THE MAY 1932 Pietro Saitia

# RADEX INDEX

WHAT'S ON THE AIR TONIGHT?



(25°)

"Ann Leaf at the Organ"

The Problem of Eliminating Hum

Chain Programs on Daylight-Saving Time

World Broadcasting Stations by Frequencies

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# HUM and ITS REMEDY

by B. Francis Dashiell

UM in alternating current radio receivers is the most confusing subject before the service man: its annoyance has tested the wits of many puzzled radio engineers. But hum in an electric radio receiver is a perfectly natural thing-when it breaks loose, while it is unknown in battery-operated sets. Therefore, in the discussion of mysterious and uncontrolled hum, we are concerned only with broadcast sets that operate on the house alternating current.

Alternating current must be understood so that we may know what causes hum. This form of current is vastly different from direct current; it is more useful, and can be transmitted over unlimited distances. That is why we find alternating current out in the rural and suburban regions, while direct current is only in the downtown areas and can be carried but very short distances. But radio has the problem of using alternating current only after it has been converted into direct current.

Alternating current, in most cases, has a frequency of 60 cycles per second, which means there are 120 alternations between positive and negative polarities each second. For instance, the potential builds up from zero volts to 110 volts positive, back to zero volts, or neutral potential, then up again to 110 volts negative, and back down to zero volts. This operation completes one full cycle composed of two alternations—positive and negative. And sixty of these cycles

occur every second. Thus, at the very beginning we have an unquestionable source of electrical and mechanical vibration-hum.

All radio hum has a marked similarity of tone; the pitch and frequency of 60 cycles a second. The characteristic alternating current hum can be reproduced by a piano note or tuning fork having the same vibration period. When the house current is led to the power transformer which steps the standard 110volt potential up as well as down so as to meet the many requirements of the radio set, we obtain several circuits with wide ranges of voltages. This transformed current from the transformer secondary coils also is alternating in character, and has the usual hum. Even the passage of the house current through the primary coil sets up a magnetic



Revva Reyes, god-child of the late General Pancho Villa. After a colorful childhood on the plains of Mexico, she is now an NBC star

vibration or hum in the iron core of the transformer, which may be heard if the ear is placed close to the power device.

The transformed alternating current taken from the secondary coil is rectified, or changed, into a pulsating positive current by cutting off every other, or negative, alternation. This is the function of the rectifier tube, such as the -80 and -81 types. But even this rectified current will hum, for it is a steady current now broken into 60 tiny pulsations surging along each second. These little breaks in the flow cause vibrations which become audible buzzings in the radio set. But by the use of proper choke coils and filter condensers this surging voltage can be smoothed out into a steady flow with no interruptions or pulsations. It then becomes a direct current as perfect as that which flows from a storage or dry-cell B battery. The perfection of the power pack built in the radio set determines whether hum will be present in the speaker.

#### Introducing the Cathode

For many years radio tubes could not be made to operate on raw, or nonrectified, alternating current. The loud hum was more than the radio engineers dared offer the public. Someone then inserted the cathode into a tube. It was heated by a white-hot filament that was connected to an alternating current source. Since the cathode was electrically independent of the filament supply it was not under the influence of the raw a. c. source and therefore could not vibrate and caused no hum. Thus the flow of electrons from this negative cathode to the positive plate did not start and stop at the rate of 60 times a second. The emission was smooth and noiseless. But while raw alternating current could be used on the filament of an a. c. electron tube, its plate required a very smooth and perfectly rectified direct current of high voltage. About this hinges most of the question of 60cycle hum in radio receivers.

So, then, with the advent of carefully filtered power packs and B eliminators, efficient rectifier tubes, and cathode heaters in a. c. tubes, hum has been eliminated as far as it is humanly pos-

sible. When hum appears, annoying and undesired, we know that either our set is poorly built, or it has one or more defective parts or circuits. Hum is the most difficult of all troubles to locate in the modern radio set.

When hum first appears it is natural to suspect its presence in the tubes. Radio tubes are very sensitive, and should one of them become a vibrating unit because of internal variations in voltage, temperature, or the magnetic field, all of which go hand in hand, it should be removed. Although a tube may check perfectly in every respect it still can hum badly. Replacement is the final solution.

#### Faults In the Speaker

Hum often appears in the dynamic speaker, and a simple reversal of the wires leading to the speaker has been known to stop a hum that was otherwise unfathomable. Imperfect rectification in the speaker power supply will cause hum, and induction in the speaker cable, if it passes near the a. c. wires in the set, is the cause of a hum that is otherwise difficult to locate.

Hum has been stopped by reversing the power cord plug in its wall socket. This is one of those freak situations, due to some peculiar method of grounding the chassis of the receiver during the process of manufacture.

Pickup, or inductive action between detector and audio tubes adjacent to the a. c. leads and power transformers may introduce serious hum in the circuit. Grounding and shielding of the power pack parts and metallic cable covers will be found very effective.

High tension electric wires parallel or close to the aerial will produce the annoying inductive hum of alternating current. The obvious solution is to relocate the aerial as far as possible from the power wires and suspend it at right angles instead of being parallel.

When a very strong hum is noticed in the radio set, yet the tubes and speaker have been carefully checked, the source of trouble will be found in the power pack circuits. An open filter condenser will cause the trouble, and

(Continued on page 25)

# "ANN LEAF at the ORGAN"

ANN LEAF is just about as big as three and one-half healthy octaves or one athletic arpeggio. She could curl up for a nap in the center of the Wurlitzer keyboard without touching any of the red keys.

Danseuse, champion skater, tennis star-you visualize all of these when Ann, dainty, vital and dynamic, flashes across your horizon for the first time. Instead she is the girl of a thousand melodies from Bach to Berlin, under whose windblown bob cantatas crowd concertos, rhapsodies jostle the waltzes of Chopin and Strauss, and the melodies of Gershwin, Harry Warner, Donaldson and others, dozens of talented new composers, tumble over each other in a rush to the tips of her sensitive, facile hands. Ann averages several hundred tunes for each of her ten fingers-sometimes she thinks it is twice that many-and her mind is a giant mental keyboard for she must orchestrate each of these tunes



The Sinclair Wiener Minstrels—Gene Arnold, interlocutor, (left), Bill Childs (lower left) and Clifford Soubier (right) are heard Mondays at 9:00 p.m. EDST over NBC-WJZ network.

## "She's Charming," Says Susie Sexton

and build them all into a harmonious whole each time she is on the air.

Ann, you know, plays the mighty Wurlitzer in Paramount's ninth floor studio in New York and broadcasts eight or nine times a week over the Columbia System,. Usually she goes on the air between two and four in the afternoon although the Dixie network often hears her in the evening. On Wednesdays at 3:15 p.m. she is heard in a commercial with Ben Alley for Cheris Foundations.

Eight doors had closed after me in the magpie corridors of the huge Paramount building off Times Square as I went in search of Ann. Up three short flights of stairs, down two, and I stood in front of the thick steel barrier to the organ room. I could hear the murmur of the announcer's voice, then Ann playing something by Sinding. The door was locked. As I glanced back over the labyrinth of corridors I wondered about those useful maps in the Edgar Wallace mysteries.

The page who had unravelled the passages had disappeared.

"That's the only way out," he reassured me as I wondered about Ann's possibilities of escape. I had not seen Ann or I would have been worried about the keyhole.

She was eating caramels with Adele Vasa when I entered. And she danced up to meet me, a tiny, tomboy artist with tousled head and laughing brown eyes. She wore a round-necked sweater of Scotch mist and a tweed skirt. I thought I had run into Mitzi Green just returned from a stiff tennis match on the Central Park courts. Perhaps I thought out loud.

"Well, Mitzi's quite a woman in her own way. You'll have to admit that," said Ann with her sparkling, irrepressible smile. "Do you mind waiting a minute while I run over a song with Adele? Then I'll change and we'll go somewhere for tea."

Any of her admirers would have known

then that this was Ann herself. For she sat down at the organ and struck a few chords for Adele who is singing with her now and then. I noticed she wore dancing pumps for the footwork. That volume of warm, colorful sound, sure touch and smooth execution were Ann at her best—the leading woman organist of the air.

When the song was ended the phone rang. Ann took the call and another chocolate while she changed from pumps to low-heeled walking shoes, with one hand.

The girls arranged a tennis match for the next morning.

"Under the trees on the West Side courts without fail," insisted Ann, the interpreter of Chaminade and Ravel. "I'm going to play tomorrow no matter what happens."

#### "How Old Is Ann?"

"Just how old are you?" I asked when everyone had gone. Ann pulled a jaunty, brown fabric sport hat down over her dark bob at a chic angle and threw on a beige sport coat and scarf.

"Oh, about twenty-three or four," she laughed. I tried to believe her. We went down to Forty-third street. The traffic had halted obligingly. I hoped nobody would blow a whistle as I held Ann firmly by the arm. One hearty blast would have sent her whirling away through the subway entrance like one of her own elusive measures of Macdowell or Greig. At last we could talk over tea, toast and marmalado.

"Usually I practice three hours a day," Ann told me. "My broadcasts usually come between two and four, then I rest a while and get back at five to arrange my future programs, which are usually made up three weeks in advance. I must add new selections to my repertoire continually and there are any number of young composers coming to the front all the time whose work must be given consideration. No, the classics are more popular than jazz and are getting to be more so every day. Composers? Tschaikowski is one of the greatest favorites on the air. More so than Gershwin or Berlin. in fact. The selections most often requested I think are "Monastery Bells" and "Trees."

"One thing about the classics—they seem to endure forever. The life of a new popular song is probably three months. After that it dies down. If it has been unusually popular it may be revived again after several months. Then a year or so passes before you hear it again. That is the end usually except in very rare cases.

"My repertory? It contains between one and two thousand selections. These I must be able to play at all times. When I first started to play professionally a repertory of two hundred pieces was considered enough for any performer. Now a pianist or organist must have many more than that at her command.

"I try to keep my programs in tune with the times. Many of my selections you will notice, picture the seasons, flowers, or are adapted to holidays or birthdays."

"Is it hard to keep up with the requests of your audiences?" I asked.

"No," she said, "So many ask for the same numbers over and over. I am usually worried because a request comes in just after I have played a number. Then I cannot repeat for a long time. I remember I was anxious for weeks over a woman who sent in a doily. I have no special need for doilies but this woman was very particular that she would not send the ornament unless that tune was forthcoming. The doily arrived in due course, but to save my life, I cannot remember whether I ever played the tune she fancied."

#### A Star at Four

Although she learned to play without instruction, Ann studied music in Omaha, Nebraska, where she was born. Her first public appearance was in a kindergarten out there. At the time her age was exactly four. The selection was Marche Militaire. It ushered her classmates out of the schoolroom. After that she became the local child prodigy.

Her sister, Sheila, was indirectly responsible for her career. She would not play the piano her parents bought for her so Ann used to climb up and run baby fingers over the keys, just to see how it sounded.

Originally Ann had intended to become (Continued on page 25)

# A PAGE of HARD NUTS

### Some Puzzles In Radio

THE Puzzle Editor is running dry of ideas for new problems and unless he gets help quickly from some of the fans, this page may be missing from some future issue. Our puzzlers have contributed generously in the past, but the file is almost like Mother Hubbard's cupboard. SOS.

At this writing the returns for the April puzzles are just beginning to come in. The cross-call doesn't seem to be giving much trouble and No. 3 is proving capable of being filled in several ways. Evidently it is No. 2 which is giving our readers a run for their money. This was the palindrome puzzle designed by Carl Schmidt, Scranton, Pa.

#### The Solution

The key to this puzzle lay in the letter L, it being the only letter not duplicated. This indicated that L must be the middle letter. The middle blank was the last letter of a three-letter call. As the letter before and the letter after the L must be alike the letter W was indicated. This gave us -WL W—. Another W is now indicated giving us WWL WW—. With this start, the puzzle gradually worked itself out. The answer is as follows:

XFG KROW CMCG WKAV WWL WWVA KWG CMC WOR KGFX.

"Puzzle No. 2, the palindrome, is my idea of a dandy puzzle," says Arthur L. Robb, 1338 Mulvane St., Topeka, Kansas. "It was a lot better than the 'magic square' of last month. The editor's method of solving the magic square was quite cumbersome. My first step was to divide the total of 3540 by 3 in order to find the average frequency. This came out on an even multiple of ten—1180. Looking up the stations on 1180 kcys. I found that WINS fitted right into the center square. From then one it was a mere matter of matching in other stations which were located on channels equidistant from and on opposite sides of 1180. In all it took about five minutes."

In No. 3, one of the several possible solutions is as follows:

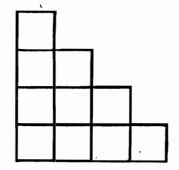
WACO IBMC CMJF CWHC

The May Problems

Our No. 1 this month is for our "math" sharps. George Raba, of Stevens-ville, Mich., has made the momentous discovery that the square root of RADEX is FAN! Here is the demonstration. George submitted this problem in the form of an example in square root, but as the Editor had forgotten his square root, we had to change the problem to one in long division. Each of the letters used stands for one of the ten digits. The problem is to change these letters into the figures for which they stand.

FAN RADEX
FAN FAXE
FZND
FYNX
FYNX

No. 2 was designed by another of our Master Puzzlers, T. J. Johnson, Bowlegs, Okla. Several readers complained that T. J.'s last puzzle had them "bowlegged." We shudder to think what this one is going to do to them. Fill in ten letters in the ten squares to give six station calls. The two horizontal calls



read left to right; the two vertical and the two diagonal read down. No call is used twice. If anyone can find a second solution of this problem, we'll give him a special prize of a rubber aerial.

In No. 3 it is required to fill letters in the eight blanks in such a way that eight station calls will be shown, all reading left to right and no calls duplicated. Each call must have four letters.

The cross-call this month (No. 4) was San . by Russell Overman,

Fernando, Calif. It seems that errors in the key just will slip in but we hope none will occur this month. These puzzles frequently must be held over several months after they are received from our readers and in bringing them up to date, both horizontally and vertically, mistakes occur.

The April issue of this magazine should be used in calls for these puzzles as changes in the May edition may be made after this writing.

Get the correct answers to all four of these problems to us by May 20th and receive a copy of the June RADEX free.

#### Across

- 1- 12 Chicago, Milwaukee & St. Paul (all reversed).
- 13- 15 Most powerful in the state (reverse).
- 16- 19 500-watts daytime (reverse).
   19- 21 The Bee, Inc.
- 22- 24 Weather reports
- 25- 26 Same as 25-35. 28- 30 A powerful blue 30- 33 Formerly WGBS.
- 36- 38 1000-watts daytime (reverse)
- 39- 40 Seventeen calls begin with these.
- 41- 43 One k.w. Columbia.

- 46- 48 A twin station. 49- 51 A palindrome. 53- 55 Cape Town (reverse). 56- 58 Two Columbias in this town
- (reverse).
  58- 61 Near ends of dial and alphabet.
- 62- 64 Five NBC on this wave. 65- 68 Three in this state share time (reverse). 69- 72 300-waats.
- 73- 76 Four stations synchronize.
- 77- 80 Five stations in this city (reverse).
- 81- 84 1 plus X. 85- 88 Deleted in Steubenville.
- 89- 91 Reverse a Cuban and get 10. 92- 94 An old-timer (reverse) 94- 97 Now WTEL.
- 98-100 Last three of Dn station (re-
- verse). 102-104 A Washington station. 105-107 Call is abbreviation of another
- state (reverse).
- 110-112 Recently changed wave (reverse).
- 113-114 First two of seven. 115-117 In a negro republic (reverse).
- 119-120 Last two of a newspaper. 122-124 Five CBS in this state.
- 127-128 Middle letters of 10 stations.
- 129-131 On a split frequency (reverse). 132-134 Only 500-watt in the state. 135-137 In Iowa (reverse).
- 138-140 In the Northwest.
- 141-144 One of two calls.
- 145-148 Former Gold Medal Station
- (reverse). 149-152 On 1200 (reverse).

#### Down

- 1- 35 In Manhattan (reverse).
- 2- 26 Twenty k.w. (reverse).
- 6- 39 On 1370 (reverse).
- 5- 28 First three of two (reverse).

- 78-101 Same owners as 75-108. 81-104 A Columbia with only 100
- watts
- 11- 33 In Karlsborg. 12- 44 Shares with Wisconsin. 27- 46 Unity School (reverse). verse).
- 32- 51 A wave to itself (reverse).

7- 40 The "Big Noise" of the South

38- 56 5 k.w. but no chain. 41- 61 In Washington.

(reverse)

8- 31 5000-watt daytime.

- 45- 66 On a Canadian-shared wave. 48- 69 An NBC station (reverse).
- 52- 75 CBS in the Southwest (reverse).
- 53- 89 Last three stand for city and
- state (reverse). 55- 79 Synchronizes (reverse).
- 58- 94 Another palindrome. 59- 95 Two daytime on this wave. 60- 96 In Movieland (reverse).
- 62- 98 Last three letters are an ad. 64-100 On 1200.
- 75-108 On 1310 (reverse).

- 92-112 Only CBS in the state (re-
- 97-115 No chain in the state (reverse).
- 102-121 7500-watts. 107-126 Frequency is one-fifth the
- power. 109-141 In the smallest province (re-
- verse). 113-146 In Jersey.
- 114-147 Last three letters leave a headache.
- 118-152 Only CBS in the state (reverse).
- 120-142 Biggest in the state (reverse).
- 122-145 West Coast.
- 125-148 Last station in the state (reverse).
- 127-151 American Radio Tel. Co.

•//	2	3	4	X	5.	6.	7	8.	X	9	10	//	12.
13	14	15	X	16	17	18	19	20	2/	X	22	23	24
25	26	X	27	X	28	29	30	3/	X	32	X	33	34
35	X	36	37	38	X	39	40	X	41	42	43	X	44
X	45	X	46	47	48.	X	X	49	50	51	X	52	X
53	54	55	X	56	57	58	59	60	61	X	6Ž	63	64
65	66	67	68	X	69	70	7/	72	X	73	74	75	76
77	78	79	80	X	81	82	83 .	84	X	85	86	87	88
89	90	91	X	92	93	94	95	96	97	X	98	99	100
X	101	X	102/	103	104	X	X	105	106	107	X	108	X
109	X	1100	195	1/2 <sup>2</sup>	X	//3	114	X	115	116	117	X	118.
119	/20	X	2	X	122	/23	124	125	X	126	X	127	128
129	/30	/3/	X	131	/33.	134	135	136	137	X	138	/39,	140
141	142	143	144	X	145	146	147	148	X	149	160	154	(52 W

# WHEN THINGS Go AWRY

#### Set Burns Out Tubes

My model 27 Super-Zenith burns out its -99 tubes, or they appear to become deadened and useless. This set also tunes too broadly. Is there anything you can suggest which will correct these faults?

This is an old model set, and has been exceeded in selectivity by newer models. The wiring of the 27 model is peculiar, in that the -99 tubes are arranged in connected sets of series and subject to overloading of current in the delicate filaments. The type of filament used causes it to become paralyzed when the current becomes too great. Try using an Amperite voltage ballast tube in series with the 110-volt house supply to guard against the excessive surges in the line. When -99 tubes seem deadened they frequently can be renewed by the reactivating process.

#### Headphones on Philco Receiver

How can I connect headphones to my Philo receiver model 70? Must I remove the speaker from the cabinet?

See page 30 of the December RADEX for instructions and data as to the colors of the wires in the speaker unit assembly. It is best to remove the speaker and separate the wires at the connection plugs. It is difficult to make the connections to the short leads between the transformer and voice coil when the speaker is in place.

#### Using the Air Cell Battery

Can a three-tube regenerative set using the new two-volt tubes, types -30 and -31, be used with the Air Cell "A" battery? After purchasing one of these batteries it seems to me that it can be used only in sets specially designed for it. Would the filament rheostats in my set injure the Ait Cell in any way? At present I am using two dry cells until I get more definite information.

The Air Cell battery may be used in any set that does not require more than two volts. The development of the new -30 series of tubes brought the Air Cell battery into being. It is simply a form of carbon cell of long life and constant voltage. The rheostats in your present

### Suggestions by The Technical Editor

set control the volume by increasing or decreasing the filament current. This is not good practice in these times, and such tends to shorten the life of the tubes and the battery. Set the rheostats to a point that feeds exactly two volts across the filament terminals of the tube sockets as measured by a voltmeter. Operate the set by turning the switch on, and if more volume control is needed it is best to install a potentiometer to control the



Blue-eyed Mildred Hunt, contralto and one of Radio's pioneer artists—a CBS star.

grid ("C" battery) voltage on the last power tube.

#### **Broad Tuning and Weak Reception**

I have a Sparton model 620 receiver that tunes broadly and does not bring in distant stations until after 9 o'clock at night. My aerial is about 50 feet long and 45 feet high. The ground is a single copper rod driven into the ground. What do you suggest?

Perhaps the set tunes broadly because it needs readjusting. This model has three equalizing condensers connected to the radio frequency amplification unit, and they are numbered 1, 2 and 3. The last one is next to the dial drum. They should be adjusted with an insu-

lated handle screw-driver, or one made of a stick of hardwood. First, tune in some distant station operating on 600 kilocycles. Adjust the three condensers very carefully until the incoming signal is at its loudest, and the tuning of the dial seems sharper. Then turn to another station at about 1200 kcys., and repeat the readjusting and tuning until the signal is loudest. Repeat the operation several times until the adjustment is perfect. Also adjust the antenna compensating condenser in the aerial circuit until the signals are loudest from a distant station.

The aerial and ground are of great importance with the Sparton. Your aerial seems as good as can be had, but the ground can stand some improvement. Try driving two addition six-foot lengths of new water pipe into the ground. Connect the tops of all grounds together with copper wire securely soldered. Pour water down the pipes to settle the earth and make better contacts. Then, too, your tubes must be tested and replaced if necessary, using good new standard makes, such as the -27s and -71As. Daytime reception is never as good as that after dark as far as distance is concerned.

#### Intensifying Weak Antenna Signals

The February issue of RADEX explained an amplifier that could be used with a loop antenna to boost up signals. Can I use the same device with my Philco model 20 receiver so as to intensify the antenna signal voltages?

It is possible to use a signal intensifying one-tube radio-frequency amplifier between the antenna and your present broadcast receiver. The set described in the February answer will suffice. The scheme may not always work because of the nature of the receiver, but, generally speaking, the device should aid greatly in increasing the signal voltage, and also sharpen tuning somewhat.

### **Adjusting Trimmers and Neutralizers**

Should the three neutralizing condensers on my Fada model 22 set be adjusted in connection with the four trimmer condensers on the large gang condenser, considering each t. r. f. unit as a separate operation?

Your set has three small neutralizing

condensers each connected between the grid of a radio frequency tube and the neutralizing coil of the r.f. transformers. It also has four small compensating or trimmer condensers mounted by each of the large variable condensers. The three neutralizing condensers should be adjusted carefully, beginning with the first, until the set does not squeal.

The trimmers on the gang-condenser have no association with the neutralizing system and should be adjusted separately after the first operation is completed. Tune in some distant station that is not fading, and adjust the trimmers for maximum volume. But do not tamper with the trimmers until the gang condensers have been checked for misalignment of plates or two or more of the large condensers on the shaft. No amount of trimmer adjustment can balance two condensers if they are out of line, for the trimmer has a very small limit of capacity. Adjust the trimmers on two distant stations-one high and one low frequency. Use well-insulated or wooden instruments for turning the adjustments.

#### Substituting Two-Volt Tubes

Can I use the two-volt tubes in my Freed-Eeiseman model NR6 radio set instead of the tubes now in use?

You do not say what tubes are now in use, but we presume them to be -01As. Substitute the type -30 2-volt amplifier-detector tubes in all of the sockets, but be careful to use exactly two volts "A" battery instead. This may be a "Air-Cell" battery made for the purpose. It may be necessary to reduce the 45-volt B battery now used on the detector tube to about  $22\frac{1}{2}$  volts in case the set shows a tendency to howl or distort with the -30 detector tube.

#### Telegraph Office Interference

Every time the telegraph office located in our railroad station sends a message the clicking of the instruments is heard in all the radio sets in our town. How can we stop this annoying form of radio interference?

The sparking of keys and relays when telegraph instruments are working can be a serious menace to good radio reception. If a heavy current is used the sparks will be very strong. But we are surprised that this form of static clicking can be heard so far over the town.

The trouble can be remedied easily, but it calls for close cooperation by the railroad and telegraph company. Large fixed condensers will absorb the sparks and prevent the broadcasting of tiny radio static waves, but must be connected across the contacts of the troublesome keys and relays. The local company should do this work, but if the radio listeners are forced to supply the parts and do the work, they should be reimbursed. Write the Tobe Deutschman Company at Canton, Mass., for prices

ordinary signal coming through from the aerial. It is a very weak signal. If the t. r. f. set is sufficiently powerful, this weak signal will pass through the amplifier to the speaker with considerable volume.

Makers of short-wave converters do not hold to arbitrary frequencies. Some superheterodynes work best with converters when tuned to 650-700 kilocycles. One, the Philco, must be set at 1000 kc. when used with its own converter. Tuned radio frequency receivers operate best with converters when tuned to the high wave end of their dials—approximately 550 kilocycles.



The Pickens Sisters from Georgia—Jane, Helen and Maria (left to right) have been signed to an exclusive contract although they had never appeared on the air. The girls are all finished musicians and play several instruments as well as the piano. At 10:45 p.m. EDST, daily except Saturday and Sunday, NBC-WIZ network.

of the necessary filter devices. They specialize in this sort of trouble.

#### Short-Wave Converters

The article about short-wave converters in the March RADEX does not state that converter adds to the sensitivity of a tuned radio frequency broadcast receiver. Also, mention is made of two settings for the receiver—650 and 550 kilocycles; which is correct?

Short-wave converters do not add to the original sensitivity or selectivity of the broadcast receiver. They merely convert the received short-wave signal to a frequency that will pass through the tuning limits of the receiver. This converted radio frequency signal is simply passed into the antenna connection of the broadcast receiver as if it were an

#### Power Transformer Is Burned Out

I have a burned-out power transformer in my Bremmer-Tully model 26 receiver. Where can I get a new one, and how should it be described?

We believe that your set is the Bremmer-Tully model 7-70 which came on the market sometime in 1929. It has seven tubes—three -26s, two -27s, two -71As, and an -80 rectifier also. By power transformer you mean a transformer that takes the house a. c. power and changes it to the proper voltages for the radio set, or to operate the above tubes. Such transformers may be obtained at any place, but we suggest you write the Coast to Coast Company, 142 Liberty Street, New York City, who specialize in replacement parts.

Changing to Superheterodyne Circuit

Can I change the -26 tubes in my set to the -24 screen grids, and the -71 As over to -45s? How can I change my Majestic model 91 receiver into a superheterodyne?

You cannot substitute the -24 screen grids for the -26s, and -45s for the -71As. The latter two may be interchanged with some slight changes in wiring but will not help your set. However, it might be wise to have all your present tubes tested, and replaced by new ones if they are old or inefficient. The Majestic model 91 receiver cannot be changed over to a superheterodyne circuit without being entirely rebuilt with many additional parts and a number of replacements.

#### Telephones On a Crosley Set

How can I use the -24 tubes in my Crosley model 42S receiver instead of the -27s? I wish to connect telephones to this set. Please tell me how to go about this.

You cannot use a -24 tube in the place of a -27 which is now used in your set. The -24s are screen grids while the -27s are not.

Telephones can be connected as follows: At the end of the cable leading to the dynacoil speaker terminals four wires will be found, two of which are brown in color. Place the tips of the phone cord to the two contacts to which these brown wires are connected and the phones should operate. But the speaker also works. A phone jack can be connected across the two wires and the phones plugged in the jack at will. If the speaker is not desired at the same time cut one of the short wires between the output transformer secondary coil and the voice coil of the cone, and place a small switch in this opening so that the coil in the speaker can be cut off when the phones are in use.

#### Locating Voice Coil Leads

How can I locate the voice coil lead wires in the speaker plug assembly of my Philco 112 broadcast set?

The model 112 has four wires leading to the speaker plug. None of these are voice coil leads. Two of the wires lead from the plates of the two push-pull power tubes to the primary of the output transformer, and the other two, green and yellow, lead to the field coil.

The voice leads are two short wires on the speaker unit itself. They connect the secondary coil of the output transformer to the voice coil of the cone. In most Philco sets the output transformer is a part of the speaker unit and the leads to the voice coil are very short.

#### Another Howling Set

My Crosley 42S broadcast set is noisy with howls after it is turned on. How can I stop this trouble?

The trouble is either microphonic or regenerative. The detector tube—the -27—perhaps is defective. Make sure the shielding over the tubes and coils is perfectly grounded to the chassis. Look also for poor contacts in the grid leads. Perhaps the plates of the detector or radio frequency tubes are getting too much plate voltage due to some fault in the voltage divider system.

#### Set Cuts On and Off

What causes my Atwater Kent model 60 set to give loud snapping sounds with occasional cutting on and off? The tubes have been tested and are perfect.

There are two models in this series. so we presume yours to be the one using three -24 tubes, two -27s, two -45s, and one -80. Look for a defect in the volume control and its resistor. Make sure all the tubes, especially the -45s, fit firmly in their sockets, for looseness will cause trouble. This sometimes comes after the tubes and contacts become hot when expansion of the parts will cause uneven contacts in the plate circuits and result in such noises. It makes the set cut on and off as well. The power pack may not be functioning perfectly. It should be tested for poor connections or punctured condensers. The various fixed bypass condensers and resistor may be defective or loose. They can cause this kind of trouble too. Are you sure the aerial is hanging tightly? It may occasionally touch some grounded object.

#### Changing the Tubes

I wish to change my Kolster 6D receiver over to the two-volt tubes and use screen grid tubes. Please explain how I can do this myself.

The set can be changed over if it is to be used entirely as a battery set. Substi(Continued on page 26)

# READING THE EDITOR'S MAIL

TANY letters have been received in approval of the classified index to chain programs. It is gratifying to know that this feature is proving helpful. So far as we know this is the only publication presenting such an aid to program enjoyment. This, together with the present convenient and comprehensive arrangement of What's On the Air Tonight should make dialing a pleasure. Now that the newspapers generally have just about ruined their program information by deleting names by which the features may be identified, radio listeners everywhere are looking more and more to these pages of RADEX for their program information.

If this issue of your magazine reaches you a day or two late it will be because we held our forms beyond our regular date of publication in order to give you the many changes in programs that always come with the shift to daylight saving time. The clocks are moved ahead this year on Sunday, April 24th. Your favorite programs will now come to you, unless you live in the Eastern Daylight Zone, an hour later than usual although some old features will necessarily be moved to other "spots."

Now we'll open the mail. Do WFAA and WBAP use the same transmitter and, if so, why do they have different power ratings?

"RADEX listing for WFAA-WBAP is correct," writes Eugene Martin, 704 S. Green St., Wichita, Kansas. "The transmitters are separate. WFAA's 50 k.w. station is located 18 miles northwest of Dallas, 18 miles northeast of Fort Worth, near Grapevine, at the highest point in North Texas. WBAP's 10 k.w. transmitter is situated 8 miles northwest of Fort Worth at Lake Worth. I am a former Dallasite and have visited both transmitters numerous times. However, WBAP is on the air one hour per week over the Grapevine transmitter in a joint broadcast with WFAA, the Damrosch Musical Appreciation Hour, which is partly on WBAP's time, partly on

## Monthly Chats With the "Family"

WFAA's. In September, 1928, WFAA and WBAP were both granted C. P.'s for 50 k.w. On May 1, 1929, WFAA was changed from 1040 to 800. It was then planned to erect one 50 k.w. transmitter at Grapevine for both stations. Plans went along smoothly for a while, but . when the time came to select transmitting equipment, a disagreement arose. WFAA wanted R. C. A., G. E. and Westinghouse units: WBAP wanted Western Electric. WBAP wanted to build a 50 k.w. station for as little as possible; WFAA wanted to build as fine a station as possible. So WBAP withdrew and it became a WFAA enterprise. On May 11, 1930, the first superpower station in the south and the first west of the Mississippi took the air-WFAA.

"The WFAA station cost \$300,000. There is no finer transmitter in existence. The 300-foot Milliken Radio towers are set 700 feet apart and can be seen at a distance of 25 miles. On December 16,



Jack Denny and his orchestra recently broadcast from a B. & O. train while speeding at seventy miles an hour.

1930, WFAA dedicated a half-hour program to Hawaii, and it was picked up and re-transmitted by KGU. I believe that's a record for long-wave stations. Has anyone of the RADEX family heard of an instance where any long-wave station was rebroadcast at a greater distance than 3800 miles? If anyone still doubts that WFAA-WBAP are separate stations, let him tune in some weekday night at 9 p.m. CST and listen to the changeover and note the difference in signal strength. In this part of the country WFAA comes in four or five times as loud."

#### Here Comes the Static!

The static season is approaching and our readers will be glad to learn how others have reduced this nuisance. Here's one method:

"Last night there was a snow storm brewing and the static was terrible," comments Edwin Barraclough, 320 East 3rd St., North Platte, Nebr. "I could get hardly anything at all on account of the noise. So I tried out the new headphones and adapter you sent me. The reduced volume cut out the noise and I was able to get most any station and I radioed until midnight. The phones and adapter are sure fine and I am well pleased with them." Mr. Barraclough has a Montgomery-Ward 1931 7-tube and has three aerials which he can cut in or out using any one, two or all three at will. One is a 75-foot straight aerial of twisted copper wire. The second is 45 feet long, running under the eaves of the house. The third is 25 feet of single wire heavily insulated, erected in the attic. "I do not notice much difference between the two outside aerials," reports Mr. Barraclough, "but am surprised at the difference between them and the one in the attic. The first night I used the attic aerial I found there was more volume and less noise than with either one of the outside aerials. I believe the insulated aerial is the stuff and am going to try out other theories with it."

And speaking of aerials. Frank A. Johnson, 59 West 66th St., Chicago, Ill., who has so many stations on his log that merely to name the total starts an argument, writes that he agrees with Roger

Causse and Samuel F. Owens regarding long aerials. With 80 verifications from European stations, Mr. Johnson has a right to speak regarding DX reception. "We all know that 25 to 40 feet of wire will pull in Canada, Cuba and Mexico when connected to a good Super. On a two-tube set such as Lilley's or a threetube set like Causse uses, a long aerial is necessary. I've always found 160 feet plenty long enough for larger sets, but with a 2, 3, or 4-tube battery set 250 feet up to 1000 may be used." Mr. Johnson also agrees fully with Richard D. Caddell on grounds. Even in a location only eight miles from the Chidago loop, Mr. Johnson uses no ground, although he admits that a ground is wise when using a short aerial.

Here is a reader who has discovered that his filtered aerial is more satisfactory when one end only is grounded. Why this should be so, we cannot say. Others have gotten better results with both ends grounded. It only goes to show that aerials and grounds are something that must be tried in various ways to get the greatest efficiency.

#### Kinks In the Filtered Aerial

"Instead of using only one 60-foot filtered aerial wire with a special lead-in." reports Rudolph Kure, 3633 Vine St., Cincinnati, Ohio, "I soldered two 60-foot filtered aerial wires together, using half of the second wire as a horizontal aerial and the rest for a lead-in direct to the aerial post of my receiver (without splices). I am thus getting tremendous volume, but only if I ground the solid straight insulated core wire on but one (the farthest) end. The moment I ground the solid straight insulated core wire also on the other end (that is on both ends) near the receiver, my volume is immediately cut in half."

"What gauge wire makes the best antenna?" inquires Charles Rowland, 23 Myrtle Drive, Pontiac, Mich. "Do you recommend single or multi-strand wire?"

Technical experiments with multiwire aerials show only a theoretical difference between a single wire, a braided wire and several wires. The difference between them has not proven marked enough to detect in practice. Let us say once more that the "best" aerial for any set and any location can be found only by experiment. It cannot be calculated by mathematics nor technical data.

#### And Now the Cuban "Reds"!

Remember that time the communists broke in and took charge of a Mexican broadcasting station and put on a program of their own? Well, Robert R. Rawstron, Claremont, N. H., sends us a clipping indicating that the Reds of Cuba are following the example recently set for them by the Communists of Mexico. From the last paragraph it would seem that the authorities feel that it was an "inside job."

"HAVANA, Cuba, March 20 (A.P.—Radio fans of Havana had hardly tuned in Station CMCF this afternoon to hear the harmony of a popular trio, when there came the raucous cry: "We are the Communists of Havana. Down with Machado! Strike on March 24!"

"There followed six or eight minutes of harsh, fast and excited address to the 'people of Cuba and workmen in general,' the President was berated and the police were called assassins.

"Just as suddenly as it began the address stopped.

"When police got to the station they were told that seven men with pistols had rounded up everybody in the building, stopped the songsters and departed.

"All the station staff were arrested pending an investigation and Communications Department officials said the station probably would be closed."

#### How to Get WJSV

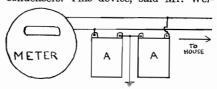
Who was it wanted to know when he could pick up WJSV when KSTP was silent?

"Those in the West who have never heard WJSV on account of interference, may now hear them with a morning revival from 6:00 to 7:00 a.m. EST," says William B. Brown, President of the Thomas A. Edison DX Club, 1822 Seventh St., N. W., Washington, D. C. William tried the tip given by one of our readers of writing a postcard to XED instead of a letter but even that failed to pass the eagle-eyed postal inspection.



Elizabeth Barthell, charming Southern singer, featured in her own program Tuesdays at 7:00 p.m. over the CBS-Dixie network (EDST). Photo by Mitchell, New York.

