa., 500 to 1000
 630 CFCY Charlottetown, P.E.I., 500 to 1000
 810 WNYC New York, N. Y., 500 to 1000
 930 CHNS Halifax, N. S., 500 to 1000
 1230 KGBX Springfield, Mo., 100 to 500
 1440 WCBA Allentown, Pa., 250 to 500
 1440 WSAN Allentown, Pa., 250 to 500

NEW

865 CMCX Havana, Cuba
 900 WMPF New Haven, Conn.
 1120 WMPH Boston, Mass.
 1310 KIUF Santa Fe, N. Mex.
 1370 KFRO Longview, Texas

1420 Daytona Beach, Fla.
 1420 Ponce, P. R.

LOCATION

1020 KYW Philadelphia, Pa., from Chicago, Ill.
 1080 WCBD Waukegan, Ill., from Zion, Ill.
 1260 WLBW Dayton, Ohio, from Erie, Pa.
 1370 WABY Albany, N. Y., from Hudson Falls, N. Y.
 1500 WMEX Boston, Mass., from Chelsea, Mass.

PERMIT TO CHANGE LOCATION

1500 WKEU LaGrange, Ga., to Griffin, Ga.

DELETE

1210 WKFI Greenwood, Miss.

REINSTATE

920 KFEL Denver, Colo.

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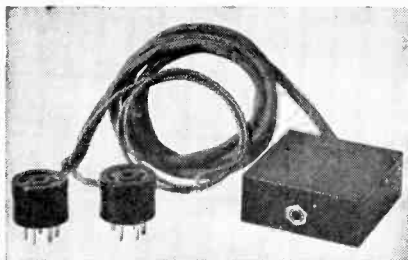
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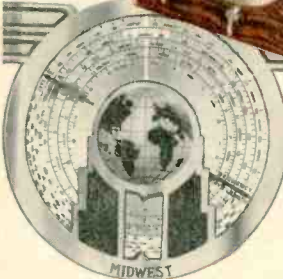
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