"I would like a question answered for me," he goes on. "Our next door neighbor has a Frigidaire and when his motor is running all the noise comes into our set evidently because our light line is grounded to a water pipe and so is his Frigidaire." The best answer to this problem is to induce the neighbor to put a filterette on his motor. Filterettes are manufactured by The Tobe Deutschmann Co., Canton, Mass. Away back in the September, 1929, RADEX, J. C. Weller, of Elyria, Ohio, described a method by which he eliminated similar interference. As shown in the sketch two condensers (marked A) with a capacity of two mfd. and a wiring voltage of D.C. 300, A. C. 200, are attached to the two power lines just inside the meter with a ground wire attached between the two condensers. This device, said Mr. Wel-



ler, "did away with the necessity of a ground wire from the set, in fact the set worked better without a ground." Be sure to throw the switch before making this installation.

#### **Defends WFEA**

"Upon reading the April issue and especially the letter of Mr. Zimmerman. I feel that a few words in defense of the stations, particularly WFEA are in order," comments Keith L. Freas, 17 Pullman Ave., Kenmore, N. Y. "When WFEA was testing, according to a letter received from them by our club, the Buffalo News DX Club, they were working with a staff of only the engineers, who were too much occupied to read and answer the many letters which they received. As soon as their tests were over, they verified very religiously, and I trust Mr. Zimmerman has by this time received his. Many other fans, I believe, expect too much of the stations. Do they always send in at least three selections (consecutive), the time, and date? Do they remember that when it is 2:00 a.m. EST, that it is only 11:00 p.m. PST of the day before? Thus the dates of information can very easily be mistaken for a time when they were not on the air. Do they allow enough time for reply?" Mr. Zimmerman writes that he realizes now he should have given WFEA more time to reply.

RADEX has recently been introduced into Newfoundland through the good offices of W. J. Fitzpatrick of St. John's. It takes ten days at the best for our shipments to reach that country. We marked the shipment of April copies "Rush" to catch a New York steamer. A day or two later we received a letter from Ralph H. Schiller, Hawthorne, N. J., who is in the foreign department of the New York post office that this package had passed through his hands and that he had made it his personal business to get it on the steamer. RADEX friends are everywhere. Mr. Schiller writes as follows: "The Transcontinental DX Club, located at Hawthorne, N. J., is composed of members residing in the countries of Australia, Canada, Ireland, Mexico, New Zealand, Porto Rico and 18 states in America. The 'DX News' is issued monthly and contains a full page of schedules of DX stations."

#### How the NNRC Rates Them

Alfred W. Oppel, Assistant Executive Secretary of the Newark News Radio Club, writes as follows regarding the honors given by that club. "We have the Junior class with a requirement of 100 stations heard. The Master rating requires 200 stations with one 2000-mile verification. The Past-Master rating requires 300 stations with five 2000-mile verifications. The Ace class with 400 stations and ten 2000-mile verifications. The fifth class, the Super-Ace, requires 500 verifications with fifty at 2000 miles, included in the total, which must be sworn to before a notary public. For listeners in the middle West we have separate ratings. A resident of Chicago must have at least 500 verifications with 67 of them being 1500 miles from point of reception. Middlewest listeners may count all Australians, etc., their mileage being divided by 2000 and the total counting as that many 2000-mile verifications toward any of our certificates."

In the April issue, Robert Rosenberger, 17 Jansen Place, Kansas City, Mo., wrote regarding his anxiety to pick up Japan. Our reply was that it would require a combination of infinite patience, tuning at the right time and in the right place, and—luck. Now Robert writes: "Thank you for your sterling advice. A few nights ago when I just had that feeling that there wasn't a station left on the air that I hadn't received, I thought I would try to bring XEN on 710 a little better. All at once a phenomenal increase in volume occurred and for two periods of fifteen minutes each I was sitting there listening to JOJK in Kanazawa at 3000 watts! So you see I got my prize catch when I wasn't looking for it."

### Gets Fifty More On His Scott

W. C. Everhart, 104 Front St., Fargo, North Dakota, has a new Scott All-Wave which has given him excellent results but he says his first copy of RADEX enabled him to add fifty new stations. On the short waves, he has received most of the police calls and the principal stations of the U. S. as well as England,

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# STORIES of Your RADIO FRIENDS

### Betty Writes of the Celebrities

In Hollywood, where she spent seven years as a radio favorite, they called June Pursell "the girl with the ballad voice." Now she is in New York singing old and new favorites for NBC audiences, although she never took a music lesson and embarked on a vocal career by accident.

A native of Indianapolis, June moved with her family to Chicago, where they remained long enough for her to graduate from high school. A week later they moved to California, where her father died five days after their arrival. It was necessary for June to go to work and her first big mon ent was a \$35 a week job singing in a Los Angeles cafe, but that job lasted only a week. Then came opportunity. "I just happened to sing one night, as a dare, in a Hollywood club," explains the platinum-haired and blue-eved singer, "I borrowed a ukulele from a little boy and sang a number. You see the program was being broad-



June Pursell

cast over a local station. Well, I kept on singing for two hours and a half, and after it was all over I found I had a job with the radio people and I stayed seven years."

June's radio debut that night launched her on a career. One listener who called on her to say her singing was beautiful was Aimee Semple McPherson. Between radio engagements she became a vaude-ville and club headliner. She traveled with Abe Lyman and his band and was headlined on the Keith-Orpheum circuit as "The Haunting Blues Singer." She did several shorts for lettro-Goldwyn-Mayer, and 1500 letters arrived from motion picture patrons. She signed a contract for a year to make phonograph records.

In 1930 June was acclaimed the most popular radio star on the west coast and won a trip to Hawaii. Then friends urged Miss Pursell to come east after her California success, and she arrived at the NBC for an audition. She was signed immediately. June's voice is peculiarly suited to the singing of ballads "with a swing." That is perhaps why she is often compared with the late Nora Bayes, whose low, rhythmical voice captivated American song lovers.

Five feet four inches tall, weighing 125 pounds, she stands easily before the microphone and whispers her songs. She gazes at the ceiling and prefers to be alone in the studio during a broadcast.

Tune in for June any Monday, Thursday or Saturday at 6:45 p.m. EDST, over the NBC-WEAF network.

#### **Brokenshire Is Back**

"Radio's playboy" and "Society's playboy" the studio folk call him, but actually there are few announcers who take their work as seriously as Norman Brokenshire. His familiar and resounding "How do you do, ladies and gentlemen, how do you do" is an air signature that has greeted listeners on every program he has introduced for the past eight years. Brokenshire is also an authority on program building and an excellent writer of radio continuity. In a

majority of cases he writes the programs he announces.

"Broke" was born in Murcheson, Ontario, June 10, 1898, and christened Norman Ernest. He was brought up in small Canadian towns to which his father, a Scotch Presbyterian missionary and school teacher, was assigned. Norman came to the States when his father became pastor of a church at Cambridge,



Norman Brokenshire

Mass. Later the family moved to Hallowell, Maine, and Norman opened a printing shop in the woodshed behind the parsonage.

The war broke up the family. Norman's father went to France as an instructor in language and Y.M.C.A. worker; his mother went to London to join her son, Laurence, who was a war casualty in a hospital there. Business dwindled and young Brokenshire was forced to give up his print shop. A succession of jobs followed, and he decided to go to war. He got permission from his mother, being still under age, and joined the infantry. Before he had completed his training, however, the Armistice was signed. At the age of nineteen, he became the youngest Y.M.C.A. hut secretary among 3000. He was in charge of Fort Totten and other Army post "Y" work, and arranged entertainments, plays, musicales and such. Other jobs followed, and finally one Sunday morning when, as usual, Brokenshire was running his eye over the classified ad section, a "blind" advertisement for a radio announcer caught his attention. "It listed more qualifications that I ever imagined any man possessed," he said, "but I had nothing to lose, so I answered it."

When he arrived at "Broadcast Central," formerly WJZ, 400 other men were waiting their turn. Norman and three others were selected. Brokenshire soon became an idol with listeners everywhere. He was transferred to Washington, D. C., and back to New York. He resigned to become a free lance and traveled this country and Europe, and finally joined the Columbia Broadcasting System. His fan mail still breaks all records.

Norman Brokenshire announces many programs, but you can hear him regulary on the "Society's Playboy" program on Wednesdays at 10:30 p.m. EDST, over the CBS.

#### The Voice That Satisfies

"Music That Satisfies" is an apt description of the sort of melody offered by Ruth Etting. Her career embodies a story more often encountered on the screen or in the pages of a novel than in real life. Born in a small town, Miss Etting made her way not only to the glamor surrounding a glorified "Follies" personality, but to fame as a singer of radio, the stage, screen, and recording.

Ruth was born in David City, Neb., where her father was head of the milling business founded by her grandfather. As a child she displayed considerable talent for sketching, mimicry and dancing. After graduation from her hometown high school she decided to make art her career and went to Chicago, where she studied fashion design at the Academy of Fine Arts. Her studies were more costly than she has reckoned and it became necessary to find a source of additional revenue in order to continue them.

She learned that several of her fellowstudents earned their tuition by dancing in the choruses of local night clubs and found that she could indulge another of her natural talents to this end. This proved to be the turning point of her career, for the plaintive note which is an intrinsic quality of her voice attracted the discriminating ear of her director. A principal in the show was taken ill and Ruth, as substitute, warbled her blues songs. When the art school reopened for the next term she was not present, for her newly discovered voice had won her engagements which took up all of her time, with personal appearances in local theatres and work in supper clubs.



Ruth Etting

Soon after she was chosen to record exclusively for the Columbia Phonograph Company, her discs were best-sellers throughout the country. Florenz Ziegfeld heard the records and signed her for his productions, on the advice of friends, without meeting her. This was in 1927.

Ruth is slim, blue-eyed, with soft blonde hair. She spends all vacations at her 150-acre farm near David City, Neb., and takes her hand at the daily chores. Still designs and makes most of her own clothes. Was picked by a jury of Chicago artists as the happiest combination of beauty and brains they had ever seen.

Has never taken a music lesson and never had a radio audition. Her voice is the answer to the radio control engineer's prayer—clear as a bell and so even in tone that the engineer rarely needs to touch his controls. She sings fluidly, with no apparent effort.

You can hear Ruth on the "Music That Satisfies" program every Wednesday and Saturday at 10 p.m. EDST, over the CBS.

#### An Artist from Mexico

From Mexico comes Tito Guizar. romantic young tenor whose appealing love songs have won him a large following. Tito's parents were horrified at his desire to go on the stage. His mother was a talented vocalist and pianist, and his father a skilled guitarist and mandolinist, but only as amateurs who played and sang for their own amusement. It was while attending the Mexican National University in Mexico City that Tito's fellow-students discovered and recognized his talents and became an admiring audience. This convinced Tito that he could be successful in the career for which he had always longed. In 1925 he went to his father and declared that he was through with medicine and academic studies forever. The next two years found him in Italy studying voice at St. Mark's Academy in Milan. In 1928 he returned to Mexico City to appear in opera. But Tito wanted something a little less formal than the role of Grand Opera hero. Thus he began to combine the classic technique he had

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Tito Guizar

# RUNNING UP NEW RECORDS

# Hobbying With Our DXers

THIS month we are giving you glimpses of some great records. Read 'em and weep. Think of records in three and even four figures being made right in Chicago and Pittsburgh, and Brooklyn. If it weren't for the darn verifications they have got to show for it, you'd say it just couldn't be done. And some of them have the audacity to make these records on old battery sets. There ain't no justice.

We have never been able to decide whether it encourages us or discourages us to read about some guy who borrows fifty dollars and stretches it into a million in a week or two. So it is with these big records. One minute they make us want to put the set up in the attic and try to forget it and the next we want to start at it again and see if we can't do it. Well, anyway, here they are, for better or for worse:

"I am the proud possessor of a very moderately priced nine-tube Silver-Marshall Super," says Roland L. Churchill, 4323 No. Tripp Ave., Chicago, Ill. "I use a six-foot cast-iron pipe one inch diameter for my ground and I have three aerials of varying lengths from one to three hundred feet all connected to a three-way inductance switch on the side of my cabinet so I may change at will. Since October 31, 1931—four and a half months-I have acquired a log of 517 stations with exactly 400 verified. I have paid for only one of these verifications— KWEA, Shreveport, La.—the others all replied for postage. On all stations heard I keep a card index arranged as to those verifications requested heard but not verified. Each card shows date, time and selections heard. It also shows date request was mailed and the date of verification. My RADEX map is worth much more to me than the 25 cents it cost. I have it mounted on a drawing board so I can hang it up on the wall as an everyday inspiration to spur me on in my efforts. Using Chicago as a center I have drawn red circles at distances of 250 miles apart. Map tacks of various colors designate the power of the stations heard. You should see my map; it is crowded with tacks. In closing let me express my sincere appreciation for what I consider the finest of all radio logs and one of the finest of radio magazines—RADEX."

#### Bringing In the T-P's

"These last few months have been glorious for Trans-Pacific reception," reports Roy Cattell, R. F. D. No. 2, Paterson, N. J. "Since November 5th I've heard JOAK, JOBK, JOCK, JOGK and JOIK, besides an as yet unidentified Oriental which signed off at 5 a.m. EST. December 27th, on 760 kcys. In Australia I've heard 4QS on February 15th. 3LO on February 19th and 4RK and 2BL in March. I have 2YA verified over a year, in addition to KGMB and KGU. One week I heard KGU five times out of the seven mornings. If they are coming through they can clearly be heard even while KOIN is on and as soon as KOIN has definitely signed off, KGU is right there at practically the same volume. Now that they have moved from 940 kcys., or will soon, they will become easier to log. I still use the old Majestic 71 Neutrodyne and it's running rings around the high-powered supers with pentodes and whatnot."

#### The Distant Canadians

"For Fred W. Harp of Brantford, Ont.," suggests Roy, "He should try CKMO every day, except Wednesday and Saturday, from 11 p.m. to 3 a.m. PST, and CKWX on those two mornings from 11:30 p.m. PST on. Another is CKOV from 12 till 2 a.m. PST on Friday and Sunday mornings. CHWK comes on the first of each month at 11 p.m. PST for a test. I also verified CJCJ April 9, 1931, at 2:20 a.m. EST. They may still have the program. Perhaps Milford Voss would rather I did not answer his question, but he asked for it, so here goes. He asks who has more than 33 Californians as far as 1800 miles. I am handicapped by being at a greater distance, yet I've logged 38 Californians as far as 2400 to 2500 miles, or 64 west coast stations. He beats me by two Mexicans, but I've got 25 Cubans and 44 Canadians. DX is a game where no matter how far your log goes it's nearly always possible to find someone just a bit better."

#### Best Even in Australia

Richard D. Caddell, Pittsburgh, Pa., wrote to Australia recently to find out something he already knew. Says he: "I wrote to Radio Station 3GL, Geelong, Australia, a couple of months ago for a verification and in my letter to them I asked 3GL if they could suggest a good log-book containing the radio stations in Australia and New Zealand. Well, I received my verification from 3GL today and Mr. E. J. Haipure, Director, informed me that the best log he knew of was-RADEX " Mr. Caddell has just received a verification of which he is proud-PRAX, Rio de Janeiro, Brazil, 1360 kcs. The Director of that station writes that Caddell is the first person in the U.S. to report PRAX, that is with a correct report of their broadcast. The time on the air for PRAX is as follows: Week days, 10:00 a.m. to 12:00 noon and 8:00 p.m. to 11:00 p.m. Sundays, 10:00 a.m. to 12:00 noon. The time is Brazilian—one hour ahead of EST. All mail should be addressed to S. A. Philips Do Brazil, Caixa Postal No. 954, Rio de Janeiro, Brazil, South America. This makes 30 verifications from South American or European stations which tell Mr. Caddell that he was the first to receive them from the U. S.-some record. Yet radio service men tell him that he is in the worst radio location in Pittsburgh. Nor does Mr. Caddell depend upon the Atlantic for his receptions for he has 12 Japanese verified.

#### 2YA Interferes with WGN!

"I am not surprised that no one answered my inquiry as to a station on 720 kcs.," says R. H. Seidel, 2828 Washington St., Lincoln, Nebr. "At 4:30 a.m. today (April 3rd) I brought that signal up to an audible point and found it to be 2YA at Wellington, New Zealand. The signal has been coming in slightly stronger for the past two or three weeks,

this being the beginning of a short period each spring and summer when the stations from across the Pacific attain their maximum volume in this country. The complete sign-off was as follows: 'Station 2YA. The clock is just striking 10:00 o'clock. Station 2YA, Wellington, is closing down. Good night, everybody.' This announcement was followed by two bars of the British national anthem and the signal disappeared. Listeners in this part of the country with good receivers may expect to pick up these foreign countries at any time for the next few months between 2:00 and 8:00 a.m. CST."



Irene Taylor, NBC "bluesette" likes chili con carne and other dishes from her southern home. On all the late dance pick-ups from Edgewater Beach Hotel in Chicago. NBC.

"During a five weeks' period, from February 2nd, I DXed almost night and day with a new Majestic ten-tube superheterodyne and tuned in 447 stations, including five Australian, 2YA, 1YA; 7 Japs; KGU and KGMB," reports Eugene Martin, 704 S. Green St., Wichita, Kansas. "Reception is much better than it was in Dallas, where I DXed for five seasons. Although I am farther from Australia here, the Australians come in better, but Japanese reception

is not as good as it was in Dallas, 300 miles farther from Japan. Several radio men have told me that this section of Kansas is a dead spot for radio. If that is so, I would certainly like to DX in a live spot for a few days."

#### Only a 1926 Battery Set!

Of course a new, modern, steen-tube extra superheterodyne will bring them in but that it isn't at all necessary is shown by the record of Earl R. Roberts, 712 South 9th St., Cambridge, Ohio, who has a six-year-old battery set with loop and outside aerials. Mr. Roberts reports that his log now stands at 785 stations with all but 48 U.S. stations as shown by the Index by Frequencies. The 785 includes 93 calls now deleted as well as the police and airport stations he has been able to pick up on his broadcast receiver. So cheer up, owners of last year's models, the signals of some 800 stations are right there in your room. All you have to do is tune them in

"Your article in the March RADEX on 'What Do You Mean by DX?' was just what I've been looking for and it's fine," writes R. B. Hemphill, 4931 Polk St., Chicago, Ill. "I've just got the DX fever and I have been trying to get some such information as you give in your article. Most radio books seem to assume that all their readers are old-timers and do not seem to consider newcomers. Congratulations on your foresight. At present I have 45 verifications from 27 states, so you can see I am just a starter in comparison with some of those who claim over 400 stations."

"You listed WPAW as deleted," points out Ray La Rocque, 135 Highland St., Worcester, Mass., "but I have been hearing it regularly operating in synchronism with WPRO. The announcement is WPRO-WPAW in Providence." Mr. La Rocque received the RADEX special DX program from 10BQ and thinks there should be more of these special programs. His log now stands at 490 from nine countries. He asks information regarding VE9LP which is evidently the test call of CKAC and would like to know their power. WSX in Boston has a number of frequencies, Mr. La Rocque, 230 and 266 on long waves and 3340, 3370, 5925 and 5940 on short waves. You will have to figure out your 795 harmonic from these.

Luther E. Grim, 505 S. Main St., Red Lion, Pa., was a "doubting Thomas" when he bought his first RADEX and read of some of the DX records. "Those that said they had three and four hundred stations were stretching the truth, to my mind, while those who claimed five, six, and seven hundred were outand-out liars as I saw it," confesses Mr. Grim. "So I thought I would see just what could be done. The first week I logged 109 stations. Now my log is 359 stations in 46 states, Canada, Cuba and Mexico." And Luther is still going strong.

#### Found a Gold Mine

Maynard Fischer, 44 Barry Place, Buffalo, N. Y., found his first RADEX on the street, picked it up, took it home, used it on his set and became an enthusiastic DXer. He was an early member of the Buffalo Evening News DX Club and did much to bring about the almost universal use of RADEX among the members of that club. It might be a good idea for us to travel around the country dropping copies of this magazine on the streets! Mr. Fischer has a five-tube Echophone, not a powerful set, but even so has a log of 362 stations with 305 verified.

#### Those RADEX Specials

Thomas Brown, Manager, Station 10BQ, Brantford, Ont., writes as follows: "You will no doubt be pleased to hear that we had a successful broadcast Saturday morning, March 19th, on our DX courtesy program for readers of RADEX. We received many reports from several states, including one from California and one from New Brunswick. By the way, this is our second report from California this winter. Not too bad for 'the little station on the hill,' a 15watter. We wish to express our sincere thanks to the many readers of RADEX who sent in reports. Some of the letters we received were wonderful. Accept our thanks for your splendid cooperation on this DX program."

"I surely got a kick out of the program from 10BQ, Brantford, Ont., which you put on for the readers of RADEX," comments Bob Brown, 413 30th St., McKeesport, Pa., and adds: "I have verifications from 44 states, 9 Mexicans, 7 Cubans, 8 Canadians, and WKAQ, Porto Rico. I have around 175 Ekko stamps, some beauties too. I am going to frame them on a heavy white blot paper mat with narrow black ebony frame later on. I expect with the help of RADEX to complete the states. Every stamp in the picture will carry some little bit of history with it. I think this will make a picture that money can't buy. What do you think of my idea?"

"Thanks to your kind information I was able to pick up and get a verification from station KXRO in Aberdeen, Wash.," says Rudolph Kure, 3633 Vine St., Cincinnati, Ohio, "I will welcome heartily your promise to arrange similar programs in the future. That would be swell. You are a real friend to radio fans. There is not even the very slightest doubt about it."

"From January 1st of this year to April 1st I have been successful in logging 375 stations with my RCA Victor Superette No. 7, 8-tube set. I have over 200 verifications. One from 10BQ on the special RADEX DX that I prize highly," writes Arthur G. Turner, 36 Arlington Ave., Beverly, Mass.

#### He Got Them Both

"I got the RADEX DX program from KXRO, Aberdeen, Wash., also 10BQ, Brantford," says Ray E. Everly, 102 W. Washington, St., Newton, Ill. "It's a fine thing. Let's have more RADEX programs on the hard to get 'wee' ones. They are reliable tests."

Edward Coristine, 5 Rosemount Ave., Montreal, Canada, has received his verification from KXRO covering his reception of the special RADEX program on March 13th, and hopes there will be other of these specials in the future.

"I pulled in the 10BQ program on March 19th," reports H. Burstrom, address not given; "thanks to RADEX or I would never have gotten them."

"Every morning when I am doing any DX work at all, I hear a station on 580 kcs. which plays phonograph records," says Wm. Ellis, P. O. Box 13, Hughson, Calif. "This station comes in weak but



Dorothea James. Mistress of Ceremonies, Movie Star Revue, CBS Tuesdays and Thursdays, 5:45 p.m. EDST.

clear and the music is louder than the announcer. I hear them from 3:30 to 4:00 a.m. PST, At 4:00 WIBW comes on and drowns it out. Is this WOBU or WSAZ? Which one is on 3:30 to 4:00 a.m. PST? I have both the filtered aerial and an earphone adapter," adds Mr. Ellis. "With the phones I am enabled to have many pleasant hours of radio while the other members of the family are asleep. As for the filtered aerial, well Japan is like a local with no noise nor distortion."

#### Here's Wyoming

KDFN, 1210, Casper, Wyoming, about which many fans have inquired, tests every Tuesday from 3:05 to 3:15 a.m. EST according to information from Ian Murdoch, 17 Main St., West, Grimsby, Ontario, who submits two queries of his own: "March 9th, on 1310 kcs. at 2:25 to 2:30 a.m. EST I heard a station which had its program cut quite frequently. I thought I picked up KGEZ. Did I get them on that date? On March 1st, on 1320 kcs., at 3:22 to 3:32 a.m. EST I heard the recording 'I Promise You.' KID is supposed to sign off at 2:00 a.m. EST, so did I by any chance get KGMB at Honolulu?"

#### From Porto Rico

"Since writing you last my log has grown a little bit," writes Benigno Contreras, Box 74, Marina Station, Mayaguez, Porto Rico. "Now I have 217 stations, with 115 verified. This season I added three good ones to my log. They are KPCB, Seattle, Wash., KGCX, Wolf Point, Mont., and KGFJ, Los Angeles. All three are verified. Outside of the broadcast band I have W3XK, W3XJ, Silver Spring, Md.; W5XA, and KGCY, Shreveport, La. The first two are television stations; the last one is a police broadcaster. Static has been very bothersome, as usual.

"At the present time I have 702 stations logged, with 670 verified and the rest to come," writes Milton P. Christa, 18092 Fairfield Ave.. Detroit, Mich. "I have every station in twelve states, including Georgia, Louisiana, Nebraska, Nevada, Utah, North Carolina, Wyoming, Connecticut, Michigan, etc., and have five verifications or more from 34 states. I have no technical knowledge of radio other than knowing how to tune them in, with one hand on the dial and RADEX in the other hand. I have never used headphones and every station naturally was heard on the loudspeaker."

"The Round the World DX Club of Los Angeles has a weekly broadcast over KGER, Long Beach, Calif., 1360 kcs., every Friday commencing at 10:00 p.m. PST. At that time DX tips on both broadcast and short-wave bands are read with musical numbers interspersed," is the information from Stuart Walmsley, 1641 West 60th St., Los Angeles, Recording Secretary of the Club.

"Have had my Waverly five-tube set for the past ten months," reports Julius Kleinman, 1494 Brook Ave., Bronx, N. Y., "and have succeeded in pulling in nearly 350 stations, with the aid of a very novel aerial. Will be very glad to pass along this information if your readers would enclose a stamped addressed envelope. This aerial has aided me in bringing in police calls on the receiver from Ingram, Mich."

#### A Heavy Date

"Those DXers who failed to listen in on the mornings of March 19th and 20th missed an excellent opportunity to add many stations to their logs," remarks Stanely H. Bond, Keyser, W. Va. "Some of the stations that were on were: WIAS, WRBQ, KRKD, WHAZ, WIBX, KFOR, WPCH, KWLC, 10BQ, 10AK, WORK, KFWI, WEDC, WBOW, WMBC, WBAA. On the programs of 10BQ and 10AK, it was announced that they were for the benefit of readers of RADEX."

"Just received a verification from

# INSURE YOUR RADIO ENJOYMENT

SEND THIS BLANK TODAY

The Radex Press, 5005 Euclid Avenue, Cleveland, Ohio. Enclosed find \$\_\_\_\_\_\_for which send me postpaid my choice of your offers as checked below: 25c One radio map of North America.... 25c ☐ One copy of the next RADEX\_\_\_\_\_ ☐ Trial subscription, next five issues of RADEX..... \$1.00 ☐ One year's subscription to RADEX, 10 issues, and Radio Map free\_\_\_\_\_\_ ☐ Two subscriptions to RADEX with one leatherette cover and Radio Map, both free 3.50 One two-year subscription with leatherette cover and Radio map, both free 3.50 Write Name Plainly Street and Number 59

W6XI, Bolinas, Calif., on short-wave. This on a three-tube home-made battery set, at 6:30 p.m. I would like to know if anyone has ever received a verification from W0DA, Paterson, N. J. Can anyone tell me when to DX for WNBW, Carbondale, Pa.?" inquires John M. Lennon, 122 Linden St., Camden, N. J.

"I have a log of which I am very proud," boasts Geo. T. Hudson, 2545 99th St., East Elmhurst, N. Y. "566 broadcast stations logged; 214 amateur stations (from all nine districts); 41 U. S. short-wave stations; 43 police stations; 41 short-wave stations from 21 countries. I use a G. E. Super and Baird short-wave converter."

#### **Another Battery Record**

"Speaking of records, how is this for a six-tube battery set (Crosley 6-60)?" asks Blaine Menth, 1003 E. Union Ave., Olympia, Wash. "WJTL, 100 watts, verified; KMAC, 100 watts, and WGL, 100 watts, both verified. I have a total of 250 stations and would like to find out if anyone else in Washington has that many."

James L. Goldwater, Adams Hall, University of Wisconsin, reports that he had logged 27 of the stations on the 1500 channel, a real record for 100 watters. He has had 44 out of the 50 on 1310. He has been helped greatly by the frequency checks of the past few weeks, thus catching stations he would otherwise have had great difficulty in ever getting.

"I have been DXing since February 11, 1923," writes Frank S. Macolly, 4408 Mitchell St., Roxborough, Philadelphia. "I have heard 764 stations with over 600 verified with either letters, cards or Ekko stamps. I now have over 600 stamps. My present set is a Bosch seven-tube using no ground. Would be glad to hear from others."

Karl J. Halpern, 1435 Coney Island Ave., Brooklyn, N. Y., reports his foreign catches for this season as follows: HIX, HRB, LR3, 1ZB, VPN, 2ZI, 6ML, 4BC, JOPK, 3YA, 2ZF and 2VE. The New Zealand stations 2ZI and 2ZF advise Mr. Halpern that he has the long distance record in hearing their stations.

"Without RADEX I would be lost as far as DXing is concerned," confesses Charles Rowland, 23 Myrtle Drive, Pontiac, Mich. "I have logged 480 stations since October of this year. Almost all my good catches are verified."

"Pulled in HIX, Santo Domingo, March 13th, on their special test DX program for the Newark News Radio Club. Came in fine," reports Philip R. Nichols, P. O. Box 82, East Hartford, Conn.

"Three months ago I didn't know what DX meant; then I got a RADEX. To date I have brought in 344 stations on my 11-tube Philco." This from Howard J. Sites, 114 Chestnut St., Covington, Va.

Only 23 stations east of the Mississippi left unverified, is the boast of Harry C. Rose, 140 Overlook Ave., Boonton, N. J., who says he has verified 78 percent of all the active stations in the U. S., or a grand total logged of 658.

"In the past seven months I have logged 301 U. S. stations, and several in Canada, Mexico and Cuba," reports W. H. Lewis, Y.M.C.A., Ft. Leavenworth, Kansas. "I think my best catches are WFEA, WWRL, CJOR, KPQ and KRKD, all verified."

Charles F. Kyle, 392 Preble St., South Portland, Maine, now has 439 for a total in his log. He would like to know the best time to get Nevada, Wyoming and New Mexico.



Petite Dorothy Brent sang one song as a Chase & Sanborn guest and got a regular job. Will soon be heard on regular weekly program.

"On February 21, 1932, I brought in 18 new stations," reports Louis Alexander, Jr., 10 So. Ridgewood Road, South Orange, N. J. "I now have a grand total of 301."

#### Some DX Targets

A letter from WKBZ, Ludington, Mich., says they will broadcast every Sunday morning from 2:00 to 3:00 a.m. EST during May, reports A. J. Parfitt, 1933 East 69th St., Cleveland, Ohio, who also has a letter from NAA saying they broadcast on 690 kcs. a weather report at 10:10 a.m., 3:45 p.m. and 10:00 p.m. EST.

"Here is a tip for some fans who have not had this station yet," suggests Louis Rewald, 483 Wilmot Ave., Burlington, Wis. "KDFN, Casper, Wyo., is on the air every Tuesday morning from 2:05 to 2:15 CST, with a short test."

WIBX, at Utica, sends out a post card signed "The Old Tom Cat from WIBX," which says: "The Tom Cat program goes on the air every weekday morning at 4:00 a.m. (EST)." This program continues until local sunrise.

CMBT, Havana, gives a DX program every Sunday morning from 1:00 to 3:00 a.m. EST on 790 kcs., reports Chas. F. Brown, 1 Rock Ave., Worcester, Mass.

"I see that 1RO, Rome, is still listed as 7,500 watts," points out Eugene Martin, 704 S. Green St., Wichita, Kans. "I wrote to 1RO last October and asked them the power of their station and they replied '75,000 watts' which corroborated information I already had. So if 1RO is 75,000 watts every DXer should know it."

From Richard E. Williams, 607 Main St., Dickson City, Pa. "Tell the Transcontinental DX Club that I wrote WODA February 14th and received a very nice card from them on February 16th." So it goes; stations that are one fan's poison are another fan's meat.

Arlie W. Crabbe, 33 Brehl Ave., Columbus, Ohio, had his own reception blanks printed and finds them a big help in getting verifications.

A cry for help comes from Harlan W. Newell, 1629 Centre St., Newton Highlands, Mass. "A station heard February 25th on approximately 1410 at 1:00 a.m.

EST. From 1:00 to 1:10 world wide news flashes were broadcast. At 1:10 a program from the —— Hotel by Anson Weeks and his orchestra was introduced. The call sounded like KOIC. Thanks a lot."

Oliver W. Todd, 1619 N. Conestoga St., Philadelphia, Pa., would like to hear from DXers, particularly broadcast band fans in Great Britian, who receive American stations often. Will our readers in the United Kingdom write Mr. Todd?

"With my Atwater Kent 60 I have logged 486 stations," reports I. B. Stewart, R. R. 14, Box 350, Indianapolis, Ind. "I have all states but Rhode Island and Wyoming. When can I catch KDFN?"

Elmore Bostwick, 31 West 12th St., New York City, heard a station testing at 4:00 p.m. March 14th. They were counting, 1-2-3-4, in German. Did anyone else catch this one?

L. Howard Donaghay, 222 Irving Ave., Bridgeton, N. J., thinks it would be a fine thing to form a correspondence club of DXers, pairing up those who want to write about some particular set or in some certain state or portion of the country. He states he will undertake this job and asks DXers to write to "The DX Listeners Correspondence Club, 222 Irving Ave., Bridgeton, N. J."

#### Correspondence Wanted

Glenn Anderson, 5640 South Jay St., Tacoma, Wash.

James P. Coristine, 5 Rosemount Ave., Westmount, Quebec.

Wm. Ellis, P. O. Box 13, Hughson, Calif. Reginald Ogan, 1005 Star Pine Road, Carpinteria, Calif.

Louis Alexander, Jr., 10 South Ridge-wood Road; South Orange, N. J.

Ian Murdoch, 17 Main St., W., Grimsby, Ontario.

Thomas Welch, R. R. 3, Box 54, Ottumwa, Iowa.

Joe H. Ziglinsky, 37 River Ave., Natrona,

H. A. Whittier, R. F. D. 147, Mansfield, Mass.

The Short Wave World Stations will appear in June issue.

### The Problem of Hum

(Continued from page 2)

replacement of this troublesome unit is the only remedy. Such tests are best made by experienced service men who have the proper meters and instruments for making a quick examination.

Open ground leads from the cores and cases of the power transformers will cause hum. Condensers that are too small or imperfectly constructed produce an inherent hum in the receiver, but which should be noticed when the set is purchased.

A defective rectifier tube will produce serious hum. The first part of the test should embrace the substitution of the questionable rectifier with a good tube. Replacement is the only remedy if the hum is found to be due to this cause.

#### **Faulty Eliminators**

The rectifying units in "A" and "B" eliminators frequently cause hum in the set. Failure of the filter choke coils and filter condensers creates a hum just as much as similar trouble in the self contained unit of an a. c. broadcast receiver. Trouble can always be looked for in the voltage divider section; where a number of resistances are connected between the negative "B" and the maximum "B" voltage output, so as to provide the various plate voltages. Also examine the associated shunt filter-condensers.

Frequently the choke coils of the power unit become short circuited—not in the coil iself—but between the terminals so that the coil is not in the circuit. This can be easily tested.

Besides the hum in defective tubes, other causes may be found in the filament circuits. And these are rather commonplace. For instance, many sets have a shunt resistance across the filament of the tube, and a center connection that is grounded through another resistance. If this resistor is incorrectly adjusted, has poor electrical contacts, or the grounded resistor is broken or loosely attached, a serious hum will develop. Still again, across the secondary coil supplying the raw alternating current to the tube filaments, there is a shunt resistance which may be defective,

or the center tap from the secondary that is grounded through a resistance may be open. A grounding of a filament at either side will cause noticeable hum. All of these causes produce an annoying hum in the filament circuits.

In the grid circuits hum may be due to open bypass condensers, insufficient grid bias voltage, open secondary coil windings leading to tube grids, grounded radio and audio transformer secondaries, and pickup from adjacent a. c. circuits.

In the plate circuits hum will come from low plate voltage, open primary coil windings, induction from other a. c. sources, and poorly functioning "B" eliminators.

External hum can be reduced by inserting a small filter unit in the a. c. cord leading to the radio power transformer. This worthy device also removes most of the power line static and other noises which are seriously amplified after entering the broadcast receiver.

# Ann Leaf at the Organ

(Continued from page 4)

a pianist. Then her family moved to Los Angeles and she began to consider finances. Playing the organ in a theatre was a good job, but managers were prejudiced against women. Just about that time too every young woman in Los Angeles was determined to become an organist. Ann could not find any place to practice unless she went to the churches at six in the morning.

(If there is one thing that terrifies Ann it is a big building, particularly an empty one. The Gothic postoffice in Omaha used to send chills down her spine. So you can imagine the effect of an empty church at dawn and a little girl climbing alone to the organ loft to practice.)

But she went to work in the first theatre into which she ventured. Her salary was raised five dollars at the end of the first week. After that she progressed steadily to the two largest theatres in Los Angeles, the Paramount Publix and the Fox West Coast, before coming to New York.

"How do you get such a volume of tone from your instrument?" I asked. Ann doubled up her fist, bent an elbow and squeezed the hard muscles of her forearm.

"It takes muscle and I have it," she laughed.

Ann adores her sister, Esther, who also broadcasts now and again, her brother Maury, who is a musician and inventor, and Ben, who is not a professional. Her greatest ambition is to live in Los Angeles and have unlimited leisure to paint, travel and write. Ann is a true daughter of the sun and is never so happy as when she is running down a long stretch of white sandy beach or hitting the ball on golf course or tennis court.

And she reads Wasserman and Balzac in large dusty volumes almost as tall as she is, not forgetting, of course, the smart magazines relating to Broadway.

Her greatest thrill on the air came when she played "Mother's Marriage Music" as Mrs. Leaf was leaving Omaha for Los Angeles. Ann doesn't know the name of the selection but it was her lulluby as a child.

You'd like Ann Leaf as much as you do her music.

You will find Ann's picture on the front cover. It will make you like her music more than ever.

# When Things Go Awry

(Continued from page 10)

tute the -01A tubes with -30s, and the -71A power tube with a -31. Remove the small 1-ohm resistance between the plus A and tube filaments of the last three tubes and replace with a length of wire. as this resistance must be removed from the circuit. Connect a two-volt "Air-Cell" battery to the two A battery terminals. Or two dry cells in series may be used if an additional 15 ohm rheostat is connected in series and adjusted so that exactly two volts is applied across the sockets when all the tubes are in place. Screen grid tubes cannot be used. You may need less negative C battery on the first audio tube, but more  $(22\frac{1}{2})$ volts on the -31 tube instead of the -9 volts now being furnished the present -71A tube.

#### **B Eliminator Causes Hum**

My Philco "B" eliminator seems to cause a loud hum in my radio set. Can this be true, and if so, how can I correct the trouble?

The resistances in the eliminator, both the fixed and adjustable, frequently are the source of such trouble. They should be tested and replaced if necessary. Next examine the choke coils and condensers in the filter portion of the power pack. There may be breakdowns or short circuits through the coils. The special Philcotron cells, or electrolytic units may require replacing. The material composing the internal parts is subject to trouble. When the little jars are replaced they quickly rejuvenate the weakened eliminator and reduce the hum. See that the electrolyte comes well above the ends of the electrodes in the

#### Improving Volume Control

Can I improve on the volume control of my Grimes six-tube receiver?

The several models of Grimes "Inverse Duplex" receivers use a simple rheostat in series with the filaments of all the tubes. It controls the volume by regulating the temperature of the filaments. This is a very poor method of volume control, but is one that was used on all of the older sets. The best thing to do is to set the rheostat permanently at a position that will allow the proper filament voltage to be applied across the terminals of the sockets as measured by a voltmeter with all the tubes in place. Then place a potentiometer across the C battery and vary the grid bias of the first audio tube for volume.

#### **Improper Volume Control**

The volume control on my set does not increase the signal strength after it has been turned beyond the midway position. Why does it reach its maximum with only a half turn?

Some controls just turn so far and then reach their full operating resistance. After that point has been reached the change of resistance cannot increase the volume of the receiver for it has already reached its maximum. Perhaps the maker has not put in a control of the proper resistance having a uniform range of

increase throughout its entire length of variation.

#### Changing Loud Speakers

Can I use the speaker from an RCA model 46 outfit on a new Midwest set instead of the speaker that came with the latter set?

The RCA speaker has four wires leading to the audio amplifier unit. Two are brown and come from the cone voice coil to connect to the two red and green wires that go to the secondary of the output push-pull transformer. other wires from the speaker come from the field coil of the unit. The Midwest speaker has a five-wire arrangement. and while some of them are similar to the RCA four-wire unit the former speaker cannot be substituted for the latter, or vice versa, without a considerable change in the wiring of the set in order to take care of the fifth wire built into the Midwest circuit and speaker arrangement.

#### **Short Wave Converter**

Do you believe that any of the short-wave converters mentioned in the article in the March issue of RADEX will operate with my Edison model C2 tuned radio frequency receiver?

We see no reason why a good converter should not work well with your set for it is rather sensitive. It should be remembered that a converter does nothing else but take the incoming short-wave signals (which are usually very weak) and convert them by the heterodyne principle to wave lengths that fit the tuning limits of the broadcast receiver. The more powerful the receiver the better the weak signals come through in an audible manner.

The broadcast receiver is adjusted to 550 kilocycles, which is the high end of the dial, and all tuning is done by the converter. If the receiver is not very selective there is apt to be a background of talk or music which will interfere with the weak short-wave signals. However, you should be able to get nearby short-wave stations with a high degree of loudness, and perhaps a number of weaker and foreign ones. Enough, at any rate, to provide quite some short-wave entertainment.

#### Changing First Audio Tube to a -27

I am thinking of changing the first audio tube, a -26, over to a -27 in my model 86 Philco receiver. I have no diagram, so will you advise me with the necessary details.

A diagram of the audio portion of the circuit has been mailed to you. There should be no difficulty in changing the tube, but we do not think the results will be very remarkable. The -27, of course, is a good detector, and usually is used as such. The -26 is strictly an amplifier tube. It will be necessary to install a five-prong socket, change the filament voltage connections, and connect the cathode of the -27 to the circuit. Use -4.5 volts on the grid of the -27 with 90 volts on the plate. The cathode should preferably be connected to the movable arm of a 50 ohm potentiometer connected across the power secondary of the transformer supplying the filament heater voltage of 2.5 volts. This arrangement may help to reduce hum and balance the circuit. This should prove an interesting experiment and may give you a better control over amplification with a good tone adjustent, but little, if any, additional volume.

#### Local Station in Background

I have a Dayton short-wave adapter, but when I use it a local station—WCAE—is heard faintly in the background. Why is this, and how can I tune it out?

Your experience is not unusual. Short-wave adapters plug into a tube socket of the regular broadcast set and do not use the radio frequency tuning circuit of the receiver. The adapter has, in most cases, two tubes, which represent the entire tuning circuit, and the audio amplifier of the large set is used to intensify the short-wave signals. Therefore the short-wave adapter is not as selective in tuning out nearby powerful stations as the broadcast receiver.

You might try using a short aerial on the adapter, and the regular aerial for the broadcast set. Also, a very small fixed condenser in series with the aerial will not interfere with short-wave reception, but will tend to keep out the longer wave signals. Such a condenser should be about .0001 mfd. capacity.

### The Editor's Mail

(Continued from page 14)

Italy and South America. He says he had a world of "dope" on short-wave stations which he would be glad to exchange with other DXers. He asks for the millenium, however, when he says: "I would like to see the question settled as to aerials and grounds, filtered aerials, umbrella type and plain straight line." As we have said before, there is no "best" aerial or ground except as it is found for a particular set in a particular location by constant experiment.

For the information of Mr. Durand, of Wheaton, Ill., and others, Clement Van Velsor, 1033 Sanford Ave., Irvington, N. J., reports that WWAC is an aeronautical station sending out aviation reports, located in Nashville, Tenn. For another reader, Mr. Van Velsor states that WFK is in Frankfort, Mich., owned by the Wabash Radio Corp. Mr. Van Velsor has a Lincoln SW-22 All-Wave Super. It has eleven tubes, one dial, a three-gang condenser, a low-high power switch and a trimmer condenser to bring each signal to its peak. It has no plug-in coils. He describes the selectivity as being razor-edged. Broadcast band reception is excellent with great volume. He states that European stations with the exception of G5SW roar in."

#### A New One in Mexico

From Manuel Angel Fernandez, Manager, Cia Difusora Mexicana, Mexico City, comes this interesting information: "It is our pleasure to advise you that our broadcasting station XETF 'La Voz de Mexico' started operating at this city March 9th, on a frequency of 610 kcys., and a power of 2500 watts. The equipment is of the Western Electric type and we hope that our signal is clearly heard in your country. This company also owns XETF 'La Voz de Veracruz' operating at 630 keys, and 500 watts antenna power. Please also take notice; that the slogan 'La Voz de Mexico' or the translation 'The Voice of Mexico' is registered in the trade-mark and patent office of this country and is owned by this company."

"I believe I may be able to clear up the mystery relative to the station in Detroit known as GZ7," informs Frank Wilkes, 25 Maurice Ave., Ossining, N. Y. "This is one of the many National Guard transmitters scattered throughout the United States. These stations are not subject to the F. R. C. and hence may use any frequency they choose. Their calls consist of any two letters and then a number, the number, I suppose, designates the district in which the station is located. A good number of these stations use frequencies of about 630 keys."

#### Some New Ones Coming?

Louis Alexander, Jr., 10 South Ridgewood Road, South Orange, N. J., clips the following prophecies of new stations from the Club notes of the Newark News: WBRL, Tilton, N. J., 500 watts, 1430 kcys., will probably share time with WFEA. WCOT, Providence, R. I., 100 watts, 1320 kcys., will probably share time with WORC. WINR, Bay Shore, L. I., 100 watts, 1210 kcys., will probably share time with WCOH, etc. WMBL, Lakeland, Fla., 100 watts, 1310 kcys. WQBC, Weirton, W. Va., 60 watts, 1420 kcys. We have noted no construction permits by the Commission for any of the above stations.

"I have a complaint to lodge against the Mexican and Cuban stations," says F. Rouse, 34 Cuyler Ave., Albany, N. Y. "I never hear some of them announce in English." (!) This seems to be a common fault with stations in other countries, the Japanese particularly. We'll have to take it up with the League of Nations. Mr. Rouse also heard one station on two waves—WSM on 1070 and 1460. Must have been harmonics, of course, but it is pretty hard to figure this out.

"While DXing last night or rather early this morning (March 13th) I picked up WBBR, Brooklyn, on 1300 kcys., their assigned frequency, and then picked them up again at 3:30 a.m. on 1030 kcs. Is it possible for a station to broadcast on two frequencies at the same time?" queries Willard K. Jennings, 45 Thorn St., Rahway, N. J.

The copy for the next issue of each RADEX goes to the printer on the 5th

of the preceding month and it is necessary for us to have data regarding special DX programs by that date. Unfortunately last month information regarding a number of specials came to us too late to be included in the April issue. Among these were special DX programs, some of them to be dedicated to readers of RADEX, from CMGF, Matanzas, Cuba; CHGS, Summerside, P. E. I.; WJTL, Oglethorpe University, Ga., and several others.

#### Vancouverites Moving

The Vancouver stations on 730 have moved to 725 in an effort to get away from interference by XER, so Richard D. Caddell, 605 Ridge Ave., N. S., Pittsburgh, Pa., reports. Mr. Caddell asks: "I wonder if any others have heard WYPC, The Voice of Muscle Shoals, located at Sheffield, Ala., evidently an unlicensed station operated by a negro preacher, Rev. L. W. Michael. This station has finally been put off the air by the authorities."

"I notice an error in RADEX," points out D. G. Powers (no address given), "You list WHDH, Boston, as daytime only but I have received this station up to 8:00 p.m. EST three or four times." Many daytime stations are permitted to remain on the air until sunset in the city in which is located the principal night station on that wave. Thus WHDH may remain on the air until sunset in Denver. Mr. Powers asks what Columbia station broadcasts on 830 kcs. None to our knowledge.

#### WBOQ is Moving Around

What is WBOQ doing on 800 kcs.? A number of readers report hearing it at that point on tests. A letter to WABC about this matter has brought no reply. We have seen nothing in Federal Commission reports authorizing tests on this frequency. Who can give us the inside of this? Robert R. Rawstron, Claremont, N. H., says: "I picked him up this morning on 790 kcs. Oddly enough his transcriptions were on 790 kcs. but when the records stopped the wave switched to 800 kcs. What's the answer? I heard the same records and announcer testing WABC on 860 kcs. after WBOQ signed off." Mr. Rawstron got stuck for a long while on the 699 peg but finally the 700th station came in and then got 701, WSAJ, Grove City, Pa., for good measure.

"On page 19 of your February issue, I note some comment about WPCH being heard sometimes on 570 kcys.," says Donald S. Miles, 378 Stuyvesant Ave., Irvington, N. J. "May I say that since WPCH and WMCA are located in the same building, the WMCA Building, and since they are operated by the same company, there may be some inductive or capacitive effects between lines from nearby studios, as any studio may be used by either station."

For several years we carried a phantom station at Toronto, Ont., CKOW on 840 kcs., but deleted it when advised that the call had never been used. Now John T. Hill, 1432 Nott St., Schenectady, N. Y., writes that he heard this station in March. A new list just received from the Dominion Government does not show it and we ask some of our Toronto readers to let us know definitely if CKOW is now on the air.

#### The Toronto Stations

E. L. Near, 32 Northcliffe Blvd., Toronto 10, Ont., thinks "it is a shame that a pioneer station like CFCA should be moved to such a rotten wave-length as 1120." CFCA probably moved of their own desire and a wave-length that may be "rotten" in one locality may be very good everywhere else.

"On March 17th I heard the announcer say: 'CFCT, Toronto,' whereas RADEX lists this station at Victoria, B. C.," reports Charles Kneer, 94 Maplewood Terrace, Rochester, N. Y. CFCT is certainly in Victoria and none of the Toronto calls sounds like it. How come the Toronto announcement?

On April 1st, CFRB, Toronto, will begin to use 10,000 watts power, says Selwyn A. Adamson, The Canadian Press, Toronto 2, Ont. Also, CKGW, Toronto, will use 10,000 shortly after. A report just received from the Dominion Government still gives the old rating however.

"I have heard CKWX every Sunday on 880 kcys.," reports Blaine Menth, 1003 E. Union Ave., Olumpia, Wash. "They go there to accommodate CKCD for their church service. CKWX signs off at about 1:30 p.m. and reappears later in the evening at their assigned frequency of 730."

"Tell Wm. Armstrong that the station he heard on January 12th at about 3:45 a.m. EST with the Corn Cob program was KGDA, 1370, Mitchell, S. Dak.," suggests Eugene Giglio, R. F. D. 1, Rockville, Conn. Mr. Giglio would like to know from owners of Crosely 1932 Supers what results they have had on distance.

"What do you make of this, Watson?" F. Barker, Jr., 435 So. Marguerita Ave., Alhambra, Calif., writes: "On the night of March 19th, at 11:00 p.m., I heard KFXY and WAGM sign off together, that is the announcer said 'KFXY in Flagstaff, Arizona, and WAGM in Presque Isle, Maine, now signing off'."

Miss M. Stannard, 522 Sunset Ave., Rockford, Ill., is anxious to identify "The Four Horsemen," an orchestra. "I want to know what time they come on and over what station and if they come direct from Chicago or through a network." No record of this feature on the networks. Who can help Miss Stannard?

"WCGU, Brooklyn, N. Y., is no longer connected with WBBC of the same city," states Mac Plung of Brooklyn. "They have a new transmitter and their studios are located at 47 Flatbush Ave., Extension, Brooklyn, N. Y. They answer all requests for verification promptly."

#### Mexican Correspondent Wanted

Through the kindness of Rolando Martorell, of Matanzas, Cuba, a reader of RADEX, we are enabled to check the accuracy of our Cuban list and make several corrections in this issue. Now if some of our readers in Mexico would offer to perform similar kindly offices in that country, our readers would certainly appreciate it.

Earl Jackson, Sergeant, Q. M. Corps, stationed at Schofield Barracks, Hawaii, writes that he has a General Electric Super and since last July has heard 125 stations "on the mainland" as far east as New York City. He reports that leakage from the 6600-volt power lines

in his locality gives him a lot of interference.

"Has there been an increase in power for KFPM, Greenville, Texas?" asks John R. Carter, 1119 West 9th St., Erie, Pa. "I picked them up this morning and they came in altogether too loud, it seemed to me, for 15 watts." No notice of any official change in power for KFPM. Mr. Carter has now passed the 400 mark on his log.

"The information from R. Rawstron, of Claremont, N. H., regarding the use of the call WABO by WHEC is correct," writes R. Brady, Jr., 47 Eastman Ave., Rochester, N. Y. "I was told by one of the engineers that the call WABO is still in their license and is used for test programs only."

#### Was it W8XAR?

"WHAR is now signing off at exactly 4:10 EST. We have been broadcasting on a frequency of 980 kcs." This announcement was heard at 1:10 PST on the morning of March 8th by A. Collver, 147 Walk Circle, Santa Cruz, Calif., who is anxious to identify his catch. Anybody know of WHAR?

"KWCR in Cedar Rapids, and WIAS in Ottumwa, Iowa, have exchanged their frequencies. KWCR now broadcasts on 1420 kcys. and WIAS on 1310," reports Rudolph Kure, 3633 Vine St., Cincinnati, Ohio. Lacking any official confirmation of this shift, we are continuing the old data, but including these stations in "Heard on Other Waves."

Fred Litwitz, Jr., 2137 Lewis Street, Chicago, is secretary of a new club, the Northern States DX Radio League. L. Cooper, 1818 Nevada St., Muskegon, Mich., is the president.

# Last Minute Items

WBAA will test May 27th from midnight to 3:00 a.m. CST.

CKWO will take the air on May 31st., 1000 watts on 540.

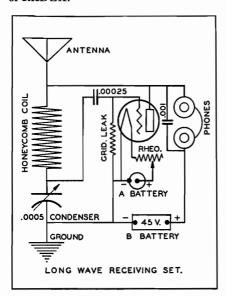
W8XAR now testing on 980 between 1:00 and 6:00 a.m. EDST.

The CNR stations have network broadcast 9:30 p.m. Mondays, probably Eastern Daylight Time.

THE February issue of RADEX told of a long wave receiver that would reach out beyond the normal radio broadcast band—as high as 20,000 meters. The circuit was simple and intended to bring in the long wave (damped) voice, spark, and arc code signals, that are broadcast only from modulated transmitters.

An improved circuit is presented this month. It will tune in also the many great continuous wave (undamped) tube and arc transmitters which are replacing many of the old modulated stations throughout the world.

This circuit is a modification of the old Colpitt's oscillator, and is necesary to make audible the otherwise continuous flow of high radio frequency current that would fail to operate the slowly moving telephone diaphragms. There is but one tuning operation—the variable condenser controlling the local oscillations which produce the slower audio-frequency beat notes. These cause the plate current of the detector tube to vibrate and rise and fall in a periodic manner with the passage of each train of dash and dot code signals. The tuning inductance is a single honeycomb coil. The sizes were given in the March issue of RADEX.



# Classified Index to Programs

Time in Eastern Daylight Standard

#### CHILDREN

Lady Next Door, 4:45 p.m., Daily, except Sunday, R. Little Orphan Annie, 5:45 and 6:45 p.m., Daily, ex. Sun., B. Skippy, 5:15 p.m., Daily, except Sunday, R.

#### CONCERTS

Artists Service Musicale, 10:30 p.m., Wednesday, R. Howard Barlow, 11:15 p.m., Tuesday and Thursday, C. Major Bowes, 11:30 a.m., Sunday, R. Cities Service, 8 p.m., Friday, R. Civic Concerts Service. 8:15 p.m., Saturday, R. Evening Melodies, 11:30 p.m., Sunday, C. Gauchos, 11 p.m., Sunday, C. L'Heure Exquise, 10:20 p.m., Sunday, R. Walter Logan, 1:45 p.m., Sunday, R. Mobiloil, 9:30 p.m., Wednesday, R. Orchestra Gems, 7:30 p.m., Sunday, R. Pastorale, 5 p.m., Sunday, C. Quiet Harmonies, 6 p.m., Sunday, C. Toscha Seidel, 9 p.m., Friday, C. Through Opera Glass, 11:30 p.m., Thursday, B. Troika Bells, 12:30 p.m., Sunday, R. Waldorf-Astoria, 6 p.m., Daily, except Sunday, R.

#### DANCE BANDS

Ben Bernie, 9 p.m., Tuesday, C.
Cab Calloway, 11:45 p.m., Mon. and Thurs., R; 12 mid.,
Wed. and Fri. B.
Lew Conrad, 11:15 p.m., Thursday, R.
Countess d'Orsay, 8:30 p.m., Saturday, B.
Jack Denny, 9 p.m., Sunday, C; 11:15 p.m., Mon., R.
Chas. Dornberger, 11:30 p.m., Tues., R; 11:35 p.m., Fri., B.
Eddie Duchin, 12 mid., Sunday, C.
Snooks Friedman, 6:30 p.m., Monday and Friday, C.
Larry Funk, 12 mid., Sunday, C.
Johnnie Hamp, 12 mid., Tues., Thurs., Fri.; 11:30 p.m.,
Sat., R.
Lesham Jones, 12 mid., Mon and Fri.; 9:30 p.m., Sat., C.
Wayne King, 3 p.m., Sunday; 5:30 p.m., Wed., R.
Lyman, 8:15 p.m., Sunday; 5:30 p.m., Fri., R.
Abe Lyman, 8:15 p.m., Tues., Thurs. and Sat., C.
Enric Madriguerra, 11:45 p.m., Saturday, C.
Don Redman, 11:45 p.m., Wed., and Fri.; 11 p.m., Sat. C.
Buddy Rogers, 12 mid., Mon., Wed. and Fri.; 11 p.m., Sat. C.
Buddy Rogers, 12 mid., Mon., Wed. and Sat., R.
B. A. Rolfe, 8:30 p.m., Thursday and Friday, B.
Noble Sissle, 6:30 p.m., Sun.; 11:45 p.m., Mon. and Tues., C.
Rudy Vallee, 8 p.m., Thursday and Friday, B.
Noble Sissle, 6:30 p.m., Sun.; Friday, B.

#### DIALOG

Amos. 'n' Andy, 7 and 11 p.m., Daily, except Sunday, B. Big Time, 8 p.m., Wednesday, R. Burns and Allen, 10 p.m., Monday, C. Clara, Lu and Em, 10:15 a.m. Daily, ex. Sat. and Sun, B. Cuckoos, 5:30 p.m., Saturday, R. Easy Aces, 7:30 p.m., Saturday, R. Goldbergs, 7:45 p.m., Daily, except Sunday, R. Jones and Hare, 7:45 p.m. and 12:30 a.m., Daily, except Sunday, R. Jones and Hare, 7:45 p.m. and 12:30 a.m., Daily, except Saturday and Sunday, B. Making Movies, 9:45 p.m., Sunday, B. Myrt and Marge, 7 and 10:45 p.m., Daily, except Saturday and Sunday, G. Fallon, G. Saturday, B. Myrt and Marge, 7 and 10:45 p.m., Daily, except Saturday and Sunday, C. Ray Perkins, 6:30 p.m., Tuesday, B. Reis & Dunn, 6:15 p.m., Tuesday, B. Stebbins Goom Only, 8:15 p.m., Sunday, B. Stebbins Boys, 7:30 p.m., Daily, except Sat. and Sun, B. Stebbins Boys, 7:30 p.m., Daily, except Sat. and Sun, B.

Col. Stoopnagle and Budd, 8:45 p.m., Sunday, Monday and Wednesday, C.
Tastyyeast Jesters, 7:15 p.m., Monday and Saturday, B.
Ward Wilson, 6:30 p.m., Mon., Wed. and Fri., B.

DRAMA
Careless Love, 12:30 p.m., Sunday, B.
Danger Fighters, 8 p.m., Saturday, B.
Death Valley Days, 8:30 p.m., Monday, B.
Eno Crime Club, 9:30 p.m., Tuesday and Wednesday, C.
First Nighter, 9:30 p.m., Saturday, B.
Friendship Town, 9 p.m., Friday, B.
Sherlock Holmes, 9 p.m., Wednesday, B.
K-7, 6:30 p.m., Sunday, B.
Rudyard Kipling Stories, 12 mid., Monday, R.
Love Story, 9:30 p.m., Thursday, C.
Moonshine and Honeysuckle, 2:30 p.m., Sunday, R.
Photoplay, 8:30 p.m., Saturday, C.
Rin-Tin-Tin, 8:15 p.m., Thursday, B.
Soconyland Sketches, 8 p.m., Monday, R.
Thompkins Corners, 9:30 p.m., Thursday, B.
Today and Yesterday, 8:30 p.m., Friday, C.
True Story, 8:30 p.m., Tuesday, R. DRAMA

Jesse Crawford, 11:30 p.m., Sunday, R. Ann Leaf, 2 p.m., Mon.; 3 p.m., Tues.; 3:15 p.m., Wed., C. Archer Gibson, 1:45 p.m., Sunday, B.

#### PIANO

Fray-Braggiotti, 9:15 p.m., Saturday, C. Ernest Hutcheson, 8 p.m., Sunday, C. Lee Sims, 11:30 p.m., Mon., Tues. and Sat., B. Twenty Fingers Harmony, 10:45 p.m., Saturday, B. Willys Overland, 8:15 p.m., Wednesday, B.

#### POPULAR PROGRAMS

POPULAR PROGRAMS

A & P Gypsies, 9 p.m., Monday, R; 10 p.m., Thursday, B. Album of Familiar Music, 9:15 p.m., Sunday, R. Armour Program, 9:30 p.m., Friday, B. Bath Club, 8 p.m., Daily, except Sat. and Sun., C. Beau Bachelor, 10 p.m., Friday, C. Big Six, 9 p.m., Thursday, R. Blue Coal Revue, 5:30 p.m., Sunday, C. Buick Revelers, 9:45 p.m., Sunday, R. Chase & Sanborn, 8 p.m., Sunday, R. Chase & Sanborn, 8 p.m., Sunday, R. Cliequot Club, 9 p.m., Friday, R. Coca-Cola Program, 10 p.m., Wednesday, R. Edgeworth Program, 8 p.m., Thursday, B. Eugene Revue, 9 p.m., Monday and Thursday, C. Evening in Paris, 9:30 p.m., Monday, C. Farm and Home, 1:30 p.m., Daily, except Sunday, B. Four Boys and a Girl, 9:30 p.m., Monday, B. Jack Frost Melody, 8:30 p.m., Monday, B. G.E. Circle, 5:30 p.m., Sunday, 12 n. Daily, except Sunday, Monday and Saturday R. Gerardine, 8:45 p.m., Tuesday, C. Great Personalities, 9:30 p.m., Tuesday, B. H.M.S. Trumpeters, 10 p.m., Tuesday, B. H.M.S. Trumpeters, 10 p.m., Tuesday, B. Hollywood Nights, 10:30 p.m., Thursday, B. Edna Wallace Hopper, 10 p.m., Sunday, R. Lucky Strike, 10 p.m., Tuesday, B. Lucky Strike, 10 p.m., Tuesday, B. Lucky Strike, 10 p.m., Tuesday, B. Lucky Strike, 10 p.m., Tues, Thurs. and Sat., R. Maxwell House, 7:15 and 11:15 p.m., Mond, Wed. and Fri, C. Musical Fast Freight, 10:15 p.m., Trues.; 9 p.m., Wed., C. Nestle's Program, 8 p.m., Friday, B. Fri., C.
Musical Fast Freight, 10:15 p.m., Tues.; 9 p.m., Wed., C.
Musical Fast Freight, 10:15 p.m., Tues.; 9 p.m., Wed., C.
Nestle's Program, 8 p.m., Friday, B.
Parade of States, 9:30 p.m., Monday, R.
Paris Night Life, 10:30 p.m., Tuesday, B.
Pennzoil Parade, 9:30 and 11:30 p.m., Sunday, C.
Pond's Program, 9:30 p.m., Friday, R.
Rexall Party, 7:15 p.m., Sunday, R.
Sampler Orchestra, 10 p.m., Friday, R.
San Felician Serenade, 9:45 p.m., Mon. and Wed., B.
Sheaffer Revue, 4:30 p.m., Sunday, B.
Silver Flute, 1:30 p.m., Sunday, R.
Simoniz Guardsmen, 5:30 p.m., Sunday, B.
Sinclair Wiener Minstrels, 9 p.m., Monday, B.
Society's Playboy, 10:30 p.m., Wednesday, C.
Songs of Home, 4 p.m., Sunday, B.

Swift Garden, 3:30 p.m., Sunday, B.
Three Bakers, 7:30 p.m., Sunday, B.
Club Valspar, 9:30 p.m., Saturday, R.
Waves of Melody, 10:30 p.m., Monday, B.
Yardley, 2 p.m., Sunday, B.
Yeast Foamers, 2:30 p.m., Sunday, B.
Ziegfeld Show, 10:30 p.m., Sunday, C.

#### QUARTETS

Bayuk Stags, 9:15 p.m., Sunday, B. Carnation Contented, 8 p.m., Monday, B. Frigidairians, 7:15 p.m., Sunday, B. Heel Huggers, 8:30 p.m., Tuesday, B. Mills Bros., 7:15 p.m., Tuesday and Thursday, C. Sylvanians, 7:45 p.m., Sunday, C.

#### RELIGIOUS

Cathedral Hour, 1 p.m., Sunday, C. Catholic Hour, 6 p.m., Sunday, R. Chicago Knights, 5:30 p.m., Sunday, C. Church of the Air, 2:30 p.m., Sunday, C. Hymn Sing, 7 p.m., Tuesday, R. National Vespers, 5 p.m., Sunday, B. National Youth, 3 p.m., Sunday, B. Seth Parker, 10:45 p.m., Sunday, R.

#### SINGERS

SINGERS

Belle Baker, 9 p.m., Sunday, C.
Connie Boswell, 6 p.m., Wed.; 5,:45 p.m., Sat., C.
Boswell Sister, 10:30 p.m., Monday and Thursday. C.
Russ Columbo, 11:15 p.m., Sunday; 11 p.m., Daily, except
Sunday and Wednesday. R.
Bing Crosby, 6:45 p.m., Mon, Wed. C.
Vaughn DeLeath, 6:15 p.m., Monday, 9 p.m., Saturday, C.
Kay Donna, 10:30 p.m., Monday, R.
Morton Downey, 7:45 and 11:30 p.m., Daily, except Sun., C.
Ruth Etting, 10 p.m., Wednesday and Saturday, C.
Jane Froman, 11:35 p.m., Wednesday and Saturday, C.
Jane Froman, 11:35 p.m., Tuesday and Triday, C.
Funnyboners, 10:45 p.m., Tuesday and Triday, C.
Alex Gray, 10:30 p.m., Tuesday and Friday, C.
Tito Guizar, 9:30 p.m., Tuesday and Friday, C.
Wm. Vincent Hall, 7:15 p.m., Saturday, C.
Elsie Janis, 7:15 p.m., Wednesday and Friday, B.
Arthur Jarrett, 10:45 p.m., Monday and Thursday, C.
McCravy Bros., 10:45 p.m., Monday and Thursday, C.
Modern Male Chorus, 7:30 p.m., Sun., 9:15 p.m., Thurs., C.
Grace Moore, 9 p.m., Wednesday, R.
Old Singing Master, 10:15 p.m., Sunday, B.
Pickens Sister, 10:45 p.m., Wed., Thurs, and Fri., B.
June Pursell, 6:45 p.m., Mon., Thur., and Sat., C.
Kate Smith, 8:30 p.m., Tues, Wed. and Thurs., C.
Sons of Eli, 2 p.m., Sunday, C.
Street Singer, 12:45 p.m., Mon., Yel.s, Wed and Thurs., C.
Gus Van, 9:45 p.m., Friday, C.
Lawrence Tibbett, 8:30 and 11:30 p.m., Monday, R.
Gus Van, 9:45 p.m., Friday, C. Gus Van, 9:45 p.m., Friday, C. Voice 1000 Shades, 10 p.m., Tuesday, C.

#### TALKS

Adventures in Health, 10:15 p.m., Wed. and Fri., C. Back of News, 6:45 p.m., Tuesday, R.
Dr. S. Parkes Cadman, 3:30 p.m., Sunday, R.
Cheerio, 8:30 a.m., Daily, except Sunday, R.
Ely Culbertson, 4:30 p.m., Mon. and Wed.; 8 p.m., Sat., R.
International Broadcast, 12:30 p.m., Sunday, C.
Kaltenborn, 6 p.m., Monday and Friday, C.
Laboratory Experiments, 8 p.m., Saturday, C.
David Lawrence, 9 p.m., Sunday, R.
Laws Safeguard, 7:15 p.m., Saturday, R.
Laws Safeguard, 7:15 p.m., Saturday, R.
Angelo Patri, 8:45 p.m., Sunday and Thursday, C.
Public Affairs, 10:15 p.m., Saturday, C.
Radio in Education, 7:30 p.m., Sat., R.; 8 p.m., Tues., B.
Nellie Revell, 11 p.m., Wednesday, R.
Taxpayers' League, 8 p.m., Wednesday, B.
Lowell Thomas, 6:45 p.m., Daily, except Sat. and Sun., B.
Frederick William Wile, 7 p.m., Saturday, C.
World Today, 6:30 p.m., Thursday. Adventures in Health, 10:15 p.m., Wed. and Fri., C.

## 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.

NATIONAL, Red (R)\_\_\_\_WEAF

NATIONAL, Blue (B)\_\_\_WJZ

Call	Dial	Call	Dial

Call	Dial	Call	Dial

Call	Dial	Call	Dial
. –			

TIME—ED Eastern Daylight Saving; E Eastern Standard; C Central Standard; M Mountain Standard.
For Pacific Time subtract one hour from Mountain.

#### MONDAY

ED-8:00 a.m., E-7:00, C-6:00, M-5:00 R — Gene and Glenn WBEN WCAE WCSH WEAF WEEI WFBR WFI WGY WIOD WJAR WRC WSAI WTAG WTAM WTIC WWJ

ED-8:30 a.m., E-7:30, C-6:30, M-5:30 R — Cheerio

K—Cheerio
CFCF CKGW KPRC KTBS WAPI
WBEN WCAE WCFL WCKY WCSH
WDAF WEAF WEEI WFBR WFI
WFI.A WGY WHAS WIOD WIS WFLA WGY WHAS WJAR WJAX WJDX WKY WOAI WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WWJ WWNC

ED-10:15 a.m., E-9:15, C-8:15, M-7:15 B — Clara, Lu and Em KDKA KFYR KOA KOIL KPRC KSL KVOO KWK WAPI WBAL WBAP WBZA WCKY WDAY WEBC MBAF WBZA WCKY WDAY WEBC WFLA WGAR WHAM WHAS WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC

ED-1:30 p.m., E-12:30, C-11:30, M-10:30 B — National Farm and Home Hour B — National Farm and Home Hour
KDKA KFYR KOA KOIL KPRC
KSTP KTBS KTHS KVOO KWK
KYW WAPI WBAL WCKY WDAF
WDAY WBC WFLA WGAR WHAM
WHAS WHO WIBA WIOD WIS WJAX
WJDX WJR WJZ WKY WMC WOAI
WOC WOW WPTF WRC WREN
WRVA WSB WSM WSMB WWNC

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

C— Ann Leaf at Organ

CFRB WAAB WABC WADC WBCM

WBRC WBT WCAO WCAU WDAE

WDBJ WDODD WDRC WDSU WFBL

WFEA WGR WHP WLAC WLBW

WMAL WNOX WOKO WORC WOWD

WG WQAM WREC WSBT WSFA

WSPD WTAR WTOC WXYZ

ED-4:30 p.m., E-3:30, C-2:30, M-1:30 R — Ely Culbertson, Bridge CFCF CKGW WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WGY WHO WJAR WLIT WOC WRC WSAI WTAG WTAM WTIC WW.

ED-4:45 p.m., E-3:45, C-2:45, M-1:45 R -- Lady Next Door WCSH WEAF WJAR WTAG WTAM ww.i

ED-5:15 p.m., E-4:15, C-3:15, M-2:15 R — Skippy WBEN WCAE WCSH WEAF WEEL WFBR WGY WJAR WLIT WRC WSAI WTAG WTAM WTIC WWJ ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B — Little Orphan Annie KDKA WBAL WBZA WCKY WGAR WHAM WJZ

ED-6:00 p.m., E-5:00, C-4:00, M-3:00
C—Current Events, Kaltenborn
KDYL KFAB KLRA KLZ KMBC
KMOX KOH KRLD KSCJ KTRH
KVOR WAAB WABC WACO WBRC
WBT WCAO WCCO WDAE WDBJ
WDBO WDOD WDRC WDSU WFBL
WFEA WFIW WIBW WIP WISN
WKBH WLAC WLAP WLBW WMAL
WMT WNOX WOKO WORC WOWO
WOAM WREC WSBT WSFA WSPD WMT WNOX WORD WORK WOWN WAR WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA WHP R—Waldorf-Astoria Orchestra KFI KFSD KOA KSD KSL WAPI WBEN WCAE WEAF WEEI WFI WHAS WJAR WKY WPTF WSM

WWNC

WWNC

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

C-Vaughn De Leath
CFRB KDYL KFH KLRA KLZ
KMBC KMOX KOH KRLD KSCJ
KTRH KVOR WAAB WABC WACO
WBRC WBT WCAO WCCO WDAE
WDBJ WDBO WDOD WDRC WDSU
WEAN WFEA WFIW WGR WHP
WIEW WIP WISN WKBN WLAC
WLAP WLBW WMT WNOX WOKO
WORC WOWO WQAM WREC WSBT
WSFA WSPD WTAO WTAR WTOC WSFA WSPD WTAQ WTAR WTOC

ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C — Snooks Friedman and Orchestra C—Snooks Friedman and Orenestra KLRA KMOX WAAB WABC WBRC WBT WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFIW WGR WHEC WHP WKBN WFIW WGR WHEC WHP WKBN WLAC WLBW WNOX WOKO WORC WOWO WOAM WREC WSBT WSFA WSPD WTAR WTOC WXYZ

WWVA

B—Royal Vagabonds, Ward Wilson KOIL KWK WAPI WBAL WBZA WCKY WFAA WGAR WHAM WJZ WMAQ WOAI WREN WRVA WSB WTMJ

ED-6:45 p.m., E:5:45, C-4:45, M-3:45 C—Bing Crosby
CFRB KFAB KFH KFPY KLRA
KLZ KMBC KMOX KOH KOIN KLZ KMBC KMOX KOH KOIN KSCJ KTRH KVOR WAAB WABC WACO WBRC WBT WCAH WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFEA WFIW WHEC WHP WIP WISN WKBH WKBN WKBW WLAC WLAP WLBW WKBH WMT WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ R — June Pursell, Ballads KOA KSD WCAE WEAF WFI WIOD

B — Literary Digest, Lowell Thomas KDKA WBAL WBZA WHAM V WLW WMAQ

B—Little Orphan Annie
KEX KFYR KOIL KPRC KSTP
KWK WDAY WEBC WENR WKY
WOAI WREN

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C-Myrt and Marge KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGR WJAS WKRC WMAL WNAC WOKO WSPD WWVA

B—Amos 'n' Andy
CFCF CKGW KDKA WBAL WBZA
WFLA WIOD WJAX WJZ WPTF
WRC WRVA WHAM

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C — Maxwell House Tune Blenders WABC WCAU WDRC WEAN WGR WJAS WNAC WOKO

B — Tastyeast Jesters
KDKA KOIL WBAL WBZA WCKY
WENR WJZ WREN

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

C—Easy Aces
KMBC KMOX WABC WCAO WCCO
WFBM WGN WGR WHK WJAS
WKRC WNAC WOKO WXYZ WCAU

B—Stebbins Boys
KDKA KFI KGO KGW KHQ KOA
KOIL KOMO KPRC KSL KSTP
KWK WBAL WBZA WCKY WENR
WFAA WGAR WHAM WJR WJZ
WKY WMC WOAI WSB WSM WSMB
WTMJ WREN

ED-7:45 p.m., E-6:45, C-5:45, M-4:45
C—Camel, Morton Downey
WABC WADC WBIG WBT WCAH
WCAO WCAU WDAE WDBJ WDRC
WEAN WFBL WGR WHEC WHK
WHP WJAS WKBN WKRC WLBZ
WNAC WOKO WORC WQAM WRUF
WSJS WSPD WTAR WTOC WWVA
WXYZ

B. The Collings

R—The Goldbergs
KSD WBEN WCAE WCSH WDAF
WEAF WENR WGY WHO WJAR
WLIT WOC WOW WSAI WTAG
WTAM WTIC WWJ

B — Billy Jones and Ernie Hare KDKA KOIL KPRC KWK WAPI WBAL WBZA WCKY WFAA WFLA WGAR WHAM WHAS WIOD WIS WJAX WJDX WJR WJZ WKY WMAQ WMC WOAI WPTF WREN WMAQ WMC WOAI WPTF WREN WRVA WSB WSM WSMB WWNC

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Bath Club C—Bath Club
CFRB KMBC KMOX WABC WADC
WBCM WCAO WCAU WCCO WDRC
WDSU WEAN WFBL WFBM WGN
WGR WHK WISN WJAS WKRC
WMAL WNAC WOKO WSPD WXYZ R — Soconyland Sketches
WBEN WCSH WEAF WEEI WGY

WJAR WTAG WTIC

#### Monday—Continued

- Carnation Contented Program CFCF CKGW KDKA KOIL KPRC KSTP KVOO KWK WBAL WCKY WDAY WEBC WFAA WFLA WHAM WHAS WIOD WJAX WJR WJZ WKY WLS WMC WOAI WPTF WREN WRVA WSB WSM WTMJ

ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C—Singing Sam', Barbasol KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WHK WJAS WKRC WMAL WNAC WOKO WSPD WXYZ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — La Palina, Kate Smith KMBC KMOX WABC WADC WBCM

WCAH WCAO WCAU WCCO WFBL WFBM WGN WGR WHEC WHK WISN WJAS WKRC WLAP WMAL WSPD WXYZ

R — Firestone, Lawrence Tibbett CFCF CKGW KPRC KTBS CFCF CKGW KPRC KTBS KTHS WBEN WCAE WCSH WEAF WEEI WFAA WFBR WFLA WGY WHAS WIS WJAR WJAX WLIT WMC WOAI WRVA WSAI WSB wron WKY WSM WRC WSMB WTAG WTAM WTIC WWJ

B — Death Valley Days, Drama KDKA KFI KFSD KFYR KGHL KGO KGW KHQ KOA KOMO KSL KSTP KTAR KWK WBAL WBZA WCKY WEBC WGAR WHAM WIBA WJZ WLS WREN

BD-8:45 p.m., E-7:45, C-6:45, M-5:45 C-Col. Stoopnagle and Budd KLZ KMBC KMOX WABC WCAO WCAU WCCO WDRC WEAN WFBL WGN WGR WHK WJAS WKRC WMAL WNAC WOKO WOWO WSPD WXYZ

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Eugene International Revue KMBC KMOX KRLD WABC WADC WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGN WGST WHK WJAS WKBW WKRC WMAL WNAC WOKO WOWO WREC WSPD WXYZ

WALLA R. Gypsies
KSD WBEN WCAE WCSH WDAF
WEAF WEEI WGY WHO WJAR
WLIT WMAQ WOC WOW WRC
WSAI WTAG WTAM WITC WWJ

B - Sinclair Wiener Minstrels KDKA KFYR KPRC KSTP KTBS
KTHS KVOO KWK WBAL WBZA
WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WIAX WJDX WJR WJZ WKY WLS WMC WOAI WPTF WREN WRVA WSM WSMB WTMJ WWNC

ED-9:15 p.m., E-8:15, C-7:15, M-6:15 C — Street Singer KMBC KMOX WABC WADC WCAO

WCAU WCCO WDRC WEAN WFBL WGN WHK WJAS WKBW WKRC WMAL WNAC WOKO WOWO WSPD wxyz

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C — Evening in Paris C—Evening in Paris
KMBC WABC WADC WBT WCAO
WCAU WEAN WFBL WGN WHEC
WHK WJAS WKBW WKRC WMAL
WMT WNAC WOWO WSPD WXYZ R — Parade of the States KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP

WBEN WCAE WCSH WDAF WEAF WEEI WFAA WFBR WGY WHAS WHO WJAR WJAX WKY WLIT WMC WOAI WOC WOW WRC WSAI WSM WTAG WTAM WSB WTIC WTMJ wwj

B — Four Boys and a Girl KOIL WBAL WHAM WJR WJZ WREN

ED-9:45 p.m., E-8:45, C-7:45, M-6:45 B — San Felician Serenade KDKA KOIL KWCR WBAL WGAR WHAM WJR WJZ WMAQ WREN

WHAM WOL WOLL WIRLY WILE WILL BOUNDED TO STORY WILL WILL BOUNDED TO STORY WILL WILL BY WILL BY KIND KOL KRLD KTRH KTSA WABC WADC WEAN WEAU WCCO WDRC WEAN WFBL WEBM WCAO WCAU WCCO WDRC WEBW WKRO WMAL WNAC WOKO WOWO WSPD WXYZ.

R — National Radio Forum

KFYR KSD KTBS WCSH WDAY WEAF WEBC WENR WFBR WFLA WIBA WIOD WIS WJAR WJDX WMC WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC ED-10:30 p.m., E-9:30, C-8:30, M-7:30

C — Music That Satisfies KDB KDYL KERN KFAB KFBK KFH KFJF KFPY KFRC KGB KGMB KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOY KRLD KSCJ KOH KOIN KOL KOY KRLD KSCJ KTRH KTSA KVOR KWG WAAB WABC WACO WADC WBBM WBCM WBIG WBRC WBT WCAH WCAH WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFIW WGST WHAD WHBC WHK WHP WIBW WJAS WKBH WKBW WKRC WLAC WLAP WLBW WADW WARL WHAC WHAP WIBW WIBZ WMAL WMBD WMBG WMT WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSPD WTAR WTOC WXYZ

R — Kay Donna, Contralto KFYR KSTP KTBS WBEN WCAE WCSH WDAF WEAF WENR WFLA WCSH WDAF WEAR WENK WFLA
WGY WHO WIOD WIS WJAR WJDX
WKY WLIT WOAI WOC WRC WSAI
WSB WSMB WTAG WWJ WWNC
B — Waves of Melody
KDKA KOIL KWK KYW WBAL
WBZA WCKY WGAR WHAM WJR

WJZ WREN

ED-10:45 p.m., E-9:45, C-8:45, M-7:45 C — Arthur Jarrett

C—Arthur Jarrett
CFRB KLRA WAAB WABC WADC
WBRC WBT WCAO WCAU WDAE
WDBJ WDBO WDOD WDRC WDSU
WFBL WFEA WFIW WHEC WHP
WLAC WLBW WMAL WNOX WOKO
WORC WPG WQAM WREC WTAR WTOC

— Myrt and Marge KDYL KFBK KFPY KFRC KHJ KLZ KMBC KMJ KOIN KOL WBBM WCCO WLAP WXYZ

B --- McCravy Brothers
KDKA KOIL WBAL WGAR WHAM
WJR WJZ WREN

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C — Alex Haas and Orchestra C—Alex Haas and Orchestra
KDYL KFAB KFBK KFPY KLRA
KLZ KMBC KMOX KOH KOL
KSCJ KTRH KVOR WAAB WABC
WADC WBCM WBRC WBT WCAH
WCAO WCCO WDAE WDBJ WDBO
WDOD WDRC WDSU WEAN WFBL
WFBA WFEA WFIW WHEC WHK
WHP WIBW WIP WKBH WKBW

WLAC WLAP WLBW WMAL WMBD WMT WNAX WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WSPD WTAR WTOC WXYZ R—Russ Columbo and Orchestra WFAF WFF WICH WIDD WIDD

WEAF WFI WIOD WJAR WOW WRC WTIC WWJ WWNC

B — Amos 'n' Andy
KFI KFSD KGO KGW KHQ KOA KFI KFSD KGO KGW KHQ KOK KOIL KOMO KPRC KSI KSTP KTHS KWK WBAP WDAF WEBC WENR WGAR WHAS WIDA WJDX WJR WKY WMAQ WMC WOAI WREN WSB WSM WSMB WTMJ

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C — Maxwell House Blenders

C — Maxwell House Blenders
KFAB KFH KFJF KLRA KMBC
KMOX KTRH KTSA WABC WACO
WBRC WBT WCAO WCCO WDAE
WDBJ WDBO WDOD WFBL WFIW
WGN WGST WHK WKRC WLAC
WLAP WMAL WNOX WOWO WQAM
WREC WRR WSPD WTAR WTOC WXYZ

R — Jack Denny and Orchestra KSD WCAE WEAF WGY WTAM WWJ

ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C — Camel, Morton Downey KDB KDYL KERN KFAB KFBK KFH KFJF KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOY KSCJ KTRH KTSA WISH WOLL AND RICH KTSA KWG WACO WBRC WCCO WDOD WDSU WFBM WGST WIBW WISN WLAC WLAP WMAL WMBD WMT WNAX WNOX WOWO WREC WRR WGN

R — Firestone, Lawrence Tibbett KFI KFSD KFYR KGHL KGIR KGO KGU KGW KHQ KOA KOMO KSL KSTP KTAR WDAY WEBC WIRA WTMJ

B—Piano Moods
KPRC KTBS WBAL WJZ WLW
WMAQ WREN

WMAQ WREN
ED-11:45 p.m., E-10:45, C-9:45, M-8:45
C—Noble Sissle and Orchestra
CFRB KDYL KFAB KFPY KLRA
KLZ KMBC KOH KOL KRLD KSCJ
KTRH KVOR WAAB WABC WACO
WADC WBCM WBRC WBT WCAH
WCAO WCAU WCCO WDAE WDBJ
WDBO WDOD WDRC WDSU WEAN
WFBL WFBM WFEA WFIW WHEC
WHP WISN WKBH WKBN WKBW
WIAC WLAP WLBW WMAL WMBD
WMT WNAX WNOX WOKO WORC
WOWO WFG WQAM WREC WSBT
WSFA WSPD WTAR WTOC WXYZ
R—Cab Calloway and Orchestra R — Cab Calloway and Orchestra KSD WBEN WCKY WEAF WMAQ WRC WTIC WWJ

ED-12:00 m., E-11:00, C-10:00, M-9:00 C — Isham Jones and Orchestra

KDYL KFAB KFH KFPY KLRA KLZ KMBC KOH KOL KRLD KSCJ KTRH KVOR WABC WACO WADC
WBBM WBCM WBRC WBT WCAH
WCAO WCAU WCCO WDAE WDBJ
WDBO WDOD WDSU WEAN WFBL
WFBM WFEA WFIW WHEC WHK WEDM WFEA WFIW WHEC WHK
WHP WIBW WISN WKBN WKBW
WLAP WLBW WMAL WMBD WMT
WNAC WNOX WOKO WOWO WQAM
WTOC WXYZ WNAX
WTOC WXYZ WNAX
P-Pund-VI-I-I-I-I-I

WIOC WAIL WHAL R—Rudyard Kipling's Stories KFI KFSD KGO KGW KHQ KOA KOMO KSL KTAR

ED-12:05 a.m., E-11:05, C-10:05, M-9:05 R—Buddy Rogers and Orchestra WCAE WEAF WEEI WGY WRC

Monday—Continued

ED-12:30 a.m., E-11:30, C-10:30, M-9:30 - Billy Jones and Ernie Hare I KFSD KGO KGW KHQ KOA KOMO KSL KTAR

#### TUESDAY

ED-8:00 a.m., E-7:00, C-6:00, M-5:00 R — Gene and Glenn, See Monday.

ED-8:30 a.m., E-7:30, C-6:30, M-5:30 R — Cheerio, See Monday

ED-10:15 a.m., E-9:15, C-8:15, M-7:15 B — Clara, Lu and Em, See Monday

ED-12:00 n., E-11:00, C-10:00, M-9:00 R — G.E. Circle
KFI KFSD KFYR KGO KGW KHQ
KOA KOMO KPRC KSD KSL KTAR KTHS KVOO WAPI WBEN WCAE
WCSH WDAF WDAY WEAF WEEI
WENR WFBR WFLA WGY WHAB
WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLIT WMC

WOAL WOC WPTF WRVA WRC WSB WSM WSMBWTAG WTAM WTIC WTMJ WWJ WWNC ED-1:30 p.m., E-12:30, C-11:30, M-10:30 B — Farm and Home, See Monday

ED-4:45 p.m., E-3:45, C-2:45, M-1:45 R — Lady Next Door, See Monday

ED-5:15 p.m., E-4:15, C-3:15, M-2:15 R — Skippy, See Monday

ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B — Orphan Annie, See Monday

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 R-Waldorf-Astoria, See Monday

ED-6:15 p.m., E-5:15, C:4:15, M-3:15 C-Reis and Dunn CFRB KDYL KFH KLRA KLZ
KMBC KOH KRLD KSCJ KTRH
KVOR WAAB WABC WACO WBRC
WBT WCAO WCCO WDAE WDBJ

WBI WOAD WCCO WDAE WDBU WDBO WDOD WDRC WDSU WFBL WFIW WGR WHP WIBW WISN WKBH WKBN WLAC WLAP WLBW WMT WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA

ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C — Jack Miller and Orchestra

KDYL KFAB KFH KLRA KLZ KMBC KMOX KOH KSCJ KTRH KMBC KMOX KOH KSCJ KTRH
KVOR WAAB WABC WACO WBBM
WBRC WCAH WCCO WDAE WDBJ
WDBO WDOD WDRC WDSU WFEA
WFIW WGR WHEC WHP WISN
WKBH WKBN WLAC WLAP WLBW
WMT WNOX WOKO WORC WOWO
WQAM WREC WSBT WSFA WSPD
WTAO WATAR WTOC WWWA WYYZ WTAQ WTAR WTOC WWVA WXYZ

B — Ray Perkins KDKA KOA KOIL KPRC KSL KWK WAPI WBAL WBZA WCKY WGAR WHAM WHAS WJDX WJZ WMAQ WMC WOAI WREN WSB WMAQ WM WSM WSMB

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C — Joe Palooka KFAB KSCJ KTRH WAAB WABC WADC WBBM WCAH WCAO WCAU WDAE WDBO WDRC WDSU WEAN WFBL WGST WHP WISN WJAS WKBW WKRC WLAC WLAP WMT WNOX WOKO WOWO WQAM WREC
WRR WSPD WTAR WTOC WXYZ
R—Back of News in Washington
KFI KFSD KGW KOA KTAR WDAF

WEAF WFBR WFI WGY WIOD WIS WPTF WRC WSAI WTAG WTIC

B — Lowell Thomas, See Monday B — Orphan Annie, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C — Myrt and Marge, See Monday B — Amos 'n' Andy, See Monday R — Mid-Week Federation Hymn Sing KEX KGA KJR KPO KTBS WDAF WEAF WJAR WJDX WREN WSAI WTAG WTIC

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C — Mills Brothers

KMBC KMOX WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WGR WHK WJAS WKRC WMAL WNAC WOKO WSPD B - Just Willie

KDKA KOIL WBZA WENR WJZ WREN

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 C—Richman Bros., Sylvia Froos KMBC KMOX WAAB WABC WADC WBBM WCAH WCAU WCCO WFBL WFBM WGL WGR WHK WISN WJAS WKBN WKRC WLAP WSPD WXYZ WWVA

B — Stebbins Boys, See Monday ED-7:45 p.m., E-6:45, C-5:45, M-4:45 C — Morton Downey, See Monday R — Goldbergs, See Monday B — Jones and Hare, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Bath Club, See Monday R—Blackstone, Sanderson-Crumit
KSD KSTP KYW WCAE WCSH
WDAF WEAF WEBC WEEI WFI
WGY WHO WJAR WOC WOW

WDAF WEAF WEBC WEEL WFI WGY WHO WJAR WOC WOW WRC WSAL WTAG WTAM WTIC WWJ WBEN

B -- Radio in Education KECA KFSD KGA KGHL KGIR KJR KOA KOIL KSL KTAR KTBS KVOO KWK KYA WBAL WCKY WFLA WGAR WIOD WIS WJDX WJZ WLS WPTF WREN WSMB WWNC

WWW.NC
ED-\$:15 p.m., E-7:15, C-6:15, M-5:15
C—Abe Lyman and Orchestra
KMBC KMOX WABC WADC WBCM
WCAH WCAO WCAU WCCO WFBL
WFBM WGN WGR WHEC WHK
WISN WJAS WKBN WKRC WLAP
WMAL WSPD WXYZ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Kate Smith, See Monday

R — True Story
KSD KYW WBEN WCSH WDAF
WEAF WEEL WFBR WFI WGY
WHO WJAR WOC WOW WRC WSAL WTAG WTAM WTIC WWJ

B — Heel Hugger Harmonies KFI KFSD KGW KHQ KOA KOIL KOMO KPO KSL KTAR KWK WBZA WHAM WJZ WLS WREN ED-8:45 p.m., E-7:45, C-6:45, M-5:45

C—Geradine, Ed Sullivan
KMBC KMOX WABC WADC WCAU
WCAU WDRC WEAN WFBL WFBM
WGN WGR WHK WJAS WKRC
WMAL WNAC WOWO WSPD WXYZ B - Sisters of the Skillet

KDKA KFYR KOIL KPRC KSTP KTBS KVOO KWK WBAP WBZA WDAY WEBC WGAR WHAM WIBA WJZ WKY WLS WLW WOAI WREN WTMJ

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C—Ben Bernie and Orchestra KDYL KFBK KFH KFPY KFRC KHJ KLZ KMBC KMJ KOIN KOL KRLD KTRH KVI WABC WADC WBRC WBT WCAO WCAU WCCO

WDRC WDSU WEAN WFBL WGN WHK WJAS WKBW WKRC WLAC WMAL WNAC WNAX WOKO WORC WOWO WSPD WXYZ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C — Eno Crime Club CFRB KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHK WJAS WKBW WKRC WMAL WNAC WOWO WSPD WXYZ B - Great Personalities

KDKA KOIL KWCR KWK WBAL WBZA WENR WGAR WHAM WJR WJZ WLW WREN

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C — Voice of 1000 Shades

C—Voice of 1000 Shades
CFRB CKAC KDB KDYL KERN
KFBK KFRC KHJ KLZ KMBC
KMJ KMOX KOIN KOL KSCJ
KTRH KWG WAAB WABC WBBM
WBT WCAH WCAO WCAU WCCO
WDRC WEAN WFBL WFBM WGST
WHEC WHK WHP WISN WJAS
WKBW WKRC WLAP WMAL WMT
WOKO WXYZ
R—Lucky Strike Dance Hour

KFSD KFYR KGO KGW KHC KTAR KTBS WAPI WBEN WCAE
WCSH WDAF WDAY WEAF WEBC
WEEI WENR WFAA WFBR WFI
WFLA WGY WHAS WHO WIBA WIS WJAR WJAX WMC WOAI WOC WRVA WSAI WSB WIOD WJDX WKY WPTFWRC WRVA WSMB WTAG WTAM WTIC WTMJ WWJ WWNC KFI

ED-10:15 p.m., E-9:15, C-8:15, M-7:15 C — Musical Fast Freight KFH KFJF WABC WCAU WDBJ WFBM WJAS WMAL WOKO

ED-10:30 p.m., E-9:30, C-8:30 M-7:30 C - Music That Satisfies See Monday B - Paris Night Life

B — FATIS (NIGHT LINE KDKA KOLL KWK KYW WBAL WBZA WCKY WGAR WHAM WJR WJZ WREN

ED-10:45 p.m. E-9:45 C-8:45 M-7:45 ED-10:45 p.m. E-9:45 C-8:45 M-7:45 C-Funphoners
CFRB KLRA WAAB WABC WADC
WBT WCAO WCAU WDAE WDBJ
WDBO WDOD WDRC WDSU WEAN
WFBL WFIW WHEC WHK WHP
WKBN WKBW WLAC WLBW WMAL
WNOX WOKO WORC WPG WQAM
WREC WTOC
C-Mwt and Marce See Mondoy

C - Myrt and Marge See Monday - McCravy Bros. See Monday

ED-11:00 p.m. E-10:00 C-9:00 M-8:00 C - Joe Palooka KDB KDYL KERN KFBK KFPY

KFRC KGB KHJ KLZ KMJ KMOX KOIN KOL KVI KWG WBRC WCCO WFBM WMAL

R - Russ Columbo See Monday B - Amos 'n' Andy See Monday

ED-11:15 p.m. E-10:15 C-9:15 M-8:15 C — Howard Barlow and Orchestra C—Howard Barlow and Orchestra
KDYL KFAB KFBK KFH KFPY
KLRA KLZ KMBC KMOX KOH
KOIN KSCJ KTRH KVOR WAAB
WABC WADC WBCM WBRC WDBJ
WOBO WDOD WDRC WDSU WEAN
WFBL WFBM WFEA WFIW WHEC
WHK WHP WIBW WKBH WKBN
WKBW WLAC WLAP WLBW WMAL
WMBD WMT WNAX WNOX WOKO
WORC WOWO WOAM WRECK WSFA WORC WOWO WOAM WREC WSFA WSPD WTAR WTOC WXYZ

Tuesday—Continued ED-11:30 p.m. E-10:30 C-9:30 M-8:30

- Morton Downey See Monday C— Morton Downey See Monday

R— Chas. Dornberger and Orchestra
CFCF CKGW KFYR KOA KPRC
KSD KTBS KTHS WBEN WCKY
WEAF WENR WFBR WFI WIBA
WIOD WJAR WJAX WOAI WRC
WTAM WILL WWJ.

B - Piano Moods See Monday

ED-11:45 p.m. E-10:45 C-9:45 M-8:45 C - Noble Sissle See Monday

ED-12:05 m. E-11:05 C-10:05 M9:04 R — Johnnie Hamp and Orchestra KTHS WBEN WEAF WGY WRC KTHS WBEN WEAL

ED-12:30 a.m. E-11:30 C-10:30 M-9:30 B — Jones and Hare See Monday

WEDNESDAY

ED-8:00 a.m. E-7:00 C-6:00 M-5:00 R — Gene and Glenn See Monday ED-8:30 a.m. E-7:30 C-6:30 M-5:30 R — Cheerio See Monday

ED-10:15 a.m. E-9:15 C-8:15 M-7:15 B - Clara Lu and Em See Monday ED-12:00 n., E-11:00, C-10:00, M-9:00 R — G.E. Circle, See Tuesday

ED-1:30 p.m., E-12:30, C-11:30, M-10:30 B - Farm and Home, See Monday

ED-4:30 p.m., E-3:30, C-2:30, M-1:30 R — Ely Culbertson, See Monday ED-4:45 p.m., E-3:45, C-2:45, M-1:45 R — Lady Next Door, See Monday

ED-5:15 p.m., E-4:15, C-3:15, M-2:15 R — Skippy, See Monday

R—Skippy, See Monday
ED-5:30 p.m., E-4:30, C-3:30, M-2:30
R—Wayne King and Orchestra
KFI KFYR KGO KGW KHQ KOA
KOMO KSD KSL KSTP WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WENR WFBR WGY WHO
WIBA WJAR WLIT WOC WOW
WRC WSAI WWAG WTAM WTIC WIBA WJAR WRC WSAI WTMJ WWJ

ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B — Orphan Annie, See Monday

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 Connie Boswell

C—Connie Boswell

CFRB KDYL KFAB KFBK KFJF

KLRA KLZ KMBC KMOX KOH

KRLD KSCJ KTRH KVI WABB

WABC WACO WBIG WBRC WBT

WCAO WCCO WDAE WDBJ WDBO

WDOD WDRC WDSU WFEA WFIN

WHP WIBW WIP WISN WKBH

WLAC WLAP WLBW WMAL WMT

WACK WOOD WOOD WOAM WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WTAQ WTAR WTOC WWVA KVOR

R - Waldorf-Astoria, See Monday ED-6:30 p.m., E-5:30, C-4:30, M-3:30 B — Royal Vagabonds, See Monday

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C — Bing Crosby, See Monday B — Lowell Thomas, See Monday B — Orphan Annie, See Monday

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

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C — Maxwell House, See Monday B — Esso Program, Elsie Janis KDKA KTBS WBAL WBZA WIS WJZ WMC WPTF WRVA WSM WSMB WWNC

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 C — Easy Aces, See Monday B — Stebbins Boys, See Monday

R — Big Time

KSD WBEN WCSH WEAF WEEI

WFBR WGY WHO WJAR WLIT

WLS WOC WOW WRC WSAI WTAM

WW.J.

B.—Taxpayers' League
KFSD KFYR KGHL KGIR KGO
KGW KHQ KOA KOIL KOMO
KPRC KTAR KTBS KVOO KWK
WBAL WDAY WFLA WHAM WIBA
WIS WJDX WJZ WLS WLW WMC
WOAL WPTF WREN WWNC

ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C—Singing Sam See Monday B—Willys Overland Program

KOKA KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KTBS KVOO KWOR KWK WAPI WBAL WBZA WCKY WDAY WEBC WFAA WGAR WHAM WHAS WIBA WJDX WJR WJZ WKY WMAQ WMC WOAI WREN WSB WSM WSMB WTMJ ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Kate Smith, See Monday

R- Halsey Stuart Program

KSD KSTP WBEN WCAE WCSH

WEAF WEEI WFBR WGV WHO

WJAR WLIT WMAQ WOC WOW

WRC WSAI WTAG WTAM WTMJ WWJ

B — Jack Frost Melody Moments KDKA WBAL WGAR WHAM WJR WJZ WLS WLW

ED-8:45 p.m., E-7:45, C-6:45, M-5:45 C — Col. Stoopnagle, See Monday

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Musical Fast Freight KFH KFJF WABC WCAU WDBJ

KPH KFJF WABC WCAU WDBJ WFBM WJAS WMAL WOKO R—Goodyear, Grace Moore KFYR KPRC KSD KSTP KTHS KVOO KYW WBEN WCAE WCSH WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHAS WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWNC R—Sherlock Holmes Drama

B — Sherlock Holmes Drama KDKA KWK WBAL WBZA WGAR WHAM WJR WJZ WLW WMAQ

WREN ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C — Eno Crime Club, See Tuesday

R - Mobiloil Concert KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KOMO KPRC KSD KSL KSTP KTAR KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WENR WFAA WFBR WFLA WGY

WHAS WHO WIBA WIOD WIS WJDX WKY WLIT WMC WJARWOAL WOC WWW WRC WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC WJAX WTMJ

ED-9:45 p.m., E-8-45, C-7:45, M-6:45 B — San Felice, See Monday

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C — Music That Satisfies, Ruth Etting KDB KDYL KERN KFBK KFH KFJF KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOY KRLD KSCJ KTRH

ED-7:45 p.m., E-6:45, C-5:45, M-4:45
C — Morton Downey, See Monday
R — Goldbergs, See Monday
B — Jones and Hare, See Monday
ED-8:00 p.m., E-7:00, C-6:00, M-5:00
C — Bath Club, See Monday
B — Big Time

ETSA KVI KVOR KWG WABC WACO WCAL WCCO
WACO WACA WCAL WCCO
WBM WBD WDBU WBD WDBU WEAN
WFBL WFBM WFIW WGST WHEC
WHK WHP WIBW WISN WJSN
WKBH WKBW WKRC WLAP WLBW
WKBH WKBW WKRC WLAP WLBW WLBZ WMAL WMBD WMBG WMT WNAC WNAX WOKO WORC WOWO WPG WQAM WSPD WTAR WTOC WXYZ

KFI KFSD KGO KGU KGW KHQ KOA KOMO KPRC KSD KSL KSTP AUA AUMU KPRC KSD KSL KSTP KTAR WAPI WBAP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WENR WFBR WFLA WGY WHAS WHO WIOD WIS WJAR WJAX WJDX WKY WLIT WMC WOAI WRVA WOAL WOC WOW WRC WRVA
WSB WSM WSMB WTAG V
WTIC WTMJ WWJ WWNC

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

C — Adventures in Health KMBC KMOX WAAB WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WHK WJAS WKBW WKRC WMAL WOKO WOWO WSPD WXYZ

WA12

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

C — Society's Playboy

CFRB CKAC KDB KDYL KERN

KFBK KFPY KFRC KGB KHJ KLZ

KMBC KMJ KMOX KOIN KOL

KRLD KTRH KVI KWG WAAB

WABC WADC WBBM WBT WCAO

WCAU WCCO WDRC WFBL WFBM

WGST WHK WJAS WKBW WKRC

WLAP WMAL WMT WOKO WOWO

WSPD WXYZ

R — NBC Artists' Service Musicale

WOLD WALL
R—NBC Artists' Service Musicale
KGO KOA KSD KSTP KTBS WBEN
WCAE WCSH WEAF WENR WHO
WIS WJAR WOAL WOC WOW WRC WSB WSMB WTAG WTAM WWJ

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

ED-10:45 p.m., E-9:45, C-8:45, M-7:45
C—Street Singer
GFRB KLRA WAAB WABC WBIG
WBRC WBT WCAO WCAU WDAE
WDBJ WDOD WDRC WDSU WEAN
WFBL WFEA WFIW WHEC WHP
WKBW WLAC WLBW WMAL WNOX
WOKO WORC WPG WQAM WREC
WTAR WTOC WADC
C—Mwrt and Marke See Monday

C - Myrt and Marge, See Monday B — Pickens Sisters

KDKA KOIL WBAL WGAR WHAM WJR. WJZ

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 R — Nellie Revell KSD WCSH WEAF WGY WJAR WOW WRC WTAM WWJ

B - Amos 'n' Andy, See Monday ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C — Maxwell House, See Monday

ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C - Morton Downey, See Monday

R—Vincent Lopez and Orchestra
KFYR KPRC KTBS KTHS WAPI
WBEN WCFL WCKY WDAF WEAF
WEBC WGY WIBA WJAR WOW
WRC WTAM WTIC WTMJ WWJ

B — Jane Froman and Orchestra WBAL WGAR WJZ WMAQ ED-11:45 p.m., E-10:45, C-9:45, M-8:45

- Don Redman and Orchestra KDYL KFAB KFJF KFPY KLRA KLZ KMBC KOH KOL KRLD KSCJ KTRH KVOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ

Wednesday-Continued WEGINESCAY—CONLINUEA
WDBO WDOD WDRC WDSU WFBM
WFEA WFIW WHEC WHP WISN
WKBH WKBW WLAC WLAP WLBW
WMAL WMBD WMT WNAX WNOX
WOKO WORC WOWO WPG WQAM
WSBT WSFA WSPD WTAR WTOC WXYZ

ED-12:00 m., E-11:00, C-10:00, M-9:00 B—Cab Calloway and Orchestra KDKA KOIL WGAR WJZ WREN ED-12:05 a.m., E11:05, C-10:05, M-9:05 R — Buddy Rogers, See Monday

ED-12:30 a.m., E-11:30, C-10:30, M-9:30 B — Jones and Hare, See Monday

THURSDAY

ED-8:00 a.m., E-7:00, C-6:00, M-5:00 R -- Gene and Glenn, See Monday ED-8:30 a.m., E-7:30, C-6:30, M-5:30 R — Cheerio, See Monday

ED-10:15 a.m., E-9:15, C-8:15, M-7:15 B -- Clara Lu and Em See Monday ED-12:00 n., E-11:00, C-10:00, M-9:00 R — G.E. Circle, See Tuesday

ED-1:30 p.m., E-12:30, C-11:30, M-10:30 B - Farm and Home, See Monday

ED-4:45 p.m., E-3:45, C-2:45, M-1:45 R — Lady Next Door, See Monday

ED-5:15 p.m., E-4:15, C-3:15, M-2:15 R — Skippy, See Monday ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B — Orphan Annie, See Monday

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 R — Waldorf-Astoria, See Monday

ED-6:15 p.m., E-5:15, C-4:15, M-3:15 C — Reis and Dunn, See Tuesday

ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C — Jack Miller, See Tuesday

KFSD KFYR KGHL KGIR KGO
KOA KOMO KSD WEAF WFAA
WFI WIBA WJAR WJAX WJDX
WMAQ WSAI WTIC WWJ WWNC

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C — Joe Palooka, See Tuesday R — June Pursell, See Monday

B — Lowell Thomas, See Monday
 B — Orphan Annie, See Monday

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

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C — Mills Brothers, See Tuesday

B — Hinds Romance Exchange
KOIL KVOO KWK WAPI WBAP
WBZA WHAS WJDX WJZ WLW
WMC WOAI WREN WSB WSM WSMB

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 C — Richman Bros., See Tuesday B -- Stebbins Boys, See Monday

ED-7:45 p.m., E-6:45, C-5:45, M-4:45 C — Morton Downey, See Monday R — Goldbergs, See Monday

B - Jones and Hare, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Bath Club, See Monday

R — Fleischmann, Rudy Vallee CFCF CKGW KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR WAPI WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WCSH WDA. WEEI WFBR WFI WHO WIOD WEAF WEBC WEEL WED WIOD WFIA WGY WHAS WHO WIOD WJAR WJAX WJDX WKY WMAQ WOAT WOOL WOW WPTF WRC WRVA WSAI WSB WSM ED-10:45 p.m., E-9:45 C-8:45 M-7:45 WSMB WTAG WTAM WTIC WWJ C-Arthur Jarrett See Monday WSMB WIAG WIAM WIIC WWJ B — Edgeworth Program KDKA KOIL KWK WBAL WBZA WCKY WGAR WHAM WJZ WLS

WREN

ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C — Abe Lyman, See Tuesday B — Rin-Tin-Tin Thriller KDKA KOIL KWK WGAR WHAM WJZ WLS WLW WREN WBZA ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Kate Smith, See Monday B — B. A. Rolfe and Orchestra KDKA KOIL KWK WBZA WJZ WLS WLW WREN

ED-8:45 p.m., E-7:45, C-6:45, M-5:45 C -- Angelo Patri, See Sunday B - Sisters of Skillet, See Tuesday

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Eugene Revue, See Monday

R — Big Six of the Air
KFI KFSD KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTBS WBAP WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WIBA WJAR WKY WMAQ WOAI WOC WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ WHO

B — Blackstone, Sanderson-Crumit KDKA WBAL WBZA WCKY WHAM W.IZ

WJZ

ED-9:15 p.m., E-8:15, C-7:15, M-6:15
C—Modern Male Chorus
CFRB KDYL KFAB KFH KFJF
KFPY KLRA KMBC KMOX KOH
KSCJ KTRH KVI KVOR WABC
WADC WBCM WBIG WBRC WBY
WOAH WCAO WCAU WCCO WDAE
WDBJ WDBO WDOD WDRC WDSU
WEAN WFBM WFEA WFIW WGL
WHP WIBW WISN WKBW WLAC
WLAP WLBW WMT WNAC WNOX
WOKO WORC WOWO WQAM WREC
WSBT WSFA WSPD WTAQ WTAR
WTOC WWVA WXYZ
ED-9:30 p.m. E-8:30 C-7:30 M-6:30

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

C — Love Story Hour

KMBC KMOX WABC WADC WCAO

WCAU WDRC WEAN WFBL WGN WHK WJAS WKBW WKRC WMAL WNAC WOWO WSPD WXYZ

B — Thompkins' Corners

B—Thompkins Corners
KDKA KFI KFSD KGO KGW KHQ
KOA KOIL KOMO KPRC KSL
KSTP KTAR KWCR KWK KYW
MAPI WBAL WBAP WBZA WEBC
WFLA WGAR WHAM WHAS WIOD
WJAX WJDX WJR WJZ WKY WLW
WMC WOAI WREN WRVA WSB
WSM WSMB WTMJ WWNC

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

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C— H.S.M. Trumpeters KFJF KLZ KMBC KMOX KRLD KSCJ WAAB WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGST WHK WJAS WKBW WKRC WLAP WMAL WMT WOWO WSPD WXYZ PLANE State See Treedow

WHAM WJR WIZ WHAQ WHAM WJR WJZ WLW WMAQ WREN

ED-10:30 p.m., E-0:30, C-8:30, M-7:30 C - Music That Satisfies See Monday B — Hollywood Nights
KDKA KOIL KWK KYW WBAL
WBZA WCKY WGAR WHAM WJR

WJZ WREN

C — Myrt and Marge See Monday
B — Pickens Sisters See Wednesday

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C — Joe Palooka, See Tuesday

R — Russ Columbo, See Monday B — Amos 'n' Andy, See Monday

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C — Howard Barlow, See Tuesday
R — Lew Conrad's Orchestra
KSD WCKY WDAF WEAF WENR

WFBR WFI WHO WJAR WOC WRC WTIC

ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C - Morton Downey, See Monday — Through the Opera Glass

CKGW KECA KEX KFYR KGA KGHL KJR KOIL KPO KSTP KTBS WBAL WENR WIBA WJR WJZ WRC WREN WSB

WRC WREN WSB
ED-11:45 p.m., E-10:45, C-9:45, M-8:45
C-Bing Crosby
CFRB KDYL KFAB KFJF KFPY
KLRA KMBC KOH KOIN KOL
KRLD KSCJ KTRH KVOR WAAB
WABC WADC WBCM WBIG WBRC
WBT WCAH WCAO WCAU WCCO
WDAE WDBJ WDBO WDOD WDRC
WDSU WEAN WFBL WFBM WFEA
WFIW WHEC WHK WHP WISN
WKBN WKBW WLAC WLAP WLBW
WMAL WMBD WMT WNAX WOKO
WORC WOWO WPG WQAM
WREC WSBT WSPD WTAR WTOC WXYZ

R - Cab Calloway See Monday

ED-12:00 m., E-11:00, C-10:00, M-9:00 C — Guy Lombardo and Orchestra
KDYL KFAB KFH KFJF KFPY
KLRA KLZ KMBC KOH KOL KRLD KLRA KLZ KMBC KOH KOL KRLD
KSCJ KTRH KVOR WABC
WBCM WBRC WBT WCAH WCAO
WCAU WCCO WDAE WDBJ WDBO
WDOD WDSU WEAN WFBM WFEA
WFIW WHEC WHP WIBW WISN
WKBN WKBW WLAC WLAP WLBW
WMAL WMBD WMT WNAC WNAX
WNOX WOKO WOWO WQAM WREC
WSBT WSPD WTAR WTOC WXYZ ED-12:05 p.m., E-11:05, C-10:05, M-9:05 R - Johnnie Hamp, See Tuesday

ED-12:30 a.m., E-11:30, C-10:30, M-9:30 B — Jones and Hare, See Monday

FRIDAY

ED-8:00 a.m., E-7:00, C-6:00, M-5:00 R — Gene and Glenn, See Monday

ED-8:30 a.m., E-7:30, C-6:30, M-5:30 R — Cheerio, See Monday

ED-10:15 a.m., E-9:15, C-8:15, M-7:15 B — Clara, Lu and Em, See Monday ED-12:00 n., E-11:00, C-10:00, M-9:00 R — G.E. Circle, See Tuesday

ED-1:30 p.m., E-12:30, C-11:30, M-10:30 B — Farm and Home, See Monday

ED-4:45 p.m., E-3:45, C-2:45, M-1:45 R — Lady Next Door, See Monday

ED-5:15 p.m., E-4:15, C-3:15, M-2:15 R — Skippy, See Monday

ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B -- Orphan Annie, See Monday

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C — Kaltenborn, See Monday R - Walderf-Asteria, See Monday

ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C — Snooks Friedman, See Monday - Royal Vagabonds, See Monday

ED-6:45 p.m., E-5:45, C-4:45, M-3:45
C — Bing Crosby, See Monday
B — Orphan Annie, See Monday
B — Orphan Annie, See Monday
R— Pond's Program R—Pond's Program
KSD WBEN WCAE WCSH WDAF
WEAF WENR WFBR WGY WHO
WJAR WLIT WOC WOW WRC
WSAI WTAG WTAM R — Larry Funk and Orchestra KGO KOA WCAE WCSH WFI WRC WTAG WWJ WEAR ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C — Myrt and Marge, See Monday B — Amos 'n' Andy, See Monday B—Armour Program KDKA KFI KGO KGW KHQ KOA KOMO KPRC KSL KSTP WAPI WBAL WBZA WEBC WFAA WGAR ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C — Maxwell House, See Monday B — Elsie Janis, See Wednesday WHAM WHAS WIOD WJAX WJZ WKY WMAQ WMC WOAI WRVA WSB WSM WSMB WWNC ED-7:30 p.m., E-6:30, C-5:30, M-4:30 - Easy Aces, See Monday ED-9:45 p.m., E-8:45, C-7:45, M-6:45 C — Van Heusen, Gus Van KMBC KMOX KRLD WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WHK WIAS WKBW WKRC WMAL WNAC WOKO WSPD B - Stebbins Boys, See Monday ED-7:45 p.m., E-6:45, C-5:45, M-4:45 C — Morton Downey, See Monday R — Goldbergs, See Monday B -- Jones and Hare, See Monday ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Bath Club, See Monday WXYZR — Cities Service Concert — Beau Bachelor CKGW KFI KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP
KTBS KTHS KYW WBEN WCAE
WCSH WDAF WEAF WEBC WEEL
WFAA WFBR WGY WHO WJAR
WKY WLIT WOAL WOC WOW WKY WLIT WOAI WOC WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ B — Nestle's Program
KDKA KOIL KWK WBAL WBZA
WCKY WGAR WHAM WJZ WLS WREN ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C — Singing Sam, See Monday B -- Paul Whiteman's Chieftains C—oniging oden, see Monday
ED-8:30 p.m., E-7:30, C-6:30, M-5:30
C—Today and Yesterday
KFJF KMBC KMOX KYRH WABC
WADC WBT WCAO WCAU WCCO
WDRC WEAN WFBL WGN WGR
WGST WHK WJAS WKRC WMAL
WNAC WOKO WOWO WREC WRR
WSPD WXYZ. WSPD WXYZ B - B. A. Rolfe, See Thursday ED-8:45 p.m., E-7:45, C-6:45, M-5:45 B — Sisters of Skillet, See Tuesday B—Sisters of Skillet, See Tuesday
ED-9:00 p.m., E-8:00, C-7:00, M-6:00
C—Toscha Seidel, Violinist
CFRB KFAB KFBK KFH KFJF
KLRA KMBC KMOX KOH KOIN
KSCJ KTRH KVI WABC WADC
WBCM WBIG WBRC WBT WCAO
WOAU WCCO WDAE WDBJ WDBO
WDOD WDRC WDSU WFBM WFEA
WFIW WIBW WISN WKBW WHAC
WLAP WLBW WMAL WMT WNAX
WNOX WOKO WORC WOWO WQAM
WREC WSFA WSPD WTAQ WTAR
WTOC WWVA WXYZ
R—Clieguet Club B — Pickens Sisters, See Wednesday R — Russ Columbo, See Monday B — Amos 'n' Andy, See Monday R — Clicquot Club WEAF WEEL WFBR WGY WHO
WJAR WLIT WLS WOC WOW WRC C - Morton Downey, See Monday WSAI WTAG WTIC WWJ B - Friendship Town CFCF CKGW KD B--Frendship flown CFCF CKGW KDKA KFI KFSD KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KTHS KWK KYW WAPI WBAL WBZA WDAY WEBC WFLA WGAR WHAM WHAS WIBA WIOD WIS

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 KDB KDYL KERN KFBK KFJF KFPY KHJ KLZ KMJ KMOX KOIN KOL KRLD KWG WAAB WABC
WADC WBBM WBT WCAO WCAU
WCCO WDRC WEAN WFBL WHK
WJAS WKBW WKRC WMAL WOKO
WOWO WREC WSPD WXYZ KFRC R — Sampler, Andy Sanella
KSD WBEN WCAE WCSH
WEEI WFBR WGY WHO
WLIT WMAQ WOC WOW WRC
WSAI WTAG WTAM WWJ KDKA KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KVOO KWK WBAL WBAP WBZA WCKY WDAY WEBC WENR WFLA WGAR WHAM WHAS WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC ED-10:15 p.m., E-9:15, C-8-15, M-7:15 C — Adventures in Health, See Wed. ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C - Music That Satisfies, See Monday ED-10:45 p.m., E-9:45, C-8:45, M-7:45 C — Myrt and Marge, See Monday C — Funnyboners, See Tuesday ED-11:00 p.m., E-10:00, C-9:00, M-8:00 ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C — Maxwell House, See Monday R — Vincent Lopez and Orchestra
KSD WCKY WDAF WEAF WEEI
WJAR WOW WRC WTAM WWJ ED-11:30 p.m., E-10:30, C-9:30, M-8:30 B—Chas. Dornberger's Orchestra CFCF KDKA KFYR KPRC KSTP WBAL WCKY WEBC WENR WIBA WIS WJR WJZ WLW WRC WREN KOA ED-11:45 p.m., E-10:45, C-9:45, M-8:45 C — Don Redman, See Wednesday ED-12:00 m., E-11:00 C-10:00, M-9:00 C — Isham Jones, See Monday B - Cab Calloway, See Wednesday ED-12:05 a m., E-11:05, C-10:05, M-9:05 R — Johnnie Hamp, See Tuesday C— To the Ladies, Tito Guizar

KMBC KMOX KRLD WABC WADC

WCAO WCAU WCCO WDRC WEAN

R— Johnnie Hamp, See Tuesday

ED-12:30 a.m., E-11:30, C-10:30, M-9:30

B— Jones and Hare, See Monday

SATURDAY

ED-8:00 a m., E-7:00, C-6:00, M-5:30 R — Gene and Glenn, See Monday

ED-8:30 a.m., E-7:30, C-6:30, M-5:30 R — Cheerio, See Monday

ED-1:30 p.m., E-12:30, C-11:30, M:10:30 B — Farm and Home, See Monday

ED-4:45 p.m., E-3:45, C-2:45, M-1:45 R — Lady Next Door, See Monday

ED-5:15 p.m., E-4:15, C-3:15, M-2:15 R — Skippy, See Monday

ED-5:30 p.m., E-4:30, C-3:30, M-2:30 R — Blue Moon Cuckoos KSD KSTP WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WGY WHO WJAR WLIT WOC WOW WRC WSAI WTAG WTAM WTIC

WTMJ WWJ ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B — Orphan Annie, See Monday

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 R — Waldorf-Astoria, See Monday

ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C — Jack Miller, See Tuesday

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 R - June Pursell, See Monday Orphan Annie, See Monday

B—Orphan Annie, See Monday
ED-7:00 p.m., E-6:00, C-5:00, M-4:00
C—Political Situation, Wile
KFAB KFH KFJF KLZ KOH KOL
KRLD KSCJ KTRH KVI KVOR
WBIG WBRC WCAO WCAU WCCO
WDAE WBDJ WDBO WDOD WDRC
WDSU WEAN WFIW WGR WHP
WIBW WISN WLAC WLAP WLBW
WMAL WHT WNAC WNOX WOKO
WOWO WQAM WREC WSFA WTAQ
WTAR WTOC WWVA
B—Amos 'n' Andy, See Monday

B - Amos 'n' Andy, See Monday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C — Wm. Vincent Hall, Baritone C—Wm. Vincent Hall, Baritone CFRB KFAB KFBK KFH KFJF KOH KOL KRLD KSCJ KTRH KVI KVOR WABC WADC WADC WBOM WBIG WBRC WBT WCAO WOALU WCCO WDAE WDBJ WDBO WDOD WDCK WDSU WEAN WFBL WFIW WGR WHEC WHP WISN WLAC WLAP WLBW WMAL WMT WNAC WOAW WOKO WORC WSAM WREC WSFA WTAQ WTOC WWWA WŴVA

R — Laws That Safeguard Society KECA KEX KFSD KFYR KGA KJR KOA KPO KPRC KTAR KTHS WAPI WBEN WCSH WDAY WEAF WEBC WENR WFI WFLA WGY WHO WIOD WJAR WJDX WOC WOW WPTF WRVA WSAI WTAG WTIC

B — Tastyeast Jesters, See Monday

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 C — Guy Lombardo and Orchestra WCAO WCAU WCCO WDRC WEAN
WFBL WGN WGR WHK WJAS
WKRC WMAL WNAC WOKO WSPD WXYZ

ED-7:45 p.m., E-6:45, C-5:45, M-4:45 C — Morton Downey, See Monday R — Goldbergs, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Laboratory Experiments
CFRB KDYL KFBK KFH KFJF
KFPY KLZ KMOX KOH KOL KRLD KSCJ KSCJ KTRH KVI KVOR WABC WACO WADC WBCM WBIG WBT

WJAX WJDX WJR WJZ WKY WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

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

WCAH WCAO WCAU WCCO WDBJ WDBO WDOD WDRC WDSU WFBM WFIW WGL. WHEC WHK WHP WIBW WISN WKBW WLAC WLAP WLBW WMT WNAC WNAX WNOX WPG WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ P. FIR CUlberten Bride.

WIAK WIOC WWWA WAYZ

R — Ely Culbertson, Bridge
CFCF CKGW KSD WBEN WCSH
WDAF WEAF WEEI WFBR WFI
WGY WHO WJAR WMAQ WOC
WOW WRC WSAI WTAG WTAM WTIC WWJ

B — Danger Fighters, Drama KDKA KFI KFSD KFYR KGO KGW KOA KOIL KOMO KPRC KSL KSTP KTAR KWK WBAL WBAP WCKY WDAY WEBC WGAR WHAM WIBA WJR WJZ WKY WLS WOAI WREN

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

C — Abe Lyman, See Tuesday
 R — Civic Concerts Program

KSD WCAE WCSH WDAF WEAF WEEI WFBR WFI WHO WIOD WIS WJAR WJAX WMAQ WOC WOW WRC WTIC WWJ WWNC

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C—Photoplay's Movie Stars KMBC KMOX WABC WCAO WCAU WFBL WGN WGR WHK WJAS WKRC WMAL WNAC WSPD WXYZ

- Radio in Education K—Kadoo in Education
KFI KFSD KFYR KGHL KGIR
KGW KHQ KOA KOMO KPRC KSD
KSL KSTP KTAR KYW WAPI WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFBR WFI WFLA
WGY WHAS WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMC WOAL WOOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

B — Dance with Countess d'Orsay CFCF CKGW KDKA KWK WBAL WBZA WGAR WHAM WJZ WLW WMAQ WREN

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Yaughn DeLeath CFRB KFAB KFBK KFH KFJF KFPY KLRA KMBC KMOX KOH KOL KSCJ KTRH KVI KVOR WAAB KOL KSCJ KTRH KVI KVOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAH WCAU WCCO WDAE WDBJ WDBO WDDO WDRC WDSU WEAN WFBL WFBM WFEA WHEC WHK WHP WIBW WISN WKBW WLAC WLAP WLBW WMAL WMT WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ

ED-9:15 p.m., E-8:15, C-7:15, M-6:15 C — Fray and Braggiotti, Piano CFRB KDYL KFAB KFBK KFH KFJF KFFY KLRA KLZ KMBC KMOX KOH KSCJ KTRH KVI KMOX KOH KSCJ KIRH KYI KYOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAH WCAU WCCO WDAE WDBJ WCAH WCAU WDRC WDSU WEAN WFBL WFBM WFEA WHEC WHK WHP WIBW WFEA WHEC WHK WHP WIBW WISN WKBW WLAC WLAP WLBW WISH WISH WLAG WLAF WLDW WMAL WMT WNAX WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C — Isham Jones and Orchestra CFRB KDYL KFBK KFH KFJF KFPY KLRA KLZ KMBC KMOX

KOH KSCJ KTRH KVI KVOR WAAB KOH KSCJ KTRH KVI KVOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDDO WDRC WDSU WEAN WFBL WFBM WFEA WFIW WHEC WHK WHP WIBW WISN WKBW WLAC WLAP WLBW WMAL WMT WNAX WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ

R — Club Valspar CFCF CKGW KSD WBAP WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WHO WJAR WMAQ QOC WOW WRC WSAI WSB WSMB WTAG WTAM WTIC WWJ

B - First Nighter, Drama KDKA KFI KFSD KGO KGW KHQ KOA KOIL KOMO KSL KSTP KTAR KWK WBAL WBZA WEBC WGAR WHAM WJR WJZ WLS WREN WHAM

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C — Ruth Etting, See Wednesday R — Lucky Strike, See Tuesday

ED-10:15 p.m., E-9:15, C-8:15, M-7:15 C — Public Affairs Institute KDYL KFBK KFH KFJF KFPY KLRA KLZ KMBC KMOX KOH KOL KLRA KLZ KMBC KMOX KOH KOL KSCJ KTRH KVI KVOR WAAB WABC WACO WADC WBCM WBIG WBT WCAH WCAO WCAU WCO WDAE WDBJ WDBO WDOD WDSU WEAN WFBL WFBM WFIW WGL WHEC WHK WHP WIBW WKBW WLAC WLAP WLBW WMAL WMBD WMT WNAX WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WXYZ B— Snoon and Peep

B — Snoop and Peep CFCF CKGW KOIL KWK WGAR WHAM WJR WJZ WREN

ED-10:45 p.m., E-9:45, C-8:45, M-7:45 C — Street Singer, See Wednesday B — Twenty Fingers of Harmony CKGW KDKA WBAL WBZA WHAM

WJZ

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C — Don Redman and Orchestra C-Don Redman and Orchestra
CFRB KDYL KFAB KFBK KFH
KFJF KFFY KLRA KLZ KMBC
KMOX KOH KOL KSCJ KTRH
KVOR WAAB WABC WACO WADC
WBCM WBIG WBRC WBT WCAH
WCAO WCCO WDAE WDBJ WDBJ
WDOD WDC WDSU WFBL WFBM
WFEA WFIW WGL WGR WHEC
WHK WHP WIBW WIP WKBW
WLAC WLAP WLBW WMBD BWT
WNAX WOKO WORC WQAM WREC
WSBT WSPD WTAR WTOC WWVA WXYZ WNOX

 C — Morton Downey, See Monday
 R — Russ Columbo, See Monday B — Amos 'n' Andy, See Monday

ED-11:30 p.m., E-10:30, C-9:30, M-8:30 R — Johnnie Hamp and Orchestra KECA KEX KGA KGHL KJR KPO KTAR WEAF WEEI WFBR WFI WGY WJAR WRC WTAM WTIC B - Piano Moods, See Monday

ED-11:45 p.m., E-10:45, C-9:45, M-8:45 C—Enric Madriguera's Orchestra
CFRB KDYL KFAB KFBK KFH
KFJF KFPY KLRA KLZ KMBC KOH KOIN KOL KRLD KSCJ KTRH KOIN KOL KRLD KSCJ KTRH KVOR WAAB WABC WADC WBCM WBIG WBRC WCAH WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBM WFIW WGL WHEC WHP WFEA WISN WKBW WLAC WLAP WLBW WMBD WMT WNAX WNOX WOKO WORC WPG WQAM WREC WSBT WSPD WTAR WTOC WWVA WXYZ

ED-12:00 m., E-11:00, C-10:00, M-9:00 - Guy Lombardo and Orchestra KDYL KFAB KFBK KFJF KFPY KDY1. KFAB KFBK KFJF KFPY
KLRA KLZ KMBC KOH KOIN KOL
KRLD KSCJ KTRH KVOR WABC
WADC WBCM WBRC WBT WCAH
WCAO WCAU WCCO WDAE WDBO
WDOD WDSU WEAN WFBL WFBM
WFEA WFIW WGI. WHEC WHP
WIBW WISN WKBW WLAC WLAP
WLBW WMBD WMT WNAC WNAX
WNOX WOKO WQAM WREC WSBT
WSPD WTOC WWVA WXYZ

ED 13.56. ELLEC CASE MAGE

ED-12:05 a.m., E-11:05, C-10:05, M-9:05 R - Buddy Rogers, See Monday

#### SUNDAY

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

ED-11:30 a.m., E-10:30, C-9:30, M-8:30
R — Major Bowes' Family
KEX KFYR KGA KJR KOA KPO
KPRC KSTP WCSH WDAF WEAF
WENR WFBR WHAS WHO WJAR
WKY WMC WOC WPTF WRC
WSM WSMB WTAM WTIC WWNC

ED-12:30 p.m., E-11:30, C-10:30, M-9:30 C - International Broadcast C — International Broadcast
CFRB KDYL KFAB KFBK KLRA
KLZ KMBC KMOX KOIN KOL
KRLD KSCJ KTRH KVI KVOR
WAAB WABC WBRC WOAH WCAU
WCCO WDAE WDBO WDOD WDRC
WDSU WEAN WFBL WFEA WFIW
WGR WHP WIBW WISN WKBH
WLAP WLBW WMAL WMBD WMT
WOKO WORC WPG WQAM WREC
WSBT WSFA WSPD WWVA WXYZ
R — Tesiès Rells

R - Troika Bells CKGW WCSH WDAF WEAF WFBR WFI WGY WHO WJAR WOC WRC WTAG WTAM WTIC WWJ

B — Careless Love, Drama
KEX KGA KGIR KJR KOA KOIL
KPO KPRC KSL KTAR WCKY WHAM WJZ

ED-12:45 p.m., E-11:45, C-10:45, M-9:45 C - Street Singer C—Street Singer
CFRB KDYL KFAB KFBK KLRA
KLZ KMBC KMOX KOIN KOLL
KRLD KSCJ KTRH KVI KVOR
WAAB WABC WBRC WCAH WCAU
WCCO WDAE WDBO WDOD WDRC
WDSU WEAN WFBL WFEA WFIW
WGR WHP WIBW WISN WKBH
WLAP WLBW WMAL WMBD WMT
WNOX WOKO WORC WPG WQAM
WSBT WSFA WSPD WTOC WWVA

WXYZ ED-1:00 p.m., E-12:00, C-11:00, M-10:00 C — Cathedral Hour

CFRB KYDL KFAB KFBK KFPY KLZ KMBC KOH KOIN KOL KSCJ KVOR WAAB WABC WADC WBCM WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WFBL WGR WHEC WHP WIBW WKBH WKBN WLAC WLAP WIBW WABH WABN WLAC WLAP WIBW WMAL WMBD WMT WNOX WOKO WPG WQAM WSBT WSPD WTAQ WTAR WTOC WWVA WXYZ

ED-1:30 p.m., E-12:30, C-11:30, M-10:00 R — Silver Flute

KSD WBEN WCAE WDAF WEAF WGY WJAR WRC WTAG WTIC

ED-1:45 p.m., E-12:45, C-11:45, M-10:45 R — Pop Concert, Walter Logan KFYR KGO KGW KPRC KSD KSL

KTAR KVOO WBEN WCAE WCSH B—Swift Garden Party WDAF WEAF WEEI WFAA WFI KDKA KOIL KWK WBAL WBZA WGY WHAS WIOD WIS WJAR WJAX WGAR WJR WJZ WLW WMAQ WRVA WSB WSM WTAG WTA WTIC WTMJ WWJ WWNC WRC

ED-2:00 p.m., E-1:00, C-12:00, M-11:00 ED-2300 p.m., E-1300, C-12300, N-11300 C— Eight Sons of Eli KFAB KMBC KMOX KRLD WABC WADC WBBM WBRC WBT WCAO WCAU WCCO WDRC WDSU WEAN WGR WHK WJAS WKRC WLAC WMAL WNAC WOKO WOWO

B — Yardley Program KOIL KWK WBAL WBZA WGAR WJZ WLW WMAQ WREN

ED-2:30 p.m., E-1:30, C-12:30, M-11:30 C — Church of the Air

C—Church of the Air
CFRB KDYL KFBK KFPY KGB
KLZ KMOX KOH KOL KSCJ KTRH
KVI KVOR WAAB WABC WCO
WDBJ WDBO WDOD WDRC WDSU
WFBL WGL WHEC WHP WIBW
WKBH WKBN WKBW WLAC WLAP
WLBW WMAL WMT WNOX WOKO
WORC WPG WQAM WREC WTAQ
WTAR WTOC WXYZ

E—Moonshipe and Hopeysuckle

R — Moonshine and Honeysuckle WCAE WCKY WCSH WDAF WEAF WEEI WFBR WGY WJAR WMAQ WRC WTAG WTAM WTIC WWJ - Yeast Foamers

B—Yeast Foamers
KDKA KFI KFSD KFYR KGHL
KGIR KGO KGW KHQ KOA KOIL
KPRC KSL KSTP KTAR KTHS
KVOO KWK KYW WAPI WBAL
WBZA WDAY WEBC WFAA WFLA
WGAR WHAM WHAS WIBA WIOD
WIS WJAX WJDX WJR WJZ WKY
WLW WMC WOAJ WPTF WREN
WRYA WSB WSM WSMB WTMJ WWNC

WWNC
ED-3:00 p.m., E-2:00, C-1:00, M-12:00
C—N.Y. Philharmonic Symphony
CFRB KDYL KFAB KFBK KFH
KFPY KGB KLRA KLZ KMBC KOH
KOIN KOL KSCJ KTRH KVI KVOR
WAAB WABC WACO WADC WBCM
WBRC WBT WCAH WCAO WCAU
WCCO WDAE WDBJ WDBO WDOD
WDRC WDSU WFBL WFBM WFEA
WFIW WGL WHP WIBW WIP WISN
WKBH WKBN WKBW WLAC WLAP
WLDW WMAL WMBD DMT WNOX
WOKO WORC WQAM WREC WSBT
WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ

R — Wayne King and Orchestra KSD KYW WBEN WCAE WCSH WDAF WEAF WEEL WFBR WGY WHO WJAR WLIT WOC WOW WRC WSAI WTAG WTAM WTIC WWJ B - National Youth Conference

B — National Youth Conference
KFSD KFYR KGHL KGIR KGO
KGW KHQ KOA KOMO KPRC KSL
KTBS KTHS KVOO KWK WAPI
WBAL WCKY WDAY WEBC WFAA
WFLA WGAR WHAM WIBA WIOD
WIS WJAX WJDX WJZ WKY WMAQ
WMC WOAI WPTF WREN WRVA
WSB WSMB WWNC

ED-3:30 p.m., E-2:30, C-1:30, M-12:00 R — Dr. S. Parkes Cadman KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTBS KTHS KVOO KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHAS WIOD WIS WJAR WJAX WJDX WKY WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WWJ WWNC

WREN

ED-4:00 p.m., E-3:00, C-2:00, M-1:00
R—10dent, Jane Froman
KPI KFSD KFYR KGHL KGIR KGO
KGW KHQ KOA KOMO KPRC KSD
KSTP KTAR KTBS KTHS KVOO
KYW WAPI WBAP WBEN WCAE
WCSH WDAF WDAY WEAF WEBC
WEEI WFBR WFIA WGY
WHAS
WHO WIBA WIOD WIS WJAR WJAX
WHO W WYY WMG WOAT WIDX WKY WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

B — Songs of Home Sweet Home KDKA KOIL KWCR KWK WBAL WBZA WGAR WHAM WJR WJZ WLS WREN

ED-4:30 p.m., E-3:30, C-2:30, M-1:30 B — Shaeffer Lifetime Revue KDKA KFI KFSD KFYR KGHL KDKA KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KTAR KTHS KVOO KWK WAPI WBAL WBAP WBZA WCKY WDAY WEBC WHAM WHAS WIBA WJDX WJZ WKY WMC WOAI WREN WSB WSM WSMB WTMJ

ED-5:00 p.m., E-4:00, C-3:00, M-2:00 C - Pastorale CFRB KDYL KFAB KFBK KFH KFPY KGB KLRA KLZ KMBC KMOX KOH KOL KSCJ KTRH KVI KMOX KOH KOL KSCJ KTRH KVI
KVOR WAAB WABC WADC WBCM
WBRC WBT WCAH WCAO WCAU
WCCO WDAE WDBJ WDOD WDRC
WDSU WEAN WFBL WFBM WFEA
WGL WGR WHP WIBW WKBH
WKBN WLAC WLBW WLBZ WMBD
WMT WNOX WOKO WORC WOWO
WQAM WREC WSFA WSPD WTAQ
WTAR WTOC WWVA WXYZ

B - National Vespers B — National Vespers
KFSD KFYR KGIR KGO KHQ
KOMO KPRC KSTP KTAR KTBS
KTHS KVOO KWK WBAL WBZA
WCKY WDAY WEBC WFAA WFLA
WGAR WHAM WIBA WIOD WIS
WJDX WJZ WMAQ WOAI WPTF
WREN WRVA WSB WSM WSMB WWNC

ED-5:30 p.m., E-4:30, C-3:30, M-2:30 C — Blue Coal Revue

CFRB WAAB WABC WCAO WCAU WDRC WEAN WFBL WGR WHEC WHP WOKO WORC

C - Chicago Knights C—Cheago Kingnes KDYL KFAB KFBK KFH KFPY KGB KLZ KMBC KMOX KOH KOIN KOL KRLD KSCJ KVI KVOR WADC WBBM WCAH WCCO WFBM WKBH WLAP WMT WSBT WTAQ WWVA WXYZ

R — G.E. Circle KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KOA KOMO KPRC KSD KSL KSTP KTAR KVOO WAPI WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WENR WFBR WFI WFLA WGY WHAS WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WMR WTAC WTAM WTIC WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

B - Simoniz Guardsmen KOIL KWK KYW WBAL WBZA WGAR WHAM WJR WJZ WLW WREN

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C - Quiet Harmonies

C—Quiet Harmonies
KLRA WBIG WBRC WBT WDAE
WDBJ WDBO WDOD WDSU WFIW
WGST WIP WLAC WNOX WODX
WPG WQAM WREC WSFA WTAR
WTOC

WTOC
R—Catholic Hour
KEX KFYR KGA KGHL KGIR KJR
KOA KPO KPRC KSD KSTP KTAR.
KTBS KVOO WBAP WBEN WCAE
WCSH WDAF WDAY WEAF WEBC
WEEI WENR WFBR WFLA WGY
WHO WIBA WIOD WJAR WJAX
WJDX WKY WLIT WMC WOAI
WOC WOW WRC WRVA WSAI
WSB WSM WSMB WTAG WTAM
WTIC WWJ WWNC

ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C — Noble Sissle and Orchestra KLRA WBRC WBT WDAE WDBJ WDBO WDSU WIP WLAC WNOX WQAM WSFA WTAR WTOC

- Our American School KSD WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WGY WHO WJAR WOC WOW WRC WTAG WTIC WWJ B — K-7. Drama

CFCF KECA KEX KFYR KGA KGHL KGIR KJR KOA KPO KPRC KSL KTAR KTBS KWK WBAL WCKY WDAY WEBC WFLA WHAS WIBA WIOD WJDX WJZ WKY WREN WRVA WSMB WWNC

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C — Radio in Education C—Radio in Education
KPAB KFBK KFH KFPY KGB
KLZ KMBC KOH KOIN KOL KRLD
KSCJ KTRH KYI KVOR WABC
WACO WADC WBCM WBT WCCO
WDAE WDBJ WDBO WDOD WDRC
WDSU WEAN WFBL WFEA WFIW
WGL WGR WHEC WHP WIP WISN
WKBH WLAP WLBW WMAL WMT
WNAC WNOX WOKO WORC WQAM
WREC WSBT WSFA WTAQ WTAR
WTOC WWVA WIBW WPG

ED-7:15 p.m., E-6:15, C-5:15, M-4:15
R—Rexall Radio Party
KFI KFSD KFYR KGHL KGIR KGO
KGW KHQ KOA KOMO KPRC KSD
KSL KSTP KTAR KVOO WAPI
WBEN WCAE WCSH WDAF WDAY
WEAF WEBC WFBR WFLA WGY
WHO WIBA WIOD WIS WJAR WJAX
WINY WKY WLIT WMAO WMC WJDX WKY WLIT WMAQ WMC WOAI WOC WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

B—Frigidarians, Male Quartet
KDKA KOIL KWK KYW WBAL
WBZA WGAR WHAM WJZ WLW
WREN

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 C — Modern Male Chorus KFAB KFBK KFH KFPY KGB
KLZ KMBC KMOX KOH KOIN
KOL KRLD KSCJ KVI KVOR WABC
WACO WADC WBCM WBRC WBT
WCAH WCAO WCAU WCCO WDAE
WDBJ WDBO WDOD WDRC WDSU
WRDBJ WBRA WERA WERDW WCJ WSD WFBL WFEA WFIW WGL WGR WHEC WHK WHP WISN WKBH WKBW WLAP WLBW WMAL WMT WNAC WNOX WOKO WORC WOAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWYA WXYZ

WIAK WIUC WWVA WXYZ
R — Orchestral Gems, Symphony
KSD WCAE WDAF WEAF WFBR
WGY WHO WLIT WLS WOC WSAI
WTAG WTIC WWJ

- Three Bakers

CFCF KDKA KFI KFSD KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KVOO KWK KYW WAPI WBAL WBZA WDAY WEBC WFAA WFLA WGAR WHAM WHAS WIBA WIOD WJDX WJR WJZ WKY WLW WMC WOAI WPTF WREN WRVA WSB WSM WSMB

ED-7:45 p.m., E-6:45, C-5:45, M-4:45 C— Sylvanians
KMBC KMOX WABC WCAO WCCO
WFBL WGN WGR WHK WHP WJAS
WKRC WLAP WNAC WOKO WPG

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Ernest Hutcheson, Pianist KDYL KFAB KFBK KFH KFPY KLRA KLZ KMBC KMOX KOH KIRA KLZ KMBC KMOX KOH
KOIN KOL KSCJ KTRH KYJ KVOR
WABC WACO WADC WBCM WBRC
WBT WCAH WCAU WCOO WDAE
WDBJ WDBO WDRC WDSU WEAN
WFBL WFBM WFEA WFIW WGL
WGR WHEC WHK WHP WIBW
WISN WKBH WKBN WLAC WLAP
WLBW WMAL WMT WNAC WNAX
WNOX WORC WREC WSFA WSPD
WTAR WTOC WWVA

R — Chase & Sanborn Hour CFCF CFGW KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTHS KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHAS WHO WIOD WIS WJAR WJDX WKY WLIT WLS WMC WOAI WOC WOW WPTF WRC WSAI WSB WSMB WTAM WTIC WTMJ WWJ WWNC

B — Enna Jettick Melodies CFCF CKGW KDKA CFCF CKGW KDKA KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KOA KOIL KUMO KPRC KSL KSTP KTAR KTBS KTHS KYOO KWCR KWK KYW WBAL WBZA WDAY WEBC WFAA WFLA WGAR WHAM WHAS WIBA WIOD WIS WJDX WJR WJZ WKY WLW WMC WOAI WPTF WJEN WYDA WSD WCAA WREN WRYA WSB WSM WSMB WTMJ WWNC

ED-8:15 p.m., E-7:15, C-6:15, M-5:15 B — Standing Room Only, Comedy KDKA KFI KGW KHQ KOA KOIL KOMO KSL KWK KYW WBAL KOMO KSL KWK KYW WBAL WBZA WGAR WHAM WJR WJZ WREN KGO

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C-Highway Traveler KMBC KMOX KTRH KTSA WABC WADC WBRC WBT WCAH WCAO WCAU WCCO WDOD WDRC WEAN WFBL WFBM WGN WGR WGST WHEC WHAL WNAC WNOX WOKO WLAP WMAL WNAC WNOX WOKO WEEC WR WSP WSY WREC WRR WSPD WXYZ

ED-8:45 p.m., E-7:45, C-6:45, M-5:45 --- Angelo Patri, Your Child KDYL KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WGN WGR WHK WJAS WKRC WMAL WNAC WOWO WSPD WXYZ

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C - Ever-Ready Gaieties

C — Ever-Ready Gaieties
KDB KDYL KERN KFBK KFPY
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KWG WABC
WADC WBT WCAO WCAU WCCO
WDRC WDSU WEAN WFBL WFBM
WADY WGSW WHY WHA WGN WGR WGST WHK WJAS WKRC WMAL WNAC WOKO WOWO WRR WSPD WXYZ

R.— Our Government, David Lawrence KSD KTBS KTHS KVOO WCSH WEAF WENR WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJDX WOC WOW WPTF WRC WSAI WWNC

ED-9:15 p.m., E-8:15, C-7:15, M-6:15 R — American Album Familiar Music KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTHS WAPI WBEN WCAE WCSH WDAY WEAF WEBC WENR WFBR WFI WFLA WTMJ WWJ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C — Pennzoil Parade C—remized rarade
KFJF KLRA KMBC KMOX KTSA
WABC WADC WBT WCAO WCAU
WCCO WDRC WEAN WFBL WGN
WGR WGST WHK WJAS WKRC
WMAL WNAC WNOX WOKO WOWO
WSDD WYVY WSPD WXYZ

ED-9:45 p.m., E-8:45, C-7:45, M-6:45 R — Buick Revelers KFYR KSD WBEN WCAE WCSH WDAF WEAF WENR WFBR WFDF WEAF WEAF WENK WIDK WEDF WFI WGY WHO WJAR WKY WOC WOW WPTF WRC WSAI WTAG WTAM WTIC WWJ

B — Making Movies, Ray Knight KDKA KOIL KWK KYW WBAL WBZA WGAR WHAM WJR WJZ WLW WREN

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 ED-10:00 p.m., E-9:00, C-8:00, M-1:00
C—Edna Wallace Hopper Variety
KDB KDYL KFBK KFH KFJF
KFPY KFRC KGB KHJ KLZ KMBC
KMOX KOIN KOL KRLD KTSA
KWG WAAB WABC WADC WBBM KWG WAAB WABC WADC WORD WCAO WCAU WCCO WDRU WFBL WFBM WGST WHEC WHK WISN WJAS WKBW WKRC WLAP WLBZ WMAL WOKO WORC WOWO WREC WSPD WXYZ

ED-10:15 p.m., E-9:15, C-8:15, M-7:15 B – Old Singing Master
KDKA KFI KGO KGW KHQ KOA
KOIL KOMO KWK WBAL WBZA
WGAR WHAM WJZ WLW WMAQ WREN

ED-10:20 p.m., E-9:20, C-8:20, M-7:20 ED-10:20 p.m., E-9:20, C-0:20, M-1:20 R — L'Heure Exquise KSTP KTBS WBEN WCAE WCSH WEAF WEBC WEEI WFBR WFI WGY WJAR WRC WTAG WTAM WTIC

WGN WGR WHK WJAS WKRC WMAL WNAC WOWO WSPD WXYZ

C—Col. Stoopnagle and Budd KLRA WBRC WBT WDAE WDBJ WFFW WLAC WDBO WDOD WDSU WFFW WLAC WTAR WTOC

WREC WTAR WTOC

WAAB WABC WADC WBRC WBT
WCAH WCAO WCAU WCCO WDAE
WDBJ WDBO WDDD WDRC WDSU
WFBL WFBM WFIW WGN WGR
WGST WHEC WHK WIBW WISN
WJAS WKBH WKRC WLAC WLAP
WLBZ WMAL WMT WNOX WOKO
WOWO WQAM WREC WSPD WTAQ
WTAR WTOC WXYZ

ED-10:45 p.m., E-9:45, C-8:45, M-7:45 R — Sunday at Seth Parker's CKGW KFSD KFYR KGHL KGIR KGO KGW KOA KOMO KPRC KSL KSTP KTAR KTBS WAPI WBEN WCAE WDAF WDAY WEAF WEBC WEEI WENR WFBR WFI WFLA WGY WHAS WHO WIBA WIOD WIS

WJAR WJAX WJDX WKY WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAM WTMJ WWJ

B — Archer Gibson, Organist KOIL WBAL WENR WGAR WHAM WJR WJZ WREN

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C — The Gauchos KDYL KFAB KFH KLRA KLZ
KMBC KMOX KOH KRLD KTRH
KVOR WAAB WABC WADC WBCM
WBRC WBT WCAH WCAO WCCO
WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA
WFIW WGL WGR WHEC WHP
WIBW WISN WKBH WKBN WLAC
WLAP WLBW WMAL WMBD WMT
WNOX WOKO WPG WQAM WREC
WSFA WSPD WTAR WTOC WXYZ ED-11:15 p.m., E-10:15, C-9:15, M-8:15 R — Russ Columbo and Orchestra

KGHL KGO KOA KOMO KPRC KTBS WCKY WEAF WFBR WFI WGY WHO WIBA WOC WOW WRC WSMB WWJ

WSML WWJ ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C— Evening Melodies KLRA WABC WADC WBCM WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFEA WFIW WGL WGR WHEC WHP WKBH WKEN WLAC WLBW WMAL WMT WNAC WNOX WOKO WPG WQAM WREC WSFA WSPD WTAR WTOC WXYZ

C - Pennzoil Parade KDYL KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOH KOIN KOL KOY KWG

R — Jesse Crawford, Organ
WCAE WCKY WDAF WEAF WFBR
WGY WHO WJAR WMAQ WOC
WOW WRC WTAM WWJ

ED-11:45 p.m., E-10:45, C-9:45, M-8:45 B — Sam Herman, Xylophone KDKA KFYR KOIL KPRC KTBS\* KWK WAPI WBAL WEBC WGAR WJR WJZ WKY WMAQ WSMB ED-12:00 m., E-11:00, C-10:00, M-9:00 C — Eddie Duchin and Orchestra

C—Eddie Duchin and Orchestra
KFAB KFH KLRA KMBC KMOX
KOH KTRH WABC WADC WBCM
WBRC WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDDU WDSU
WEAN WFBL WFBM WFEA WFIW
WGL WGR WHEC WHP WIBW WISN WKBN WLAP WLBW WMAL WMT WNAC WNAX WOKO WQAM WREC WSBT WSFA WSPD WTOC

R — Larry Funk and Orchestra WCAE WEAF WGY WOW WRC WCAE WTAM

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#### KEV

Frequency in kilocycles. Wavelengths in meters. Night power in watts in third column. Second column symbols: \*Verifies reception for postage or sends station stamp for 10c. †Verifies for postage; no stamp. † Stamp only. † Does not verify. § Does not reply. \$ Verification 25c, reply card 10c. Fourth column symbols: D, Daytime only. Dn, Daytime but may use some evening hours. S, Sunday only. X, Has permit to increase power. + Uses greater power in daytime. CP, Has construction permit only. Z, Has permit to change frequency. Y, has permit to change location. 

These stations are synchronized. 1-2-3, Small figures indicate stations sharing time. a-b-c, Small letters indicate stations with two sets of calls. Some Canadian, Cuban and Mexican stations have odd frequencies; correct frequency shown in fourth column. Dashes (\_\_\_\_) Official information not received.

Columbia: C National: Red R. Blue B. Both N.

meters
lsor, Ontario Essex Broadcasters, Ltd.
meters
kings, S. D.  S. D. State College Concordia Theological Seminary Meyer Broadcasting Co.  State Agricultural College Ouis, Mo.  John Mo.  John Mo.  John Mo.  Buffalo Broadcasting Co.  WKRC Incorporated
meters
mont, Texas er, Colo. Francisco, Cal. delphia, Pa. ago, Ill. delphia, Pa. ville, Tenn. ago, Ill. ni, Fla.  Magnolia Petroleum Co. Reynolds Radio Co., Inc. Associated Broadcasters Strawbridge & Clothier Nelson Bros. Bond & Mortgage Co. Lit Brothers WNOX, Inc. North Shore Congregational Church Miami Broadcasting Co.
meters
ita Falls, Texas wood, Cal. ma, Wash. amala
mbus, Ohio gstown, Ohio use, N. Y. York City  Ohio State University WKBN Broadcasting Corp. Clive B. Meredith Knickerbocker Broadcasting Co., Inc.
tton, S. D.  York City York City Suse, N. Y.  ville, N. C.  House of Gurney, Inc. Dept. of Plants and Structures Clive B. Meredith Citizens Broadcasting Co., Inc.
meters
nto, Ont. lottetown, P. E. I. nton, Alta. nto, Ont. nto, Ont. nton, Alta. nton, Alta. nton, Alta. set, Kansas leston, W. Va. lester, Mass.  Dominion Battery Co. Christian and Missionary Alliance The Dominion Battery Co. University of Alberta State Agricultural College Topeka Broadcasting Assn., Inc. WSAZ, Inc. Telegram Publishing Co.

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	590	kilo	cyc1	es 5	08.2	meters		
	CMW		2000	588	Hove	na Cuha	Columbus Commercial & Radio Co.	ксүs. 6 <b>70</b>
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	WEEI WKZO	‡	1000 1000	R D	Bosto Kalar	on, Mass. mazoo, Mich.	WKZO, Inc.	MTRS.
	WOW	*	1000	1R	Omal	na, Nebr.	Woodmen of the World,	447.5
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	CNRO KFSD	Ī	500 500	+N	San I	wa, Ont. Diego, Cal.	Canadian National Railways Airfan Radio Corp.	
	WCAC WCAO	1	250 250	2+ C	Storr Balti	s, Conn. more, Md.	Conn. Agricultural College Monumental Radio, Inc.	Ì
	WCAO WICC WMT	:	250 500	+N 2+ C 2+ C	Bridg	geport, Conn.	Bridgeport Broadcasting Station, Inc. Waterloo Broadcasting Co.	Ì
	WREC		500	+C	~ -	rloo, Iowa phis, Tenn.	WREC, Inc.	
	610	kilo	ocycl	es 4		meters		]
-	KFRC VPN	•	1000 500	С	San I Nassa	Francisco, Cal. au, Bahama	Don Lee, Inc. Development Board	
-	₩DAF	:	1000 500	N Ca Ca	Kans	au, Bahama sas City, Mo. delphia, Pa. delphia, Pa.	Kansas City Star Co. Keystone Broadcasting Co., Inc.	1
	WFAN WIP	*	500	Ça Da	Phila	delphia, Pa.	Gimbel Bros. Co.	l
	WJAY XETR	†	500 2500	D 	Mexic	land, Ohio co City, Mexico	Cleveland Radio Broadcasting Corp. Cia. Difusora Mexicana S. A.	
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	KZRM	٠.	1000		Mani	nix, Arizona ila, P. I.	Erlanger & Galinger, Inc.	1
	WFLA WLBZ	ŧ	1000 500	+Na C	Bang	water, Fla. or, Maine	Chamber of Commerce Maine Broadcasting Co., Inc.	
	WSUN	-	1000 1000	+a +N	St. P Milw	etersburg, Fla. aukee, Wis.	Chamber of Commerce Milwaukee Journal	
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	CFCT	•	500		Victo	ria, B. C.	Victoria Broadcasting Association	Ω
	CKOC	•	500 500	+aZ	Ham	ton, Sask. ilton, Ont.	Winnipeg Grain Exchange Wentworth Radio Broadcasting Co.	CUT
	CKTB CMCJ		500 250	+aZ	St. C Have	atherines, Ont. ma, Cuba	Taylor & Bate, Ltd. Rafael Rodriquez	TUO
	CNRA HIX	•	500 1000		Mon	cton, N. B. o Domingo	Canadian National Railways Dominican Republic	F
	-KFRU	•	500	<u>i</u>	Colu	mbia. Mo.	Stephens College	9
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680	kilocycles	440.9 meters	
KFEC		St. Joseph, Mo.	Scroggin & Co., Bank
KPO	† 5000 NX	San Francisco, Cal.	Scroggin & Co., Bank Hale Bros. & The Chronicle Durham Life Insurance Co.
WPTI XFG	7 * 1000 NE	on Raleigh, N. C.	Durham Life Insurance Co.
		.3 Mexico, Mex.	Sria. de Guerra y Marina
	kilocycles	434.5 meters	
CFAC CFRE	500 1	Calgary, Alta.	The Calgary Herald
CFRE	* 7000 Ca	Toronto, Ont. Calgary, Alta. Toronto, Ont.	Rogers-Majestic Corp., Ltd. Albertan Publishing Co., Ltd. Canadian National Railways
CJCJ CNR2	* 500 1 K * 4000 a	Toronto Ont	Canadian National Railways
NAA	1000	Arlington, Va.	U. S. Navy
VAS	† 2000 685	Arlington, Va. Glace Bay, N. S.	Canadian Marconi Co.
XET VCX	† 500 100	Monterrey, Mexico Halifax, N. S.	Mexico Music Co., S. A. Sambro Lightship
, VCA		riamax, rv. o.	Garristo Digressing.
700	kilocycles	428.3 meters	
WLW	* 50000 B	Cincinnati, Ohio	Crosley Radio Corp.
<b>710</b>	kilocycles	422.3 meters	
KMP	C * 500 Dn	Beverly Hills, Cal.	R. S. MacMillan
WOR XEN	* 5000 X † 1000 711	Newark, N. J. Mexico City	Bamberger Broadcasting Service, Inc. Cia. Civil de Inversiones
720	kilocycles	416.4 meters	
WGN	† 25000 C	Chicago, Ill.	Chicago Tribune
730	kilocycles	410.7 meters	
CHLS	100 1b	V D C	W. G. Hassell
CHYC	* 5000 Sa † 5000 Ca	Montreal, Que.	Northern Electric Co., Ltd. La Presse Publishing Co., Ltd.
CKCE	† 5000 Ca	Vancouver, B. C.	
CKFC	; † 50 1	Vancouver, B. C.	United Church of Canada
CKM	0 1 100 1	Vancouver, B. C. Vancouver, B. C. Vancouver, B. C. Vancouver, B. C. Vancouver, B. C.	Sprott-Shaw Radio Co.
CMK	X † 100 1 3150		United Church of Canada Sprott-Shaw Radio Co. Western Broadcasting Co., Ltd. Cuban Broadcasting Co., Hotel Plaza Canadian National Railways
CNRN	1 * 5000 a	Montreal, Que.	Canadian National Railways
-XER	75000 735	Villa Acuna, Mex.	Dr. John R. Brinkley
<b>740</b>	kilocycles	405.2 meters	
CJCA KMM	* 500 745	Edmonton, Alta.	The Edmonton Journal, Ltd.
WSB	J * 1000 Dn 5000 NX	Clay Center, Nebr. Atlanta, Ga.	The M. M. Johnson Co. Atlanta Journal Co.
WHE		Portsmouth, N. H.	Granite State Broadcasting Corp.
750	kilocycles	399.8 meters	
KGU	† 1000 RX		Marion A. Mulrony
WJR	† 10000 BX	Detroit, Mich.	WIR. The Goodwill Station, Inc.
XĚQ	5000	Juarez, Chih.	Feliciano Lopez Islas
760	kilocycles	394.5 meters	
₩KXA WBAL	* 250 + * 1000 B□	Seattle, Wash.	American Radio Tel. Co.
WEW	* 1000 D	Baltimore, Md. St. Louis, Mo.	Consolidated Gas, Elec. & Power Co. St. Louis University
WJZ	† 30000 B	New York City	National Broadcasting Co., Inc.
<i>77</i> 0	kilocycles	389.4 meters	
KFAB WBBN		Lincoln, Nebr. Chicago, Ill.	KFAB Broadcasting Co. WBBM Broadcasting Corp.
780	kilocycles	384.4 meters	
CKY	E000 -	Winning Maniester	Manitoba Telephone System
CNRW	7 5000 a	Winnipeg, Manitoba	Canadian National Railways
KELW	* 500 2	Winnipeg, Manitoba Winnipeg, Manitoba Burbank, Cal.	Magnolia Park, Ltd.
WEAN	* 500 2+ * 250 +C	Los Angeles, Cal.	Pickwick Broadcasting Corp.
WEAN		Providence, R. I. Memphis Tenn	Pickwick Broadcasting Corp. Shepard Broadcasting Service, Inc. Memphis Commercial-Appeal, Inc. WTAR Radio Corp.
WPOR	500 +N	Norfolk, Va.	WTAR Radio Corp.
WTAR	* 500 1Cb		WIAR Radio Corp.
XEZ	* 500	Mexico, Mex.	Joaquin Capilla
		Γ <i>1 1</i> 1	

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INDEX BY FREQUENCIES A	ND DIAL NUMBERS	
790 kilocycles 379.5 meters		
CMBS 150 Havana, Cuba CMBT 500 Havana, Cuba CMHC 100 Tuinucu, Cuba KGO † 7500 N San Francisco, Cal. WGY † 50000 R Schenectady, N. Y.	Enrique Artalejo Emilio Perera Frank H. Jones National Broadcasting Co., Inc. General Electric Co.	
800 kilocycles 374.8 meters		
WBAP † 10000 IXN Fort Worth, Texas WFAA ¢ 50000 IN Dallas, Texas	Carter Publications, Inc. News & Journal	*
810 kilocycles 370.2 meters		ксуs. 880
CHNS * 500 Za815 Halifax, N. S. CNRH _ 500 Za815 Halifax, N. S. WCCO * 5000 CX WPCH * 500 D New York City XFC _ 250	Maritime Broadcasting Co., Ltd. Canadian National Railways Northwestern Broadcasting, Inc. Eastern Broadcasters, Inc. Gobierno del Estado de Aguascalientes Ayre & Sons, Ltd.	MTRS. 340.7
820 kilocycles 365.6 meters		DIAL
CMGC - 30 Matanzas, Cuba WHAS † 10000 NX Louisville, Ky. XFI - 1000 818 Mexico City	Oscar S. Mechoso Courier-Journal & Times Sria. de Ind., Commercio y Trabajo	
830 kilocycles 361.2 meters [		
KOA † 12500 NX Denver, Colo. WEEU 1000 D Reading, Pa. WHDH 1000 D Boston, Mass. WRUF * 5000 DnC Gainesville, Fla.	National Broadcasting Co., Inc. Berks Broadcasting Co. Matheson Radio Co., Inc. University of Florida	,
840 kilocycles 356.9 meters		
CKGW * 5000 Na Toronto, Ont. CKLC † 1000 b Red Deer, Alta. CMC * 500 842 Havana, Cuba CNRD † 1000 b Red Deer, Alta. CPRY - 5000 a Toronto, Ont. XEFD _ 300 845 Tiajuana, B. C.	Gooderham & Worts, Ltd. Alberta Pacific Grain Co., Ltd. Cuban Telephone Co. Canadian National Railways Canadian Pacific Railways Carlos de la Sierra	0
850 kilocycles 352.7 meters		T
	Hello World Broadcasting Corp. Loyola University	OUT
860 kilocycles 348.6 meters		ž
KMO	KMO, Inc. Atlantic Broadcasting Corp. Atlantic Broadcasting Corp. WHB Broadcasting Co. Secretaria de Educacion Publica	CUT OUT ON DOTTED LINES
870 kilocycles 344.6 meters		E
WENR _ 50000 1N Chicago, III.  WLS	National Broadcasting Co., Inc. Agricultural Broadcasting Co. Gobierno del Estado de Chihuahua	S .
880 kilocycles 340.7 meters		
CHML * 50 4 Hamilton, Ont.  CJCB * 50 Sydney, N. S.  CKCV † 50 a Quebec, Que.  CKPC † 100 4 Preston, Ont.  CNRQ † 50 a Quebec, Que.  EFRA † 500 2+ Greeley, Colo.  EKLX * 500 Oakland, Cal.  KPOF * 500 2 Denver, Colo.  WCOC * 500 + Meridian, Miss.  WGBI * 250 1 Scranton, Pa.  WGUI * 500 Iowa City, Iowa	Maple Leaf Radio Co., Ltd. N. Nathanson G. A. Vandry Cyrus Dolph Canadian National Railways Midwestern Radio Corp. Tribune Publishing Co, Pillar of Fire, Inc. Mississippi Broadcasting Co., Inc. Scranton Broadcasters, Inc. Scranton Times University of Iowa	

	890	kilc	cycle	es 3	336.9 meters	
	CFBO	*	500	3	St. John, N. B. Ottawa, Ont.	C. A. Munro, Ltd.
	CKCO CKPR	‡ 	100 50	3	Ft. William, Ont.	Dr. G. M. Geldert Dougall Motor Car Corp.
	CMCF	Ţ-	250	555	Havana, Cuba Havana, Cuba Little Rock, Ark.	Raoul Karman
	CMX KARK		1000 250	885	Little Rock, Ark.	Francisco Lavin Arkansas Radio & Equipment Co.
-	KFNF		500	2+	Shenandoah, Iowa	Henry Field Co.
	KUSD	*	500	2		University of South Dakota Georgia School of Technology
	WGST WILL	+	250 250	+C 2+ +R	Urbana, Ill.	University of Illinois
	WJAR WKAQ	*	250	+R	Providence, R. I.	The Outlet Co
	WKAQ WMM	* T	250 250	+	San Juan, P. R.	Radio Corp. of Porto Rico Holt-Rowe Broadcasting Co.
	XES	\$	500		Verminion, S. D. Atlanta, Ga. Urbana, Ill. Providence, R. I. San Juan, P.R. Fairmont, W. Va. Tampico, Mexico	Difusora Portena XES
	900	kilo	cycle	es 3	333.1 meters	
	KGBU	İ	500		Ketchikan, Alaska	Alaska Radio & Service Co.
	KHJ KSEI	*	1000 250	C	Los Angeles, Cal.	Don Lee, Inc. Radio Service Corp.
	WBEN	*	1000	Ř	Pocatello, Idaho Buffalo, N. Y.	WBEN, Inc.
	WJAX WKY	*	1000	N N	Iacksonville, Fla.	City of Jacksonville
	WKY WLBL	Ť	1000 2000	D D	Oklahoma City Stevens Point, Wis.	WBEN, Inc. City of Jacksonville WKY Radiophone Co. Wisconsin Dept. of Markets
				_		Transcording to provide the second
	910	kilo	ocyclo		329.6 meters	
	CFLC	*	100	915	Prescott, Ont.	Radio Association
	CFOC CJGC CNRL CNRS	*	500 5000	a b	Saskatoon, Sask. London, Ont	The Electric Shop, Ltd.
	CNRL	*	5000	b	London, Ont. London, Ont.	Free Press Printing Co., Ltd. Canadian National Railways Canadian National Railways
	CNRS		500	а	Saskatoon, Sask.	Canadian National Railways
	TICR XEW	Ť	50 5000	911	Saskatoon, Sask. San Jose, Costa Rica Mexico City	Mexico Music Co.
	920	kilo	cycle	es 3	325.9 meters	
	ннк	*	1000		Port au Prince, Haiti	Republic of Haiti
	-KFEL	<b>†</b>	500	1	Denver, Colo.	Eugene P. O'Fallon, Inc. Colorado Radio Corp.
	KFXF KOMO		500 1000	1 N	Denver, Colo. Seattle, Wash.	Colorado Radio Corp. Fisher's Blend Station, Inc.
	KPRC	†	1000	D D D	Houston, Texas Chicago, Ill.	Houston Printing Co.
	WAAF WBSO		500	Ŗ	Chicago, Ill.	Houston Printing Co. Drovers' Journal Publishing Co. Babson Service Organization, Inc.
-	-WBSC	Ť	500 1000	D R	Needham, Mass. Detroit, Mich.	The Detroit News
				_		
	930	kilo	cycle	es 3	322.4 meters	
	<b>CFCH</b>		cyclo 100	es 3	322.4 meters	Northern Supplies, Ltd.
	CFCH CFRC		100 50	es 3 3+		Northern Supplies, Ltd. Queen's University
	CFCH CFRC CKX	ī-	100 50 500	3 3+		Queen's University Manitoba Telephone System
	CFCH CFRC CKX CMCD CMCN	 †	100 50 500 250	3 3+ 925	North Bay, Ont. Kingston, Ont. Brandon, Man. Hayana, Cuba	Queen's University Manitoba Telephone System Angel Bertematy
	CFCH CFRC CKX CMCD CMCN	 †	100 50 500 250 250 50	3 3+ 925 925	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Havana, Cuba	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers
	CFCH CFRC CKX CMCD CMCN CMJF KFWI	 †  †	100 50 500 250 250 50 50	3 3+ 925 925	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Havana, Cuba Camaguey, Cuba San Fenniso, Cal	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc.
<b>G</b> aptan,	CFCH CFRC CKX CMCD CMCN CMJF KFWI KGBZ KMA	†  † *	100 50 500 250 250 50	3 3+ 925 925	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Havana, Cuba Camaguey, Cuba San Fenniso, Cal	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc.
<b>G</b> aptan,	CFCH CFRC CKX CMCD CMCN CMJF -KFWI -KGBZ -KMA -KROW	 +  +  *	100 50 500 250 250 500 500 500 500	3 3+ 925 925 925 2+ 2+ 1+X	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp.
<b>G</b> aptan,	CFCH CFRC CKX CMCD CMCN CMJF -KFWI -KGBZ -KMA -KROW WBRC	† † †	100 50 500 250 250 500 500 500 500 500	3 3+ 925 925 925 2+ 2+ 1+X	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal. Birmingham, Ala.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp.
<b>G</b> aptan,	CFCH CFRC CKX CMCD CMCN CMJF -KFWI -KGBZ -KMA -KROW	 +  +  *	100 50 500 250 250 500 500 500 500	3 3+ 925 925	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp.
<b>C</b> haption Viscolate printings excellen	CFCH CFRC CKX CMCD CMCN CMJF -KFWI -KGBZ -KMA -KROW WBRC WDBJ WIBG	†  † **	100 500 500 250 250 500 500 500 500 250 25	3 3+ 925 925 925 1 2+ 2+ 1+X +C +C	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal. Birmingham, Ala. Roanoke, Va. Elkins Park, Pa.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co.
<b>C</b> ertain, Visuality entities, erroller	CFCH CFRC CKX CMCD CMCN CMJF KFWI KGBZ KMA WBRC WDBJ WIBG	†  † **	100 50 500 250 250 500 500 500 500 500	3 3+ 925 925 925 12+ 2+ 1+X +C +C D	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal. Birmingham, Ala. Roanoke, Va. Elkins Park, Pa.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.
Control of the Contro	CFCH CFRC CKX CMCD CMCN CMJF KFWI KGBZ KMA KROW WBRC WDBJ WIBG 940 KOIN KZRC	kilo	100 50 50 250 250 250 500 500 500	3 3+ 925 925 1 2+ 2+ 1+X +C D	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal. Birmingham, Ala. Roanoke, Va. Elkins Park, Pa.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.  KOIN, Inc. Erlanger & Galinger, Inc.
Control of the Contro	CFCH CFRC CKX CMCD CMCN CMJF KFWI KGBZ KMA KROW WBRC WDBJ WIBG  -KOIN KZRC WAAT	kilo	100 500 500 250 250 500 500 500 500 250 25	3 3+ 925 925 2+ 2+ 1+X +C D	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal. Birmingham, Ala. Roanoke, Va. Elkins Park, Pa.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.  KOIN, Inc. Erlanger & Galinger, Inc. Bremer Broadcasting Corp.
Control of the Contro	CFCH CFRC CKX CMCD CMCN CMJF KFWI KFWI KGBZ KROW WBBJ WIBG WOBJ WIBG WAAT WCSH	kilo	100 50 50 250 250 250 500 500 500	3 3+ 925 925 12+ 2+ 1+C D S 937.5 DR+	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal. Birmingham, Ala. Roanoke, Va. Elkins Park, Pa.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.  KOIN, Inc. Erlanger & Galinger, Inc. Bremer Broadcasting Corp.
Control of the Contro	CFCH CFRC CKX CMCD CMCN CMJF KFWI KGBZ KMA KROW WBBG WDBJ WIBG WOIN KZRC WAAT WCSH WDAY	kilo	100 500 250 250 500 500 500 500 250 25 0CYCL 1000 1000 1000	3 3+ 925 925 12+ 1+C +C 937.5 D R+ NC	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal. Birmingham, Ala. Roanoke, Va. Elkins Park, Pa.  319.0 meters Portland, Oregon Cebu, P. I. Jersey City, N. J. Portland, Maine Fargo, N. D. Hopkinsville, Ky.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Corp. WIBG, Inc.  KOIN, Inc. Erlanger & Galinger, Inc. Bremer Broadcasting Corp. Congress Square Hotel Co. WDAY, Inc. WFIW. Inc.
Control of the Contro	CFCH CFRC CKX CMCD CMCN CMJF KFWI KFWI KFWI WBRC WBRC WBBG WBBG WBRC WBBG WBBG WBBG WBBG WBBG WBBG WBBG WBB	kilo	100 500 2500 250 250 500 500 500 500 250 25	3 3+ 925 925 12+ 2+ 1+C D S 937.5 DR+	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal. Birmingham, Ala. Roanoke, Va. Elkins Park, Pa.  319.0 meters Portland, Oregon Cebu, P. I. Jersey City, N. J. Portland, Maine Fargo, N. D. Hopkinsville, Ky.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.  KOIN, Inc. Erlanger & Galinger, Inc. Bremer Broadcasting Corp. Congress Square Hotel Co. WDAY, Inc. WFIW. Inc.
Control of the Contro	CFCH CFRC CKX CMCD CMCD CMCD CMMF KFWI KGBZ KMA KROW WBR WBR WBR WBR WBR WBR WBR WBR WBR WB	kilo	100 500 250 250 250 500 500 500 500 250 25	3 3+ 925 925 12+ 2+ 1+C D S 937.5 DR+ NC D+	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal. Birmingham, Ala. Roanoke, Va. Elkins Park, Pa.  319.0 meters Portland, Oregon Cebu, P. I. Jersey City, N. J. Portland, Maine Fargo, N. D. Hopkinsville, Ky. Madison, Wis. Mexico City	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.  KOIN, Inc. Erlanger & Galinger, Inc. Bremer Broadcasting Corp.
Control of the Contro	CFCH CFRC CKX CMCD CMCD CMCD CMMF KFWI KGBZ KMA KROW WBR WBR WBR WBR WBR WBR WBR WBR WBR WB	kilo	100 500 2500 250 250 500 500 500 500 250 25	3 3+ 925 925 12+ 2+ 1+C D S 937.5 DR+ NC D+	North Bay, Ont. Kingston, Ont. Brandon, Man. Havana, Cuba Camaguey, Cuba San Francisco, Cal. York, Nebr. Shenandoah, Iowa Oakland, Cal. Birmingham, Ala. Roanoke, Va. Elkins Park, Pa.  319.0 meters Portland, Oregon Cebu, P. I. Jersey City, N. J. Portland, Maine Fargo, N. D. Hopkinsville, Ky.	Queen's University Manitoba Telephone System Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.  KOIN, Inc. Erlanger & Galinger, Inc. Bremer Broadcasting Corp. Congress Square Hotel Co. WDAY, Inc. WFIW. Inc.

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LINES

WRAX Broadcasting Co.

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1030 kilocycles	291.1 meters	
CFCF - 500 N CMKC * 150 1034 CNRV † 500 XEB † 1000	Montreal, Que. Santiago de Cuba Vancouver, B. C. Mexico City, Mexico	Canadian Marconi Co. M. P. Martinez Canadian National Railways El Buen Tono, S. A.
1040 kilocycles	288.3 meters	
KRLD * 10000 C1 KTHS † 10000 N1 WKAR * 1000 D	Dallas, Texas Hot Springs, Ark. East Lansing, Mich.	KRLD Radio Corp. Chamber of Commerce Michigan State College
1050 kilocycles	285.5 meters	
CMGH 150 Dn HFBI * 5000 Dn HNX * 5000 XEFC 10	Matanzas, Cuba Milford, Kansas Hollywood, Cal. Merida, Yuc.	Alberto Alvarez Farmers & Bankers Life Insurance Co. Western Broadcast Co. Hugo Molina Font.
1060 kilocycles	282.8 meters	
WHAG * 5000 Dn WBAL * 10000 1B WJAG * 1000 Dn WTIC * 50000 1R	Portland, Ore. Baltimore, Md. Norfolk, Nebr. Hartford, Conn.	KWJJ Broadcast Co., Inc. Consolidated Gas Elec. & Pwr. Co. Norfolk Daily News Travelers Broadcasting Service Corp.
1070 kilocycles	280.2 meters	
CMBG - 150 CMCB - 150 KJBS * 100 WCAZ * 50 D WDZ † 100 D WTAM * 50000 R XEG - 250	Havana, Cuba Havana, Cuba San Francisco, Cal. Carthage, III. Tuscola, III. Cleveland, Ohio Mexico City, Mexico	Francisco Garrigo Antonio Capablanca Julius Brunton & Sons Co. Superior Broadcasting Service James L. Bush National Broadcasting Co., Inc. Miguel Yarza
1080 kilocycles	277.6 meters	,
WBT * 5000 CX WCBD * 5000 1 Dn WMBI * 5000 1 Dn	Charlotte, N. C. Zion, Ill.	Station WBT, Inc. Wilbur Glenn Voliva Moody Bible Institute
1090 kilocycles	275.1 meters	
KMOX * 50000 C	St. Louis, Mo.	Voice of St. Louis, Inc.
1100 kilocycles	272.6 meters	
WLWL * 5000 1 WPG * 5000 1C	Stockton, Cal. New York City Atlantic City, N. J.	E. F. Peffer Missionary Society of St. Paul WPG Broadcasting Corp.
1110 kilocycles	270.1 meters	
CMHI 15 2500 Dn KZKA 1000 N	Santa Clara, Cuba Sioux Falls, S. D. Manilla, P. I. Richmond, Va.	Laviz y Paz Sioux Falls Broadcasting Assn., Inc. Larus & Bros. Co., Inc.
1120 kilocycles	267.7 meters	· .
CFCA † 500 a CFJC - 100 CHGS * 500 CJOC † 100 CNRT * 500 a KFIO † 100 D KFSG * 500 3 KRKD * 500 3 KRSC † 50 D KTRH * 500 2C	Toronto, Ont. Kamloops, B. C. Summerside, P. E. I. Lethbridge, Alta Toronto, Ont. Spokane, Wash. Los Angeles, Cal. Los Angeles, Cal. Seattle, Wash. Houston, Texas Orlando, Fla.	Star Pub. & Ptg. Co. N. S. Dalgleish & Sons R. T. Holman, Ltd. Harold R. Carson Canadian National Railways Spokane Broadcasting Corp. Echo Park Evang. Assn. Dalton's, Inc. Radio Sales Corp. Rice Hotel
WDBO * 250 +C WDEL † 250 +X WHAD * 250 1C WISN † 250 1C WTAW * 500 2	Milwaukee, Wis. Milwaukee, Wis. College Station, Texas	Orlando Broadcasting Co., Inc. WDEL, Inc. Marquette University Evening Wisconsin Co. Agricultural & Mech. College
WDBO * 250 +C WDEL † 250 +X WHAD * 250 1 WISN † 250 1C	Milwaukee, Wis. Milwaukee, Wis.	WDEL, Inc. Marquette University Evening Wisconsin Co.

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					AND DIAL NOWIDENS	
1140	kild	ocyc1	es	263.0 meters		
KVOO	*	5000	INX INX	Tulsa, Okla.	Southwestern Sales Corp.	
WAPI XETA	•	5000 500	1NX	Birmingham, Ala. Mexico City	Alabama Polytechnic Institute Manuel Espinosa Tagle	
1150	kilo	ocycl	es	260.7 meters		
CMCQ CMGI		600		Havana, Cuba	Andres Martinez	
CMGI	÷-	30 250		Colon, Cuba Havana, Cuba	Armando Lizama Jose Fernandez	
CMQ WHAM	÷	5000	BX	Rochester, N. Y.	Stromberg-Carlson Tel. Mfg. Co. Trail Amateur Radio Assn.	
10-AT 116Ω	1-:1	25 2012-01	1155	Trail, B. C. 258.5 meters	Trail Amateur Radio Assir.	
WOWO.	KIII	ocycl	1C		Main Auto Supply Co.	*
₩WVA	*	5000	1C	Ft. Wayne, Ind. Wheeling, W. Va.	West Virginia Broadcasting Corp.	
1170	kilo	ocycl		256.3 meters	Universal Broadcasting Co.	
1190	1-:1.	10000	CX	Philadelphia, Pa. 254.1 meters	Universal bloadcasting co.	
1100	KII	ocycl	es		Manuel Fernandez	
CMJE KEX	*	20 5000	$\bar{2}\bar{N}$	Camaguey, Cuba Portland, Ore.	Western Broadcasting Co.	
KOB WDGY	*	20000	2 Dn	State College, N. M. Minneapolis, Minn.	College of Agriculture & Mech. Arts Dr. George W. Young	•
WINS	*	1000 500		New York City	American Radio News Corp.	
WMAZ	†	500		Macon, Ga.	Southeastern Broadcasting Co., Inc.	
1190	kil	ocyc1	es	252.0 meters		
WOAI	*	50000	N	San Antonio, Texas	Southern Equipment Co.	
	kil	ocycl	es	249.9 meters		
CKOV CMGB		100 30	$\bar{1}\bar{2}\bar{0}5$	Kelowna, B. C. Matanzas, Cuba	J. W. B. Browne Jose Anorga	
CMJG KBTM		30 30		Camaguey, Cuba Paragould, Ark. Bakersfield, Cal.	Pedro Nogueras W. J. Beard's Temple of Music	KCYS.
KBTM KERN		100 100	D	Paragould, Ark. Bakersfield, Cal.	Bee Bakersfield Brdcstg Co.	1200
KFJB KFWF	Ť-	100	C + 5+	Marshalltown, Iowa	Marshall Electric Co., Inc.	
KFWF KGDE KGDY	*-	100 100	5+ +	St. Louis, Mo.	St. Louis Truth Center, Inc Jaren Drug Co.	MTRS.
KGDY		100		Huron, S. D.	Jaren Drug Co. Voice of South Dakota Rechler Elec. Equipment Co.	249.9
KGEK KGEW		100 100 100	9 9	Fergus Falls, Minn. Huron, S. D. Yuma, Colo. Fort Morgan, Colo.	Beehler Elec. Equipment Co. City of Fort Morgan	
KGEK KGEW KGFJ	ţ	100 100 100 100	5 <sup></sup>	Fort Morgan, Colo.	Beehler Elec. Equipment Co. City of Fort Morgan Ben S. McGlashan	249.9 DIAL
KGEK KGEW <del>K</del> GFJ KGHI KGY		100 100 100 100 100 100	9	Fort Morgan, Colo. Los Angeles, Cal. Little Rock, Ark.	Beehler Elec. Equipment Co. City of Fort Morgan Ben S. McGlashan	
KGEK KGEW 	‡ *	100 100 100 100 100 100 100	9  + D	Fort Morgan, Colo. Los Angeles, Cal. Little Rock, Ark. Olympia, Wash. Monroe, La.	Beehler Elec. Equipment Co. City of Fort Morgan Ben S. McGlashan O. A. Cook KGY, Inc. Liner's Broadcasting Station, Inc. KVOS, Inc.	
KGEK KGEW KGFJ KGHI KGY KMLB KWOS	† † † † *	100 100 100 100 100 100 100 100	9	Fort Morgan, Colo. Los Angeles, Cal. Little Rock, Ark. Olympia, Wash. Monroe, La. Bellingham, Wash. Stockton, Cal. *	Beehler Elec. Equipment Co. City of Fort Morgan Ben S. McGlashan O. A. Cook KGY, Inc. Liner's Broadcasting Station, Inc. KVOS, Inc. Portable Wireless Tel. Co., Inc.	
KGEK KGEW KGFJ KGHI KGY KMLB KVOS WABI	† † † †	100 100 100 100 100 100 100 100 100	9 9  + D	Fort Morgan, Colo. Los Angeles, Cal. Little Rock, Ark. Olympia, Wash. Monroe, La. Bellingham, Wash. Stockton, Cal. Bangor, Maine New Orleans, La.	Beehler Elec. Equipment Co. City of Fort Morgan Ben S. McGlashan O. A. Cook KGY, Inc. Liner's Broadcasting Station, Inc. KVOS, Inc. Portable Wireless Tel. Co., Inc. First Universalist Society Samuel D. Reeks	
KGEK KGEW KGFJ KGHI KGY KMLB KVOS WABI WABI WABZ WBBZ	† † † † *	100 100 100 100 100 100 100 100 100 100	9 9  + D	Fort Morgan, Colo. Los Angeles, Cal. Little Rock, Ark. Olympia, Wash. Monroe, La. Bellingham, Wash. Stockton, Cal. Bangor, Maine New Orleans, La.	Beehler Elec. Equipment Co. City of Fort Morgan Ben S. McGlashan O. A. Cook KGY, Inc. Liner's Broadcasting Station, Inc. KVOS, Inc. Portable Wireless Tel. Co., Inc. First Universalist Society Samuel D. Reeks	
KGEK KGEW KGFJ KGHI KGY KMLB KVOS WABI WABZ WBBZ WBBZ WBBZ WBHS	† † † † *	100 100 100 100 100 100 100 100 100 100	9 9  + D  1 10CP	Fort Morgan, Colo. Los Angeles, Cal. Little Rock, Ark. Olympia, Wash. Monroe, La. Bellingham, Wash. Stockton, Cal. Bangor, Maine New Orleans, La. Ponca City, Okla.	Beehler Elec. Equipment Co. City of Fort Morgan Ben S. McGlashan O. A. Cook KGY, Inc. Liner's Broadcasting Station, Inc. KVOS, Inc. Portable Wireless Tel. Co., Inc. First Universalist Society Samuel D. Reeks C. L. Carrell The Hutchens Co. State School of Mines	
KGEK KGEW KGFJ KGHI KGY KMLB KVOS WABI WABI WABI WBBZ WBHS WCAT WCAX	† † * * * * *	100 100 100 100 100 100 100 100 100 100	9  D  1 10CP 2	Fort Morgan, Colo. Los Angeles, Cal. Little Rock, Ark. Olympia, Wash. Monroe, La. Bellingham, Wash. Stockton, Cal. Bangor, Maine New Orleans, La. Ponca City, Okla.	Beehler Elec. Equipment Co. City of Fort Morgan Ben S. McGlashan O. A. Cook KGY, Inc. Liner's Broadcasting Station, Inc. KVOS, Inc. Portable Wireless Tel. Co., Inc. First Universalist Society Samuel D. Reeks C. L. Carrell The Hutchens Co. State School of Mines Burlington Daily News	DIAL
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	1210	kil	ocycl	es	247.8 meters	TID DIAL NOVIBERS
	CFCO		250	8	Chatham, Ont.	Western Ontario "Better Radio" Club
	CFCO CFNB	*	50		Chatham, Ont. Fredericton, N. B. Vancouver, B. C.	James S. Neill & Sons, Ltd. G. C. Chandler
-	CJOR CKMC	*	500 100	8	Vancouver, B. C.	G. C. Chandler
	-KDFN	Ť	100	$\tilde{\mathbf{x}}\mathbf{z}$	Cobalt, Ont. Casper, Wyo. Devil's Lake, N. D. Klamath Falls, Ore	R. L. MacAdam Donald Lewis Hathaway
	KDLR	ŧ	100		Devil's Lake, N. D.	KDLR.Inc.
-	KFJI KFOR	İ	100	-,-	Klamath Falls, Ore	KFJI Broadcasters, Inc. Howard A. Shuman
	KFOR	*	100 100	<del>+</del>	Lincoln, Nebr.	Howard A. Shuman
	KFVS KFXM	Ť	100	9	Cape Girardeau, Mo. San Bernardino, Cal.	Hirsch Battery & Radio Co. J. C. & E. W. Lee
	KGCR KGMP	†	100		Watertown, S. D.	Greater Kampeska Radio Corp.
	KGMP	*-	100		Watertown, S. D. Elk City, Okla. Dodge City, Kansas	Bryant Radio & Electric Co.
	KGNO KMJ	*	100		Dodge City, Kansas	Bryant Radio & Electric Co. Dodge City Broadcasting Co. James McClatchy Co.
_	-KPPC		100 50	9.	Fresno, Cal. Pasadena, Cal.	Pacadana Prophystorian Classell
	KWEA	\$	100	-	Shreveport, La.	Pasadena Presbyterian Church Hello World Broadcasting Corp. Roy W. Waller John H. Stenger, Jr. Grace Covenant Pres. Church H. I. Dewing & Cho. Moster
	WALR	*	100	i	Shreveport, La. Zanesville, Ohio	Roy W. Waller
	WBAX WBBL	-	100 100	7S	Wilkes-Barre, Pa.	John H. Stenger, Jr.
	WCBS	‡	100	2	Richmond, Va. Springfield, Ill. Yonkers, N. Y. Chicago. Ill.	Grace Covenant Pres. Church
	WCOH	*	100	2	Yonkers, N. Y.	H. L. Dewing & Chas. Messter Westchester Broadcasting Corp. Clinton R. White
	WCRW	*	100	4	Chicago. Ill.	Clinton R. White
	WEBQ	*	100 100	6	Harrisburg, III. Chicago, III.	First Trust & Savings Bank
	WGBB	¥-	100	<b>4</b> <b>3</b>	Freeport N Y	Emil Denemark, Inc.
	WGCM	*	100	ΧZ	Freeport, N. Y. Gulfport, Miss.	Great Southern Land Co. Inc.
	WHBF	*	100		Rock Island, III.	Harry H. Carman Great Southern Land Co., Inc. Beardsley Specialty Co.
	WHBU WIBU	‡	100		Anderson, Ind. Poynette, Wis. Red Bank, N. J.	Anderson Broadcasting Corp.
	WIBU		100 100	3	Poynette, Wis.	wm. C. Forrest
	WJBI WJBU WJBY WJW WLCI	*	100	ĭ	Lewisburg, Pa. Lewisburg, Pa. Gadsden, Ala. Mansfield, Ohio Ithaca, N. Y. Richmond, Va. Jamaica, N. Y.	Monmouth Broadcasting Co. Bucknell University
	WJBY	*	100		Gadsden, Ala.	Gadsen Broadcasting Co., Inc.
	WJW	*	100		Mansfield, Ohio	Mansheld Broadcasting Assn.
			50 100	7C	Ithaca, N. Y.	Lutheran Assn. of Ithaca Havens & Martin, Inc.
	WMR J WOCL	*	100	3	Jamaica, N. Y.	Peter I. Prinz
	WOCL	*	50		Jamestown, N. Y. Manitowoc, Wis. Providence, R. I.	Peter J. Prinz A. E. Newton
	WOMT WPRO		100 100	5	Manitowoc, Wis.	Francis M. Kadow Cherry & Webb Broadcasting Co.
	WODX	*	100	9	Thomasville, Ga.	Cherry & Webb Broadcasting Co. Stevens Luke
	WQDX WRBQ WSBC WSEN	<b>‡</b>	100	4	Greenville, Miss.	I. Pat. Scully
	WSBC	*	100	4	Chicago III	World Battery Co., Inc.
	WSEN	<b>†</b>	100		Columbus, Ohio Springfield, Tenn. Gastonia, N. C. Springfield, Ill.	Columbia Broadcasting Co
	WSIX WSOC	Ť	100 100		Gastonia N C	638 Tire & Vulcanizing Co.
	WTAX	ŧ	100	2	Springfield, Ill.	WSOC, Inc. WTAX, Inc.
	XEX		500		Mexico City	Excelsior, Cia Editorial S. A.
	1220	kil	ocyc1	es	245.8 meterş	
	CMBY	<b>*</b> -	350	1225	Havana, Cuba	Callejas-Cosculluela
	KFKU	*	500	1	Lawrence, Kansas Seattle, Wash.	University of Kansas
$\subseteq$	KTW	*-	1000 1000	2	Seattle, Wash.	First Presbyterian Church
-	-KWSC WCAD	*	500	+ 2 D	Pullman, Wash. Canton, N. Y.	State College of Washington St. Lawrence University
	WCAE	*	1000	R	Pittsburgh, Pa.	Pittsburgh Sun-Telegraph
	WDAE	*	1000	Ç	Pittsburgh, Pa. Tampa, Fla.	Pittsburgh Sun-Telegraph Tampa Publishing Co.
	WREN	-	1000	ĺВ	Lawrence, Kansas	Jenny Wren Co.
	1230	kilo	ocyc1	es	243.8 meters	
	CMCA		150	1235	Havana, Cuba	Manuel Cruz
	KFOD KGGM KYA	<b>I</b> -	100		Anchorage, Alaska	Anchorage Radio Club
	KY4	ţ	250 1000	B	Albuquerque, N. Mex.	New Mexico Broadcasting Co.
	WBIS	*	1000	a a	San Francisco, Cal. Boston, Mass.	Pacific Broadcasting Corp.
	WFBM	*	1000	1C	Indianapolis, Ind.	Shepard Broadcasting Service, Inc. Indianapolis Power & Light Co.
	WNAC WPSC	*	1000	aС	Boston, Mass.	Shepard Broadcasting Service, Inc.
	WPSC WSBT	*	500	D	State College, Pa.	Pennsylvania State College
	XETQ	†	500 100	1C	South Bend, Ind. Mexico, Mex.	South Bend Tribune Carlos G. Caballero
	1240	kild	ocycl	es '	241.8 meters	Carlos G. Cabanero
	CMAB	_/11/	20	1249		Francisco Martin
	KGCU		20 250	3	Pinar del Rio, Cuba Mandan, N. D. Minot, N. D.	Francisco Martinez Mandan Radio Assn.
	KGCU KLPM	Ť	250	3	Minot, N. D.	John B. Cooley
	KTAT	Ť	1000	1	Ft. Worth, Texas	John B. Cooley Texas Air Transport
	KTFI WACO	-	250 1000	1+ 1C	Twin Falls, Idaho	Radio Broadcasting Corp. #
	WXYZ	‡	1000	Ċ	Waco, Texas Detroit, Mich.	Central Texas Broadcasting Co., Inc. " Kunsky-Trendle Broadcasting Corp.
						Library Lieute Dioaceasting Corp.

INDEX BY FREQUENCE	ES AND DIAL NUMBERS
1250 kilocycles 239.9 meter	cs
KFMX † 1000 2 Northfield, Mini KFOX * 1000 Long Beach, Cal WAAM * 1000 1+X Newark, N. J.	n. Carleton College . Nichols & Warinner, Inc.
WAAM * 1000 1+X Newark, N. J. WCAL * 1000 2 Northfield, Minn WDSU † 1000 C New Orleans, Le	WAAM, Inc.  St. Olar College  Jos. H. Uhalt
WGCP 250 1 Newark, N. J. WLB † 1000 2 St. Paul. Minn.	May Radio Droadcast Corb.
WODA 1000 1 Paterson, N. J. WRHM 1000 2 Minneapolis, M	University of Minnesota Richard E. O'Dea nn. Minnesota Broadcasting Corp.
1260 kilocycles 238.0 mete	
KOIL * 1000 B Council Bluffs, KRGV * 500 1 Harlingen, Texe KVOA † 500 D Tucson, Arizona	owa Mona Motor Oil Co. s KRGV, Inc. Robert M. Riculfi
KWWG * 500 1 Brownsville, Tex	las Herald Pub. Co. Radio-Wire Program Corp.
WLBW * 500 C+ Oil City, Pa. WTOC * 500 C Savannah, Ga.	Savannah Broadcasting Co. •
1270 kilocycles 236.1 mete	rs
CMCU - 250 Havana, Cuba KGCA † 50 2D Decorah, Iowa ROL 1000 C Seattle, Wash.	Jorge Garcia Serra Charles W. Greenley Seattle Broadcasting Co., Inc.
KVOR * 1000 C Colorado Spring	s, Colo. Reynolds Radio Co., Inc. Luther College
KWLC * 100 2D Decorah, Iowa WASH * 500 a Grand Rapids, WEAI * 1000 D Ithaca, N. Y.	Mich. Kunsky-Trendle Broadcasting Corp. Cornell University
WFBR _ 500 R Baltimore, Md. WJDX * 1000 N Jackson, Miss.	Baltimore Radio Show, Inc.
	Mich. Kunsky-Trendle Broadcasting Corp.
1280 kilocycles 234.2 mete	
CMCW - 150 1285 Havana, Cuba KFBB * 1000 + Great Falls, Mo WCAM * 500 1 Camden, N. J. WCAP * 500 1 Asbury Park, N WDOD * 1000 + C Chattanooga, T WIBA * 500 +N Madison, Wis. WOAX - 500 1 Trenton, N. J. WRR ¢ 500 C Dallas, Texas	Jose Lorenzo nt. Buttrey Broadcast, Inc. City of Camden
WCAM * 500 1 Camden, N. J. WCAP * 500 1 Asbury Park, N. WDOD * 1000 +C Chattanoga, T. WIBA * 500 +N Madison, Wis.	. J. Radio Industries Broadcast Co. enn. WDOD Broadcasting Corp.
WIBA * 500 +N Madison, Wis. WOAX - 500 I Trenton, N. J. WRR & 500 C Dallas, Texas	Badger Broadcasting Co. WOAX, Inc. City of Dallas
1290 kilocycles 232.4 mete	
KDYL † 1000 C Salt Lake City KFUL - 500 1 Galveston, Text KLCN * 50 D Blytheville, Ark	news Publishing Co. C. L. Lintzenich MTRS.
TSA † 1000 L+C Sen Antonio T	eyas Lone Star Broadcast Co.
WEBC * 1000 +N Superior, Wis. WJAS * 1000 C+ Pittsburgh, Pa. WNBZ _ 50 D Saranac Lake, l	N. Y. Pittsburgh Radio Supply House Smith & Mace DIAL
1300 kilocycles 230.6 mete	rs
KFAC * 1000 4 Los Angeles, Ce	Radio Station KFH Co. i ○
KFJR * 500 3 Portland, Ore. KTBR _ 500 3 Portland, Ore.	Ashley C. Dixon—KFJR, Inc.
WBBR * 1000 1 Brooklyn, N. Y WEVD * 500 1 New York City WFAB * 1000 1 New York City	People's Pulpit Association  Debs Memorial Radio Fund, Inc.  Defenders of Truth Society, Inc.
WFAB * 1000 1 New York City WHAZ * 500 1 Troy, N. Y. WIOD * 1000 N Miami, Fla.	Rensselaer Polytechnic Institute Isle of Dreams Broadcasting Corp.
WOQ * 1000 Kansas City, M XEM † 250 Tampico, Tam	o. Unity School of Christianity Maria T. de Gutirrez
1310 kilocycles 228.9 mete	
KCRJ † 100 D Jerome, Arizon	a Chas. C. Robinson
KFBK † 100 Sacramento, C KFGQ † 100 7 Boone, Iowa KFPL † 100 Dublin, Texas KFPM • 15 Greenville, Tex	Boone Biblical College C. C. Baxter
KFPM 15 Greenville, Tex	C. C. Baxter The New Furniture Co.

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-	KFXI	t	100		Grand Junction, Colo.	Western Slope Broadcasting Co.
	KFXJ KFXR	Ť	100	+	Oldahama City	Exchange Ave Bantist Church
	KGBX KGCX KGEZ	*	100		St. Joseph, Mo.	KGBX, Inc.
****	KGCX	†	100	+	Wolf Point, Mont.	First State Bank of Vida
	KGEZ	Ť	100		Kalispell, Mont.	Donald C. Treloar
-	KGFW	1	100		St. Joseph, Mo. Wolf Point, Mont. Kalispell, Mont. Kearney, Nebr. Yakima, Wash. Medford, Ore.	KGBX, Inc. First State Bank of Vida Donald C. Treloar Central Nebraska Broadcasting Corp.
	KIT ∸KMED	Ι	100		Yakima, Wash.	Carl E. Haymond Mrs. W. J. Virgin Radio Station KRMD, Inc.
-	KRMD	·I	100 50	$\ddot{\mathbf{x}}$	Mediord, Ore.	Dadia Station VDMD Inc
	KTLC	*	100		Shreveport, La. Houston, Texas El Paso, Texas	Houston Broadcasting Co.
	KTSM	+	100	2	El Paco Tayas	W S Bledsoe & W T Blackwell
•	KTSM KXRO	‡	100		Aberdeen, Wash.	W. S. Bledsoe & W. T. Blackwell KXRO, Inc.
400	WBEO		100		Marquette, Mich.	Lake Superior Broadcasting Co.
	WBOW	*	100		Terre Haute, Ind.	Lake Superior Broadcasting Co. Banks of Wabash, Inc.
	WBRE		100		Wilkes-Barre, Pa.	Louis G. Baltimore
	WCLS	*	100	î	Joliet, Ill.	Louis G. Baltimore WCLS, Inc.
	WDAH	<b>†</b>	100	2	El Paso, Texas Buffalo, N. Y.	Bledsoe & Blackwell
	WEBR	*	100	+	Buffalo, N. Y.	Howell Broadcasting Co., Inc.
	WEXL	<b>†</b>	50		Royal Oak, Mich.	Royal Oak Broadcasting Co.
	WFBG		100	3X	Altoona, Pa.	Wm. F. Gable Co.
	WFDF	*	100	5	Flint, Mich.	Frank D. Fallain WGAL, Inc.
	WGAL	•* *	100	5	Lancaster, Pa. Newport News, Va. Philadelphia, Pa.	WGAL, Inc.
	WGH		100	4 7 3 6	Newport News, Va.	Hampton Roads Broadcasting Corp
	WHAT WIAS	† † *	100	4 7	Philadelphia, Pa.	Independence Broadcasting Co.
	WIAS	*	100 100	4	Ottumwa, Iowa	Iowa Broadcasting Co.
	WIAK	*	50	6	Johnstown, Pa.	Johnstown Automobile Co. Truth Publishing Co., Inc.
	WJAC WJAK WKAV WKBB	*	100		Elkhart, Ind. Laconia, N. H.	Laconia Radio Club
	WKER	*	100	ī	Joliet, Ill.	Sanders Bros. Radio Station
	WKBC	*	100		Birmingham, Ala.	R. B. Broyles Furniture Co
	WKBS	*	100		Galesburg, Ill.	Permil N. Nelson
	WKBS WLBC	†	50	6	Galesburg, III. Muncie, Ind. Auburn, N. Y.	Donald A. Burton
	WMBO	† †	100		Auburn, N. Y.	WMBO, Inc.
	WNBH		100		New Bedford, Mass.	New Bedford Broadcasting Co.
	WOL	*	100		Washington, D. C.	American Broadcasting Co.
	WRAW	*	100	$5\mathbf{X}$	Reading, Pa. Knoxville, Tenn.	Reading Broadcasting Co. Stewart Broadcasting Co.
	WROL	‡	100		Knoxville, Tenn.	Stewart Broadcasting Co.
	WSAJ	*	100		Grove City, Pa. Winston-Salem, N. C.	Grove City College
	WRAW WROL WSAJ WSJS	*	100		Winston-Salem, N. C.	Winston-Salem Journal Co. Foulkrod Radio Engineering Co.
	WTEL WTJS WTSL	•	100	4	Philadelphia, Pa. Jackson, Tenn. Laurel, Miss.	Foulkrod Radio Engineering Co.
	WIJS	†	100	+	Jackson, Tenn.	Sun Publishing Co.
	XEFB		100 50	1315	Mantanese N. I	G. A. Houseman Quintanilla y Stevenson
	AEFB		30	1313	Monterrey, N. L.	Quintannia y Stevenson
	1220	1_11	1	4	227 1 4	
	1320	K110	ocycl	les 1	227.1 meters	
	KCHR				Pueblo Colo	C. P. Ritchie & J. E. Finch
	KGHF KGMB	‡	250 250	ċ	Honolulu Hawaii	Honolulu Broadcasting Co., Ltd.
*	KID	*	250	ĭ	Pueblo, Colo. Honolulu, Hawaii Idaho Falls, Idaho	KID Broadcasting Co.
	WADC	† *	1000	CN CN	Akron, Ohio	Allen T. Simmons
	WSMB	÷	500	Ň	New Orleans, La.	WSMB, Inc.
					,	
	1220	1_91		^	225 4 4	
	1330	K110	ocycı	.es 🛚	225.4 meters 🚽	
***	*KGB	*	500		San Diago Col	Don Lee Inc
	⊷KSCJ	*	1000	C	San Diego, Cal.	Don Lee, Inc. Perkins Bros. Co.
	WDRC	*	500	1+C C	Sioux City, Iowa Hartford, Conn.	WDRC, Inc.
	WSAI	*	500	ığτ	Cincinnati Ohio	Crosley Radio Corp., Lessee
	WTAO	*	1000	R+ 1C	Cincinnati, Ohio Eau Claire, Wis.	Gillette Rubber Co.
			2000		zaa ciano, wisi	
	1010	4 44	-	_	300 5	
	1340	kilo	ocvel	es 2	223.7 meters	
						Torre Transaction Management
	CMCG		30	1345	Havana, Cuba	Jose Justo Moran
	CMCR		150	1345	Havana, Cuba Havana, Cuba	Aurelio Hernandez
	CMCY KFPW	1-	50	1345	navana, Cuba	M. D. Autran
	KFPW ₩KFPY	†	50 1000	C	Fort Smith, Ark. Spokane, Wash.	Southwestern Hotels Co. Symons Broadcasting Co.
-	WCOA	*	500		Panagagla Fla	Pensacola Broadcasting Co.
	WSPD	*	1000	C	Pensacola, Fla. Toledo, Ohio	Toledo Broadcasting Co.
	H GE D	-	1000	0	Tolego, Ollio	Total Dioaccasting Co.
	1050	4	_			
	1350	kild	ocvc1	es 2	222.1 meters	
						Di Dai di Ciri
-dept	KIDO	† *	1000		Boise, Idaho	Boise Broadcasting Station
1.30	KWK	*	1000	В	St. Louis, Mo.	Greater St. Louis Brdcstg Corp.
11. M	WAWZ	*	250	1	Zarephath, N. J.	Pillar of Fire
-	WBNX	*	250 ' 250 250	1a	New York City	Standard Cahill Co., Inc.
	WCDA	3	200 500	1	New Tork City	Italian Educ. Broadcasting Co., Inc. Emory & Henry College
	WEHC WMSG	•	500 <b>250</b>	D la	New York City New York City Emory, Va. New York City	Madison Sa Gardon Padeta Com
	W MISO		230	14	New TORK CITY	Madison Sq. Garden Brdctg. Corp.

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			INDE	X BY	FREQUENCIES	AND DIAL NUMBERS	
	<b>1360</b>	kilo	ocycl	es 2	220.4 meters		
*******	KGER KGIR	•	1000 500	Ñ	Long Beach, Cal. Butte, Montana	Consolidated Broadcasting Corp.	
	WCSC	•	500	ĊΧ	Charleston, S. C.	KGIR, Inc. South Carolina Broadcasting Co., Inc.	
	WFBL WGES	:	1000 500	1+	Charleston, S. C. Syracuse, N. Y. Chicago, Ill.	Onondaga Radio Broadcasting Corp. Oak Leaves Broadcasting Station, Inc. Johnson-Kennedy Radio Corp.	
	WGES WJKS WQBC	ŧ	1000 500	1+ 1+z D	Gary, Ind. Vicksburg, Miss.	Johnson-Kennedy Radio Corp. Delta Broadcasting Co., Inc.	
	WQBC	1	300	D	vicksburg, wilss.	Delta broadcasting con, me.	
	1370	kild	ocycl	es 2	218.7 meters		
	<b>CMGB</b>		30	1375	Cardenas, Cuba	Genaro Sebater	
	HRB KCRC	+	2300 100	<u>2</u> +	Tegucigalpa, Hond. Enid, Okla.	United Fruit Co. Enid Radiophone Co.	
	KCRC KFBL	‡ *	50	3	Everett, Wash. Grand Forks, N. D.	Leese Bros. University of North Dakota	
	KFJM KFJZ KFLX	‡	100 100		Ft. Worth, Texas	Ralph S. Bishop	
-	KFLX KGAR	*	100 100	<del></del>	Ft. Worth, Texas Galveston, Texas Tucson, Arizona Mitchell, S. D.	George Roy Clough Tucson Motor Service Co.	
-	KGDA KGFG		100	<u>-</u>	Mitchell, S. D.	Mitchell Broadcasting Corp.	
	KGFG KGFL	†	100 50	2 4		Oklahoma Broadcasting Co., Inc. KGFL, Inc.	
	KGKL	Ť	100	4ĈP	Raton, N. M. San Angelo, Texas Clovis, N. Mex.	KGKL, Inc.	
***	KICA KMAC	Ť	100 100	5 5	San Antonio, Texas	KGFL, Inc. KGKL, Inc. W. E. Whitmore W. W. McAllister	
_	KONO KOOS	‡	100 100			Mission Broadcasting Co.	
	KRE		100		Marshfield, Ore. Berkeley, Cal. Walla Walla, Wash.	H. H. Hanseth, Inc. First Congregational Church	
-	KVL	Ť	100 100	3	Walla Walla, Wash. Seattle, Wash.	KUJ, Inc. KVL, Inc.	
	KWKC	1-	100		Seattle, Wash. Kansas City, Mo. Glens Falls, N. Y.	Wilson Duncan Broadcasting Co. W. N. Parker and H. H. Metcalfe	
	WBGF WBTM	‡	50 100	7	Danville, Va.	Piedmont Broadcasting Corp.	
	WCBM WDAS		100 100	† <b>z</b>	Baltimore, Md. Philadelphia, Pa.	Baltimore Broadcasting Corp. WDAS Broadcasting Station, Inc.	
	WGL.	<b>*</b>	100	Ċ	Philadelphia, Pa. Fort Wayne, Ind. Mount Orab, Ohio	WDAS Broadcasting Station, Inc. Fred Z. Zieg F. P. Moler	
	WHBD WHBQ WHDF	ŧ	100 100		Memphis, Tenn.	Broadcasting Station WHBQ, Inc.	
	WHDF	Ť	100 100	+ 1	Memphis, Tenn. Calumet, Mich. Jackson, Mich. Detroit, Mich. Atlanta Ge	Unner Michigen Broadcasting Co.	
	WJBK	•	50 100	î	Detroit, Mich.	WIBM, Inc. James F. Hopkins, Inc. Oglethorpe University Lexington Air Stations	
	WJBK WJTL WLEY WLVA		100 100	<del></del>	Atlanta, Ga. Lexington, Mass.	Oglethorpe University Lexington Air Stations	
	WLVA	Ī	100 100	7	Lynchburg, Va.	Lynchburg Broadcasting Corp. F. J. Reynolds	
	WMBR WPFB	Ŧ	100		Tampa, Fla. Hattiesburg, Miss. St. Albans, Vt.	Hattiesburg Broadcasting Co.	
	WQDM WRAK	*	100 100	D 6	St. Albans, Vt. Williamsport, Pa.	A. J. St. Antoine C. R. Cummins Wilmington Radio Association	
	WRAM	*	100		Williamsport, Pa. Wilmington, N. C.	Wilmington Radio Association	
	WRDO WRJN	†	100 100		Augusta, Maine Racine, Wis.	WRDO, Inc. Racine Broadcasting Corp.	
	wsvs	•	50 100	6	Buffalo, N. Y. Williamsport, Pa.	Seneca Vocational School Sun-Gazette Broadcasting Co.	
		kil	ocycl		217.3 meters		
	CMJC KOH	÷-	150 500	1382 C	Camaguey, Cuba Reno, Nevada	Feliciano Isaac The Bee, Inc.	KCYS.
	KQV KSO	Ì	500	2	Pittsburgh, Pa.	KQV Broadcasting Co.	1400
-	KSO WKBH		500 1000	î ic	Clarinda, Iowa La Crosse, Wis.	Iowa Broadcasting Co. WKBH, Inc.	MTRS.
	<b>W</b> SMK	•	200 125	2	Dayton, Ohio Torreon, Coah.	WKBH, Inc. Stanley M. Krohn, Jr. Jose A. Berumen	214.2
	XETB		125		Torreon, Coan.	Jose A. Derumen	DIAL
	1390	kil	ocycl	es 2	215.7 meters		DIAL
	KLRA	*	1000	1C	Little Rock, Ark.	Arkansas Broadcasting Co.	Ī
*****	-KOY KUOA	ŧ	500 1000	C 1	Phoenix, Arizona Fayetteville, Ark.	Nielson Radio & Sporting Goods Co. University of Arknasas	0
	WHK	† •	1000	Ĉ	Cleveland, Ohio	Radio Air Service Corp.	136
	1/00	1-:1.	003701	<b>as</b> '	214.2 meters		CUT OUT ON
		KII	ocycl			Francisco Mayorquim	FG
	CMBI CMBN		30 30	1405 1405	Havana, Cuba Havana, Cuba Havana, Cuba	Armado Romeu	ON
	CMCH		15	1405	Havana, Cuba	Hernani Torralbas	SZ

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			INDE	X BY	FREQUENCIES A	AND DIAL NUMBERS
	CMCM KLO KOCW WBAA WBBC WCGU WCMA WFOX WKBF WLTH XEP	* * * * * * * * * * * * * * * * * * * *	15 500 250 500 500 500 500 500 500 200	1405  1+ 2 1 2 1 2	Havana, Cuba Ogden, Utah Chickasha, Okla. Lafayette, Ind. Brooklyn, N. Y. Brooklyn, N. Y. Culver, Ind. Brooklyn, N. Y. Indianapolis, Ind. Brooklyn, N. Y. Laredo, Mexico	Martinez-Madicu Interstate Broadcasting Corp. College for Women Purdue University Brooklyn Broadcasting Corp. U. S. Broadcasting Corp. General Broadcasting Corp. Paramount Broadcasting Co. Indianapolis Broadcasting, Inc. The Voice of Brooklyn, Inc. La Voz Latino
	1410	kilo	ocycl	es 2	212.6 meters	
	KFLV KGRS WAAB WBCM WDAG WHBL WHIS WODX WRBX WSFA	†** ** * †* *	500 1000 500 500 1000 500 250 500 250 500	4 1 C C 1 4 2 3 C 2 3 C	Rockford, Ill. Amarillo, Texas Boston, Mass. Bay City, Mich. Amarillo, Texas Sheboygan, Wis. Bluefield, W. Va. Mobile, Ala. Roanoke, Va. Montgomery, Ala.	Rockford Broadcasters, Inc. Gish Radio Service Bay State Broadcasting Corp. James E. Davidson National Radio & Broadcasting Corp. Press Pub. Co. Daily Telegraph Mobile Broadcasting Corp. Richmond Development Corp. Montgomery Broadcasting Co., Inc.
	1420	kilo	ocycl	es 2	211.1 meters	
- Paradina	KABC KBPS KCMC KFIZ KFXY KFXYO KFXYY KFYO KGFF KGGC KGIX KGWC KGIX KGWC KGIX KGWC WENC WHOL WENC WHOL WHOL WIJM WJMS	† * * -   † † † † † * * † * - ` - ` -   † -   * * *   * * *   *   *	100 100 100 100 100 100 100 100 100 100	7 + YZ 5 D D a D D a	San Antonio, Texas Portland, Ore. Texarkana, Ark. Fond du Lac, Wis. Nampa, Idaho Flagstaff, Arizona Abilene, Texas Shawnee, Okla. San Francisco, Cal. Trinidad, Colo. Las Vegas, Nevada Sand Point, Idaho Missoula, Montana Red Oak, Iowa Eugene, Ore. Cedar Rapids, Iowa Portland, Ore. Houston, Texas Presque Isle, Maine Waterburv, Vt. Cicero, Ill. Battle Creek, Mich. Americus, Ga. Erie, Pa. Anniston, Ala. Tupper Lake, N. Y Cicero, Ill. Wilmington, Del. New Orleans, La.	Alamo Broadcasting Co. Benson Polytechnic Institute North Mississippi Broadcasting Corp. Reporter Printing Co. Frank E. Hurt Albert H. Scherman T. E. Kirksey KGFF Broadcasting Co. Golden Gate Broadcasting Co. Leonard E. Wilson Las Vegas, Nevada, Radio Corp. Sandpoint Broadcasting Co. Mosby's Incorporated Red Oak Radio Corp. Eugene Broadcasting Station Cedar Rapids Broadcast Co. KXL Broadcasters, Inc. Harris County Broadcast Co. Aroostook Broadcasting Corp. Harry C. Whitehill WEHS, Inc. Enquirer-News Co. Americus Broadcast Co. Erie Dispatch-Herald Raymond G. Hammett Tupper Lake Broadcasting Co. Inc., WHFC, Inc. Delaware Broadcasting Co., Inc. Valdemar Jensen
	WKBI WLBF WMBC WMBH WPAD WSPA WTBO	† † * *	100 100 100 100 100 100 100 100	D a + + + + + + + + + + + + + + + + + +	Ironwood, Mich. Cicero, Ill. Kansas City, Kansas Detroit, Mich. Joplin, Mo. Paducah, Ky. Spartanburg, S. C. Cumberland, Md.	Valdemar Jensen Marius Johnson WKBI, Inc. WLBF Broadcasting Co. Michigan Broadcasting Co., Inc. Edwin Dudley Aber Paducah Broadcasting Co. Voice of South Carolina Associated Broadcasting Corp.
	1430	kilo			209.7 meters	
-	KECA KGNF WBAK WCAH WFEA WHEC WHP WNBR WOKO	† † † * * * * † †	1000 500 500 500 500 500 500 500 500	ND+1+10 CC CC+10	Los Angeles, Cal. North Platte, Nebr. Harrisburg, Pa. Columbus, Ohio Manchester, N. H. Rochester, N. Y. Harrisburg, Pa. Memphis, Tenn. Albany, N. Y.	Earle C. Anthony, Inc. Great Plains Broadcasting Co. Penna. State Police Commercial Radio Service Co. New Hampshire Broadcasting Co. WHEC, Inc. WHP, The Harrisburg Telegraph Memphis Broadcasting Co. WOKO, Inc.
	1440	kilo	ocycl	es 2	208.2 meters	
,	KLS WBIG	*	250 500	D C	Oakland, Cal. Greensboro, N. C.	Warner Bros. North Carolina Broadcasting Co.

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WCBA WMBD WSAN WTAD	* * †	250 500 250 500	3+C a 3	Allentown, Pa. Peoria Heights, III. Allentown, Pa. Quincy, III.	B. B. Musselman Peoria Broadcasting Co. Allentown Call Publishing Co., Inc. Illinois Broadcasting Corp.
1450	kilo	ocycl	les	206.8 meters [	
KTBS WBMS WGAR WHOM WNJ WSAR WTF1	* † * *	1000 250 500 500 250 250 250	N 1 B 1	Shreveport, La Hackensack, N. J. Cleveland, Ohio Jersey City, N. J. Newark, N. J. Fall River, Mass. Athens, Ga.	Tri-State Broadcasting System, Inc. WBMS Broadcasting Corp. WGAR Broadcasting Co. New Jersey Broadcasting Corp. Radio Investment Co. Doughty & Welch Electric Co., Inc. Toccoa Falls Broadcasting Co.
1460	kilo	ocycl	les	205.4 meters [	
KSTP WJSV	*	10000 10000	N 	St. Paul, Minn. Alexandria, Va.	National Battery Broadcasting Co. WJSV, Inc.
1470	kilo	ocvel	les	204.0 meters	
KGA WLAC	1	5000 5000	N C	Spokane, Wash. Nashville, Tenn.	Northwest Broadcasting System, Inc. Life & Casualty Insurance Co.
1480	kilo	oeve]	les	202.6 meters □	
KFJF WKBW	*	5000 5000	C	Oklahoma City Buffalo, N. Y.	National Radio Mfg. Co. Buffalo Broadcasting Co., Lessees
1490	kilo	ocyc]	les	201.2 meters	
WCHI WCKY	*	5000 5000	1 1N	Chicago, Ill. Covington, Ky.	Midland Broadcasting Company L. B. Wilson, Inc.
1500	kilo	ocyc]	les	199.9 meters	
CMBL CMBQ CMBR KDB KGFI KGFI KGFX KGKY KNOW KPJM KPQ KREG KXO WFDV	 * † * † * *	20 50 15 100 100 100 100 100 100 100 100	C +	Havana, Cuba Havana, Cuba Havana, Cuba Santa Barbara, Cal. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Nebr. Austin, Texas Prescott, Arizona Wenatchee, Wash. Santa Ana, Cal.	Julio C. Hidalgo Gall-Sardinas Tomas Basail Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Brdestg, Co. Hilliard Co., Inc. KNOW Broadcasting Co. A. P. Miller Wescoast Broadcasting Co. J. S. Edwards
WKBV WKBZ WLBX WLOE WMBQ WMIL WMPC WNBF WOPI WPEN WRDW WSYB WWRL WWSYB	†* †* * † * * * † * * * † *	100 100 100 50 100 100 100 100 100 100 1	† † † † † † † † † † † † † † † † † † †	El Centro, Cal. Rome, Ga. Connersville, Ind. Ludington, Mich. Long Island City, N. Y. Boston, Mass. Newport, R. I. Brooklyn, N. Y. Brooklyn, N. Y. Lapeer, Mich. Binghamton, N. Y. Bristol, Tenn. Philadelphia, Pa. Augusta, Ga. Rutland, Vt. Woodside, N. Y. Pittsburgh, Pa. Covoacan, D. F. Kosciusko, Miss.	Ē. R. Irey and F. M. Bowles Rome Broadcasting Corp. Knox Battery & Electric Co. K. L. Ashbacker John N. Brahy Boston Broadcasting Co. LeRoy Joseph Beebe Paul J. Gollhofer Arthur Faske First M. P. Church Howitt, Wood Radio Co., Inc. Radiophone Brdestg, Station, Inc. Wm. Penn Broadcasting Co. Musicove, Inc. Philip Weiss Music Co. Long Island Broadcasting Corp. Walker & Downing Radio Corp. Manuel Zetina Attala Milling & Produce Co.

ксуs. **1500** MTRS. 199.9 DIAL

# INDEX BY LOCATIONS WITH MAP KEY Columbia: C. National: Red, R; Blue, B; Both, N.

				_			
ALABAMA	Watts		Kcys.	San Jose J-1 -	500	KOW	1010
Anniston O-22	100	WFDW	1420	Santa Ana M-3	100	KQW KREG KDB C	1500 1500
Birmingham O-21	5000	WAPI N	1140	Santa Barbara M-2 - Stockton J-2 -	100 250	KDB C KGDM	1100
	500 100	WAPI N WBRC C WKBC WIBY	930 1310	ν .	100	KWG	1200
Gadsden O-21	100			€OLORADO			
Huntsville N-21 Mobile Q-20	50 500	WBHS WODX C	1200 1410	Colorado Springs K-11	<del>-1</del> 000	KVOR C	1270
Montgomery P-21	500	WSFA C	1410	Denver K-11	500	KFEL	920
					500 1000	KFXF KLZ C	920 <b>560</b>
ALASKA					12500	KOA N	830 880
Anchorage	100	KFQD	1230	Fort Morgan J-11	100	KGEW	1200
Ketchikan	500	KGBU	900	Grand Junction K-9	100	KFXJ	1310
				Greeley J-11	<del>5</del> 00 250	KFKA KGHF	880 1320
ARIZONA				Trinidad L-11	100	KGIW	1420
Flagstaff M-7 Jerome M-6	100	KFXY	1420 1310	Yuma J-12	100	KGEK	1200
Phoenix N-6	500	KCRJ KOY C KTAR N	1390	CONNECTICUT			
Prescott M-6	500 100	KTAR N KPJM	620 1500	Bridgeport H-27	250	WICC	600
Tucson O-7	100	KGAR	1370	Hartford H-27	500	WDRC C	1330
	500	KVOA	1260	Storrs H-28	-50000 250	WTIC R WCAC	1060 600
ARKANSAS			-	555215 22 25	200		300
Blytheville M-19	50	KLCN	1290	DELAWARE			
Fayetteville M-16	1000	KUOA	1390	Wilmington J-26	250	WDEL	1120
Fort Smith N-16	50 10000	KFPW KTHS N	1340 1040		100	WILM	1420
Hot Springs N-17 Little Rock N-17	250	KARK	890	DISTRICT OF C	OI IN	ATD T A	-
	100 1000	KGHI KLRA C	1200 1390		250	WMAL C	630
Paragould M-18	100	KBTM	1200	Washington J-26	500	WRC R	950
Texarkana O-17	100	KCMC	1420		100	WOL	1310
				FLORIDA			
CALIFORNIA				Clearwater R-24	1000	WFLA N	620
Bakersfield L-3	100 100	KERN C	1200 1370	Gainesville Q-24	~ 5000 1000	WRUF C WJAX N	830 900
Berkeley J-2 Beverly Hills M-3	500	KMPC	710	Miami T-25	1000	WIOD N	1300
Burbank M-3	<del></del>	KELW	780   1000	Orlando R-24	1000 250	WQAM C WDBO C	560 1120
Culver City M-3 El Centro N-4	100	KFVD KXO	1500	Pensacola Q-21	500	WCOA	1340
Fresno K-2	1000	KMJ KFWB	1210 950	St. Petersburg S-24	1000	WSUN WDAE C	620
Hollywood M-3	500	KMTR	570	Tampa R-24	1000 100	WDAE C WMBR	1220 1370
Lang Basah M 2	<del>5</del> 000	KNX KFOX	1050 1250	TOP OT A			
Long Beach M-3	1000	KGER	1360	GEORGIA		********	4.400
Los Angeles M-3	1000	KECA N	1430	Americus P-22 Athens O-23	500 500	WENC WTFI	1420 1450
	1000 50000	KFAC KFI N	1300 640	Atlanta O-22	250	WGST C	890
	500	KFSG	1120		100 5000	WJTL WSB N	1370 740
	100 1000	KGFJ KHJ C	1200 900	Augusta O-23	100	WRDW	1500
	500	KRKD	1120	Columbus O-22 Macon O-23	50 500	WRBL WMAZ	1200 1180
Oakland J-1	500 250	KTM KLS	780 1440	Rome N-22	100	WFDV	1500
Cariand J-1	<del></del> 500	KLX	880	Savannah O-24	500	WTOC C	1260
Pasadena M-3	500 50	KROW KPPC	930 1210	Thomasville Q-22	100	WQDX	1210
Sacramento J-2 San Bernardino M-	100	KFBK	1310	HAWAII			
San Bernardino M- San Diego N-3	3	KFXM KFSD N	1210 600	Honolulu	250	KGMB C	1320
_	500	KGB C	1330		1000	KGU R	750
San Francisco J-1	1000 500	KFRC C KFWI	610 930	TDAHO			
	100	KGGC	1420	Boise G-5	1000	KIDO	1350
	7500	KGO N	790 1070	Idaho Falls G-7	250	KID KFXD	1320 1420
		KJBS KPO N	680	Nampa G-5 Pocatello H-7	100- 250	KSEI	900
	1000	KTAB	560	Sand Point D-6	100	KGKX	1420
	1000	KYA B	1230	Twin Falls H-6	250	KTFI	1240

Columbia: C. National: Red, R; Blue, B; Both, N.

ILLINOIS	Watts		Kcys.	Shenandoah J-16	500		890
Carthage J-18 Chicago I-20	50 10000	WCAZ KFKX	1070 1020	Sioux City I-15 Waterloo I-17	1000	KMA KSCJ C WMT C	930 1330 600
	T0000 500	KYW N WAAF	1020 920	KANSAS		-11111	000
	25000 1500	WBBM C WCFL R	770 970	Coffeyville M-15	500	KGGF	1010
	5000 100	WCHI WCRW	1490 1210	Dodge City L-13 Kansas City K-16	100 100	KGNO WLBF	1210 1420
	100 50000	WEDC WENR N	1210 870	Lawrence K-16	500 1000	KFKU WREN B	1220 1220
	500	WGES	1360 720	Manhattan K-15	500	KSAC KFBI	580
	25000- 1000	WIBO	560	Milford K-14 Topeka K-16	<del>10</del> 00	WIBW C	1050 580
	50000 5000	WLS N -WMAQN	870 670	Wichita L-15	. 1000	кғн с	1300
	5000 500	WMBI	1080 560	-KENTUCKY	<b>5000</b>	WOKANA	1.400
Cicero 1-20	100 100	WSBC WEHS	1210 1420	Covington K-22 Hopkinsville M-20	5000 1000	WCKYN WFIW C	1490 940
Cicero 1-20	100 100	WHFC WKBI	1420 1420	Louisville L-21	<del></del>	WHAS N WLAP C	820 1200
Decatur K-19	100	WJBL	1200	Paducah M-19	100	WPAD	1420
Galesburg J-18 Harrisburg L-19	100 100	WKBS WEBQ WCLS	1310 1210	<b>LO</b> UISIANA			
Joliet I-19	100 100	WKBB	1310 1310	Monroe P-18 New Orleans R-19	· 100 100	KMLB WABZ	1200 1200
La Salle J-19 Mooseheart I-19	20000	WJBC WJJD WMBD C	1200 1130	110.11 01100010 11 15	1000 100	WDSU C	1250 1420
Peoria Heights J- Quincy K-18	19 500 500	WMBD C WTAD	1440 1440		100 500	WJBO WJBW WSMB N	1200 1320
Rockford I-19 Rock Island I-18	500 100	KFLV WHBF	1410 1210		10000_	-WWL	850
Springfield K-19	100	WCBS	1210	Shreveport P-17	50 1000	KRMD KTBS N	1310 1450
Tuscola K-20	100 100	WTAX WDZ	1210 1070		100 <del></del> 0000	KWEA KWKH	1210 850
Urbana J-20 Zion I-20	250 5000	WILL WCBD	890 1080	MAINE			
		-		Augusta F-28 Bangor F-29	100 100	WRDO WABI	1370 1200
INDIANA			- 1	Portland F-28	500 1000	WLBZ C WCSH R	620 940
	100	WHBU	1210	Presque Isle D-29	100	WAGM	1420
Anderson J-21 Connersville K-21 Culver I-20	100 500	WKBV WCMA	1500 1400	MARYLAND			
Elkhart I-21	50 500	WJAK WGBF	1310	Baltimore J-26	10000	WBAL B	1060
Evansville L-20 Fort Wayne J-21	100	₩GL C -WOWO C	1370		250 100	WCAO C WCBM	600 1370
Gary I-20	10000- 1000	WJKS WWAE	1360	Cumberland J-25	500 - 100	WFBR R WTBO	1270 1420
Hammond I-20 Indianapolis J-21	100 1000	WFBM C		MACCACITIE	errre		
Lafayette J-20	500 500	WKBF WBAA	1400 1400	MASSACHUS Boston G-28	500	WAAB C	1410
Muncie J-21 South Bend I-20	50 100	WLBC WFAM	1310 1200	5050011 0 20	1000 25000	WBIS WBZ B	1230 990
Terre Haute K-20	500	WSBT C WBOW		•	1000	WEEI R	590
Terre Haute K-20	100	WBOW	1310		1000 100	WHDH WLOE	830 1500
				Fall River H-28	1000 250	WNAC C WSAR	1230 1450
IOWA				Lexington G-28 Needham G-28	100 500	WLEY WBSO	1370 920
Ames I-17 Boone I-17	5000	<b>-</b> ₩OI KFGO	640 1310	New Bedford H-28	100	WNBH WBZA B	1310 990
Cedar Rapids I-18	100	KWCR B ∼KSO	1420 1380	Springfield H-27 Worcester G-28	100	WORC C	1200
Clarinda J-16 Council Bluffs J-1	6 1000	KOIL B	1260		250	WTAG R	580
Davenport 1-18 Decorah H-18	5000 50	WOC R	1270		50	WELL	1420
Des Moines I-17	- 5000	KWLC WHO R		Battle Creek I-21 Bay City H-22 Calumet E-19	50 500	WELL WBCM C	1420 1410
lowa City 1-18 Marshalltown 1-13	500 7 100	WSUI KFJB	880 1200	Calumet E-19 Detroit H-22	100 50	WHDF WJBK	1370 1370
Ottumwa J-17 Red Oak J-16	100	WIAS KICK	1310 1 <b>420</b>		10000	WJR B WMBC	750 1420
New Car J-10			1420				

# INDEX BY LOCATIONS WITH MAP KEY Columbia: C. National: Red, R; Blue, B; Both, N.

Detroit H-22	1000	wwj R	920	TESTA DA			
Detroit 11-22	1000	WWJ R	1240	NEVADA	Watts		Kcys.
East Lansing H-21	1000	WKAR	1040	Las Vegas L-5	100	KGIX	1420
Flint H-22	100	WFDF	1310	Reno I-3	500	⊨кон с	1380
Grand Rapids H-21	500 500	WASH WOOD	1270	NEW HAMPS	HIDE		
Ironwood F-18	100	WJMS	1270 1270 1420				
Jackson I-21	100	WIBM	1370	Laconia G-28	··· 100	WKAV	1310
Kalamazoo I-21	1000	WKZÓ	590	Manchester G-28 Portsmouth G-28	500 250	WFEA C WHEB	1430 740
Lapeer H-22	100	WMPC	1500	Portsmouth G-28	250	WILED	/40
Ludington H-20	50	WKBZ	1500	NEW JERSEY	7		
Marquette F-19	100	WBEO	1310				
Royal Oak H-22	50	WEXL	1310	Asbury Park I-27	500	WCAP	1280
ATMINITECOTA		•		Atlantic City J-27	5000	WPG C	1100
MINNESOTA				Camden I-26 Hackensack I-27	500 250	WCAM WBMS	1280 1450
Fergus Falls F-15	100	KGDE	1200	Jersey City I-27	300	WAAT	940
Minneapolis G-17	1000	WCCO C WDGY	810 1180	Jersey City 1-27	500	WHOM	1450
	1000	WRHM	1250	Newark I-27	1000	WAAM	1250
Moorhead F-15	50	KGFK	1500		250	WGCP	1250
Northfield G-17	1000	KFMX	1250		<b>25</b> 0	WNJ	1450
	1000	WCAL	1250	l	5000	WOR	710
St. Paul G-17	1000	WLB	1250	Paterson I-27	1000	WODA	1250
	10000-	KSTP N	1460	Red Bank I-27	100	WJBI WOAX	1210
				Trenton I-26	500 250	WAWZ	1280
MISSISSIPPI		•		Zarephath I-27	250	WAWZ	1350
Greenville O-18	100	WRBQ	1210	NEW MEXIC	0		
Gulfport Q-19	100	WGCM	1210		_		
Hattiesburg Q-19 Jackson P-19	100	WPFB	1370	Albuquerque N-7	250	KGGM	1230
Jackson P-19	1000	WJDX N	1270	Clovis N-11	100	KICA	1370
Kosciusko O-19	100		1500	Raton M-11	50	KGFL	1370
Laurel P-20 Meridian P-20	100	WTSL	1310	State College P-9 -	20000	KOB	1180
Vicksburg P-18	500 500	WCOC WQBC	880 1360	NEW YORK			
VICKSDUIG I'-10	300	WQDC	1300				
- MISSOURI				Albany H-27	500	<b>WOKO</b> C	1430
Cp. Girardeau L-19	100	KFVS	1210	Auburn H-25	100	WMBO WNBF	1310
Columbia K-17	500	KFRU	630	Binghamton H-26	100 500	WNBF	1500
Grant City I-16	100	KGIZ	1500	Brooklyn I-27	1000	WBBR	1400 1300
Grant City J-16 Jefferson City L-17	500	wos	630		500	WCGU	1400
Joplin M-16	100	WMBH	1420		500	WFOX	1400
Kansas City K-16	1000	KMBC C	950	,	500	WLTH	1400
	100	KWKC	1370		100	WLTH WMBQ	1500
	1000	WDAF N	610	l	100	WMIL	1500
	500 1000	WHB	860	Buffalo H-24	1000	WBEN R	900
St. Joseph K-16	2500	WOQ KFEQ	1300 680		100 1000	WEBR	1310
St. Joseph K-10	100	KGBX	1310		- 5000	WGR C WKBW C	550
St. Louis L-18	500	KFUO	550		50	WSVS	1480 1370
50. 20dio 2-10	100	KFWF	1200	Canton F-26	500	WCAD	1220
***	50000	KMOX C	1090	Freeport I-27	100	WGBB	1210
	500	KSD R	550 l	Glens Falls G-27	50	WBGF	1370
	1000	KWK B	1350	Ithaca H-25	1000	WEAI	1270
	1000	WEW	760		50	WLCI	1210
	100	WIL	1200	Jamaica H-27	100	WMRJ	1210
MONTANA				Jamestown H-24	50	WOCL	1210
Billings F-9	م ۱۸۸۸ امیوسی	KGHL B	950	Long Island City I- New York City I-27	27 100	WLBX	1500
Butte F-7	500	KGIR N	1360	New York City I-27	<b>5</b> 0000 -	WABC C	860
Great Falls E-8	1000	KFBB	1280		250	WBNX	1350
Kalispell D-7	100	KGEZ	1310		50000	WBOQ	860
Missoula E-7	100	KGVO	1420	_	250 50000	WCDA WEAF R	1350 660
Wolf Point E-11	<del>1</del> 00	KGCX	1310		500	WEVD K	1300
					1000	WFAB	1300
NEBRASKA				1	500	WINS	1180
Clay Center J-14	1000	KMMJ	<b>74</b> 0		250	WHN	1010
Kearney J-14	100	KGFW	1310	1 -	30000	WJZ B	760
Lincoln J-15	5000	KFAB C	<i>77</i> 0	J	5000	WLWL	1100
	100	KFOR	1210		500	WMCA	570
NIC-11- 7 45	500	WCAJ	590		250	WMSG	1350
Norfolk I-15	1000	WJAG	1060		500	WNYC	570
North Platte J-13	500	KĞNF WAAW	1430		1000	WOV	1130
Omaha J-15	500 1000	WAAW WOW R	660 590		250	WPAP WPCH	1010
Scottsbluff I-11	1000	KGKY	1500		500 250	WOAO	810 1010
York J-15	500	KGBZ	930		250 250	WRNY	1010
2 02M J-10			,,,,		200	** 1414 1	1010
		*		•			

# INDEX BY LOCATIONS WITH MAP KEY Columbia: C. National: Red, R; Blue, B; Both, N.

Rochester G-25	<del>50</del> 00	WHAM B	1150	Portland E-3	5000	KEX N	1180
Rochester G-25	500	WHEC C	1430	Fortiand E-3	100	KBPS	1420
Saranac Lake F-26		WNBZ	1290		500	KFJR KGW N KOIN C	1300
Schenectady G-27	<del>5</del> 0000	WGY R	<i>7</i> 90	1	1000-	rKGW N	620
Syracuse G-25	1000	WFBL C	1360		1000	KOIN C	940 1300
	250 250	WMAC WSYR	570 570		500	•KWJJ	1060
Troy G-27	500	WHAZ	1300		100	KXL	1420
Tupper Lake F-26	100	WHDL	1420		100	14.10	- 120
Utica G-26	100	WIBX	1200	PENNSYLVA	NIT A		
Woodside I-27	100	WWRL	1500	LINIGIEVA	uun		
Yonkers I-27	100	WCOH	1210	Allentown I-26	250	WCBA	1440
				111101110111111111111111111111111111111	250	WSAN	1440
NORTH CAR	OLINA			Altoona I-25	100	WFBG	1310
Asheville M-23	1000	WWNCN	570	Carbondale H-26	10	WNBW	1200
Charlotte M-24		WBT C	1080	Elkins Park I-26	25 100	WIBG WERE	930 1420
Gastonia M-24	100	WSOC	1210	Erie H-24 Grove City I-24	100	WSAJ	1310
Greensboro M-24	500	WBIG C	1440	Harrisburg I-25	500	WBAK	1430
Raleigh M-25	1000	WPTF N	680	Tarrisburg 1-20	100	WCOD	1200
Wilmington N-26	100	WRAM	1370		500	WHP C	1430
Winston-Salem M	-24 100	WSJS	1310	Johnstown J-24	100	WJAC WGAL	1310
				Lancaster I-26	100	WGAL	1310
NORTH DAK	OTA			I omiobuse I 26	100 100	WKJC	1200 1210
Bismarck F. 13	1000	KFYR N	550	Lewisburg I-26 Oil City I-24	500	WJBU WLBW C	1260
Devils Lake E-14	100	KDLR	1210	Philadelphia I-26	10000	WCAU C	1170
Fargo F-15	1000	WDAY N	940		100	WDAS	1370
Grand Forks E-15	100	KFJM KGCU	1370	l	500	WFAN C	610
Mandan F-13	250	KGCU	1240		500	WFI R	560
Minot E-13	250	KLPM	1240	1	100	WHAT WIP C	1310
					500 500	WIP C	610 560
OHIO		•			100	WPEN	1500
Akron I-23	1000	WADC	1320	1	250	WRAX	1020
Canton I-23	1000	WADC C WHBC	1200	Ī	100	WTEL	1310
Cincinnati K-22	100	WFBE	1200	Pittsburgh J-24	<del>50</del> 000	KDKA B	980
, ,	1000	WKRC C	550		500	KQV WCAE R	1380
	50000	WLW B	700	1	1000 1000	WCAE R WIAS C	1220 1290
Cleveland I-23	500 500	WSAI R			100	WJAS C WWSW	1500
Cieveland 1-23	1000	WGAR B WHK C	1450 1390	Reading I-26	1000	WEEU	830
	500	WJAY	610		100	WRAW	1310
-	50000	WTAM R	1070	Scranton H-26	250	WGBI	880
Columbus J-22	500	WAIU	640	State College I-25	250 500	WQAN WPSC	880 1230
	500	WCAH C	1430	Washington J-24	100	WNBO	1200
	750 100	WEAO WSEN	570 1210	Wilkes-Barre I-26	100	WBAX	1210
Dayton I-22	200	WSMK	1380		100	WBRE	1310
Dayton J-22 Mansfield J-22	100	WJW	1210	Williamsport I-25	100	WRAK	1370
Mount Orab K-22	100	WHBD	1370	V1- 7 26	100 1000	WORK	1370
Toledo I-22	1000	WSPD C	1340	York J-26	1000	WORK	,1000
Youngstown I-23	500	WKBN C	570	1	_		
Zanesville J-23	100	WALR	1210	PHILIPPINE	S		
			1	Cebu	500	M7DC	937.5
OKLAHOMA				Manila	1000	KZRC KZKA	1110
Chickasha N-14	250	KOCW	1400		1000	KZRM	618.5
Elk City N-13	100	KGMP	1210		1000	1421411	010.0
Enid M-14	100	KCRC	1370	PORTO RIC	0		
Norman N-15	500	WNAD	1010				
Oklahoma N-15	5000	KFJF C KFXR	1480	San Juan W-34	250	WKAQ	890
	100	KFXR	1310				
	100	KGFG	1370	D*************************************			
Ponca City M-15		WKY N, WBBZ	900 1200	RHODE ISLA	AND		
Shawnee N-15	100	KGFF	1420	Newport H-28	100	WMBA	1500
Tulsa M-15		KVOO N	1140	Providence H-28	250	WEAN C	<b>780</b>
	2003				250	WJAR R	890
ODECON					100	WPRO	1210
OREGON							
Corvallis E-2	1000	KOAC	550	SOUTH CAR	OLINA		
Eugene F-2	100	KORE	1420			WOOO	1200
Klamath Falls G-3 Marshfield F-1	100	KFJI KOOS	1210 1370	Charleston O-25 Columbia N-24	500 500	WCSC WIS N	1360 1010
Medford G-2	100	KMED	1310	Spartanburg N-23		WSPA	1420
	100		1010	- Span vallouig 14-20	100		1 120

Columbia: C. National: Red, R; Blue, B; Both, N.

Commence of the second						
— SOUTH DAKOTA W	atts	Ксуз.	VIRGINIA	Watts		Kcys.
Brookings H-15 5	00 KFDY	550	Alexandria K-26	10000	WJSV	1460
	00 KGDY	1200	Arlington J-25	1000	NAA	690
	00 KGDA	1370	Danville L-25	100	WBTM	1370
	00 KGFX	630		500	WEHC	1350
Pierre G-13	00 WCAT	1200	Emory L-23	100	WEILC	1370
			Lynchburg L-25 Newport News L-26	100	WLVA WGH	
Sioux Falls H-15 ——25	OU KSOO	1110	Newport News L-20	5 100	WGH	1310
	00 KUSD	890	Norfolk L-26	500	WPOR	780
	00 KGCR	1210	i	500		C 780
Yankton I-15 ——10	00-WNAX	C 570	Petersburg L-26	100	WLBG	1200
293			Richmond K-26	100	WBBL	1210
X X A				100	WMBG	C 1210
TENNESSEE		i	l	<del>5</del> 000	WRVA	N 1110
D-1-4-1 [ 22 1	00 WOPI	1500	Roanoke L-24	250	WDBJ	C 930
			Tround 2 21	250	WRBX	1410
Chattanooga N-21 10	00 WDOD	1200	1	200	*******	
	00 WTJS 50 WFBC	1310	WASHINGTO	N		
		1200				
10	00 WNOX		Aberdeen D-2	100	KXRO KVOS	1310
1	00 WROL	1310	Bellingham C-3	100	KVOS	1200
Memphis N-19 1	00 WHBQ	1370	Everett C-3	50	KFBL	1370
5	00 WMC 1	N 780	Olympia D-3	100	KGY	1200
	00 WNBR	1430	Pullman E-5	1000-	-KWSC	1220
	00 WREC	C 600	Seattle C-3	5000	KIR N	970
Nashville M-21 50	00 WLAC	C 1470	Geattle C-5	1000	KJR N KOL C	970 1270
148511VIIIe 1VI-21 500	00 WSM	650	1	<del>10</del> 00	KOMO N	920
	00 WSIX	1210				650
Springfield M-20 10	OU WOLK	1210		100	KPCB	
		- 1	I	50	KRSC	1120
TEVAC				1000	KTW	1220
TEXAS				100	KVL	1370
Abilene P-13	00-KFYO	1420	1	<del>5</del> 00	KXA	760
Amarillo N-1210		1410	Spokane D-5	T00 -	·KFIO	1120
10		1410		<u>10</u> 00	KRPY C	1340
Austin Q-14	00 KNOW	1500		<del>50</del> 00	KGA N	1470
Personant P. 17	00 KFDM	560	1	1900 -	KGA N	590
	00 KWWG	1260	Tacoma D-3	500	KMÔ	860
		1120	Tacoma D-3	<del>10</del> 00	KVI C	570
			Walla Walla E-5	<del>10</del> 0 -	-ĸŭj	1370
	00 KGFI	1500	Wenatchee D-4		KPQ	1500
Dallas P-15 100		2 1040		50	4/TT	1210
500	00 WFAA 1	1 800 l	Yakima D-4	<del>1</del> 00 -	KÎT	1310
500	00 WFAA 1 00	N 800   C 1280	Yakima D-4	100 -	KIT	1310
Dublin P-14	00 WFAA 1 00	N 800 C 1280 1310	Yakima D-4	100 -	KÎT '	1310
Dublin P-14 El Paso P-9	00 WFAA 1 00	N 800 1280 1310 1310	Yakima D-4 ——WEST VIRGI	<del>1</del> 00 -	KIT	1310
Dublin P-14 1 1 E1 Paso P-9 1 1	00 WFAA 1 00	N 800 C 1280 1310 1310 1310	Yakima D-4 WEST VIRGI Bluefield L-24	<del>1</del> 00 - NIA 250	*KIT WHIS	1310
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Dublin P-14 El Paso P-9 Fort Worth P-15 10 Galveston R-16 Greenville O-15 Harlingen T-14 Houston R-16  San Angelo Q-13 San Antonio R-14 Tyler P-16 Waco Q-15 Wichita Falls O-14  UTAH Ogden I-7  500 10 10 10 10 10 10 10 10 10 10 10 10 1	00 WFAA 10 00 WFAL 10 00 WFPL 00 KTSM 00 WDAH 00 KFIZ 00 KFIZ 00 KFIZ 00 KFUL 15 KFPM 00 KFIC 00 KTRC 00 KTRC 00 KTRC 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KTRL 00 KGKD 00 KTRA 00 KONO 00 KTRA 00 KONO 00 KTRA 00 KONO 00 KTRA 00 KONO 00 KTRA 00 KONO 00 KTRA 00 KOKO 00 KTRA 00 KOKO 00 KTRA 00 WOAL 00 KGKB	N 800 1310 1310 1310 1370 1240 1290 1370 1260 N 920 1370 1420 1370 1420 1370 1420 1370 C 1290 N 1190 C 1120 1500 C 1240 1570 1500 C 1240 1570 1400 1400 1400 1400 1400 1400 1400 14	WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24 WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19 Poynette H-19 Racine I-20 Sheboygan H-20 Stevens Point G-19 Superior F-17 WYOMING	1000 - 1000 - 2500 - 2000 - 2000 - 20000 - 2	WHIS WOBU WMMN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHA WIBA N WOMT WHAD WISN C WTMJ N WIBU WRJN WHEL WEBC N	1410 5890 580 1160 2 1330 1420 1200 1200 2 1380 940 1210 1120 1120 1120 1120 1120 1210 1340 1210 1340 1290
Dublin P-14 El Paso P-9 Fort Worth P-15 10 Galveston R-16 Greenville O-15 Harlingen T-14 Houston R-16 San Angelo Q-13 San Antonio R-14  Tyler P-16 Waco Q-15 Wichita Falls O-14  UTAH Ogden I-7 Salt Lake City I-7	00 WFAA 10 00 WFAPL 00 KFPL 00 KFPL 00 WDAH 00 KFJZ 00 KFIZ 00 KFUL 15 KFPM 00 KFUL 15 KFPM 00 KFUL 16 KFPM 00 KRGV 00 KFUL 00 KTRH 00 KGKD 00 KTRH 00 KGKL 00 KONO 00 KTSA 00 KONO 00 WOAI 00 WOAI 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO	N 800 C 1280 1310 1310 1310 1320 1240 N 800 1370 1290 1370 1200 1370 1200 1370 C 1200 1370 C 1200 1500 C 1240 570 C 1240 C 1290	Yakima D-4  WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24  WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19  Poynette H-19 Racine I-20 Sheboygan H-20 Stevens Point G-19 Superior F-17	1000 - 1000 - 2500 - 2000 - 2000 - 20000 - 2	WHIS WOBU WMMN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHA WIBA N WOMT WHAD WISN C WTMJ N WHISL WI BI.	1410 580 580 1160 1420 1200 1200 1210 1210 1210 1120 121
Dublin P-14 El Paso P-9 Fort Worth P-15 10 Galveston R-16 Greenville O-15 Harlingen T-14 Houston R-16  San Angelo Q-13 San Antonio R-14 Tyler P-16 Waco Q-15 Wichita Falls O-14  UTAH Ogden I-7  500 10 10 10 10 10 10 10 10 10 10 10 10 1	00 WFAA 10 00 WFAPL 00 KFPL 00 KFPL 00 WDAH 00 KFJZ 00 KFIZ 00 KFUL 15 KFPM 00 KFUL 15 KFPM 00 KFUL 16 KFPM 00 KRGV 00 KFUL 00 KTRH 00 KGKD 00 KTRH 00 KGKL 00 KONO 00 KTSA 00 KONO 00 WOAI 00 WOAI 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO	N 800 1310 1310 1310 1370 1240 1290 1370 1260 N 920 1370 1420 1370 1420 1370 1420 1370 C 1290 N 1190 C 1120 1500 C 1240 1570 1500 C 1240 1570 1400 1400 1400 1400 1400 1400 1400 14	Yakima D-4  WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24  WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19  Poynette H-19 Racine I-20 Sheboygan H-20 Stevens Point G-19 Superior F-17  WYOMING Casper H-10	100 - 100 -	WHIS WOBU WMMIN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHAA WIBA N WOMT WHAD WISN C WTMJ N WIBU WRJN WHBL WLBL WEBC N	1410 5890 580 1160 2 1330 1420 1200 1200 2 1380 940 1210 1120 1120 1120 1120 1120 1210 1340 1210 1340 1290
Dublin P-14 El Paso P-9 Fort Worth P-15 10 Galveston R-16 Greenville O-15 Harlingen T-14 Houston R-16 San Angelo Q-13 San Antonio R-14  Tyler P-16 Waco Q-15 Wichita Falls O-14  UTAH Ogden I-7 Salt Lake City I-7 50	00 WFAA 10 00 WFAPL 00 KFPL 00 KFPL 00 WDAH 00 KFJZ 00 KFIZ 00 KFUL 15 KFPM 00 KFUL 15 KFPM 00 KFUL 16 KFPM 00 KRGV 00 KFUL 00 KTRH 00 KGKD 00 KTRH 00 KGKL 00 KONO 00 KTSA 00 KONO 00 WOAI 00 WOAI 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO 00 WGKO	N 800 C 1280 1310 1310 1310 1320 1240 N 800 1370 1290 1370 1200 1370 1200 1370 C 1200 1370 C 1200 1500 C 1240 570 C 1240 C 1290	Yakima D-4  WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24  WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19  Poynette H-19 Racine I-20 Sheboygan H-20 Stevens Point G-19 Superior F-17  WYOMING Casper H-10	100 - 100 -	WHIS WOBU WMMIN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHAA WIBA N WOMT WHAD WISN C WTMJ N WIBU WRJN WHBL WLBL WEBC N	1410 5890 580 1160 2 1330 1420 1200 1200 2 1380 940 1210 1120 1120 1120 1120 1120 1210 1340 1210 1340 1290
Dublin P-14 El Paso P-9 Fort Worth P-15 10 Galveston R-16 Greenville O-15 Harlingen T-14 Houston R-16 San Angelo Q-13 San Antonio R-14  Tyler P-16 Waco Q-15 Wichita Falls O-14  UTAH Ogden I-7 Salt Lake City I-7  VERMONT	00 WFAA 1 00 WFAK 1 00 WFR 1 00 KFPL 0 00 KTSM 1 00 KFJZ 0 00 KTAT 1 00 WBAP 1 00 KFLX 1 15 KFPM 00 KRGV 0 00 KTRC 0 00 KTRC 0 00 KTRH 0 00 KRGV 0 00 KGKL 0 00 KGKL 0 00 WAGO 0 00 WGAI 1 00 WGCO 0	N 800 C 1280 1310 1310 1310 1320 1240 1370 1240 1370 1420 1370 1420 1370 C 1290 N 190 C 1240 570 C 1290 N 1190 C 1240 1370 C 1290 N 1190 N 1190 N 1130	Yakima D-4  WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24  WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19  Poynette H-19 Racine I-20 Sheboygan H-20 Stevens Point G-19 Superior F-17  WYOMING Casper H-10	1000 - 1000 - 2500 - 2000 - 2000 - 20000 - 2	WHIS WOBU WMMIN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHAA WIBA N WOMT WHAD WISN C WTMJ N WIBU WRJN WHBL WLBL WEBC N	1410 5890 580 1160 2 1330 1420 1200 1200 2 1380 940 1210 1120 1120 1120 1120 1120 1210 1340 1210 1340 1290
Dublin P-14 El Paso P-9 I Fort Worth P-15 I Galveston R-16 Greenville O-15 Harlingen T-14 Houston R-16 I San Angelo Q-13 San Antonio R-14 I Tyler P-16 Waco Q-15 Wichita Falls O-14  UTAH Ogden I-7 Salt Lake City I-7 VERMONT Burlington F-27 I I I I I I I I I I I I I I I I I I I	00 WFAA 10 00 WFAL 10 00 WDAH 000 KTSM 000 KFIZ 000 KFIZ 000 KFIZ 000 KFUL 15 KFPM 000 KFUL 15 KFPM 000 KFUL 100 KRCV 000 KFUL 100 KTRH 000 KTRH 000 KYPC 100 KTRH 000  N 800 1310 1310 1310 1310 1320 1240 1370 1240 1370 1420 1420 1420 1420 1420 1420 1420 142	Yakima D-4  WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24  WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19 Poynette H-19 Racine I-20 Sheboygan H-20 Stevens Point G-19 Superior F-17  WYOMING Casper H-10  C.	100 - 100 -	WHIS WOBU WMMIN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHAA WIBA N WOMT WHAD WISN C WTMJ N WIBU WRJN WHBL WLBL WEBC N	1410 5890 580 1160 2 1330 1420 1200 1200 2 1380 940 1210 1120 1120 1120 1120 1120 1210 1340 1210 1340 1290	
Dublin P-14 El Paso P-9 In Fort Worth P-15 In Tot Worth P-15 In Tot Worth P-15 In Tot Worth P-15 In Tot Worth P-15 In Tot Worth P-15 In Tot Worth P-15 In Tot Worth P-15 In Tot Worth P-15 In Tot Worth P-16 In Tot Washington In Tot Worth P-16 In Tyler P-16 In Washington In Tot Worth P-16 In Washington In Tot Worth P-16 In Washington In Tot Worth P-16 In Washington In Tot In In Tot In In Tot In In Tot In In In Tot In In In In In In In In In In In In In	00 WFAA 10 00 WFAPL 00 KFPL 00 KTSM 00 KFPL 00 KTAT 00 WBAP 10 00 KFL 00 KFUL 15 KFPM 00 KFUL 15 KFPM 00 KRGV 00 KRGV 00 KTRH 00 KGKB 00 KGKL 00 KMAC 00 KMAC 00 KMAC 00 KGKB 00 KGKB 00 KGKB 00 WCAL 00 WCAX 00 WCAX	N 800 1310 1310 1310 1320 1240 N 800 1370 1290 1370 1290 1310 C 1120 1370 C 1370 C 1370 C 1290 N 1190 C 1290 N 1190 C 1290 N 1190 C 1290 N 1190 C 1290 N 1130 1290 N 1190 S 70 1290 N 1130 1290 N 1290 N 1130 N 1130 1290 N 113	Yakima D-4  WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24  WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19  Poynette H-19 Racine I-20 Stevens Point G-19 Superior F-17  WYOMING Casper H-10  C. ALBERTA	1000 - 10	WHIS WOBU WMMN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHAA WIBA N WOMT WHAD WISN C WTMJ N WIBU WRJN WHBL WLBL WEBC N	1310 1410 580 890 580 1160 1420 1200 1200 1280 1210 112
Dublin P-14 El Paso P-9 Fort Worth P-15 10 Galveston R-16 11 Greenville O-15 Harlingen T-14 Houston R-16 11 San Angelo Q-13 San Antonio R-14 11 San Antonio R-14 12 13 14 15 16 17 18 18 20 19 20 19 20 21 21 21 22 21 21 22 21 23 24 25 25 26 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	00 WFAA 10 00 WFAPL 00 KFPL 00 KTSM 00 KFPL 00 KTAT 00 WBAP 10 00 KFL 00 KFUL 15 KFPM 00 KFUL 15 KFPM 00 KRGV 00 KRGV 00 KTRH 00 KGKB 00 KGKL 00 KMAC 00 KMAC 00 KMAC 00 KGKB 00 KGKB 00 KGKB 00 WCAL 00 WCAX 00 WCAX	N 800 C 1280 1310 1310 1310 1320 1240 1250 1420 1370 C 1290 N 1190 C 1240 570 C 1290 N 1130 C 1240 570 1370 C 1290 N 1130 C 1240 1370 C 1290 N 1130 C 1240 1370 C 1290 N 1130 C 1240 1370 1370 C 1290 N 1130 1500 C 1240 1370 1370 1370 1370 1370	Yakima D-4  WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24  WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19  Poynette H-19 Racine I-20 Stevens Point G-19 Superior F-17  WYOMING Casper H-10  C. ALBERTA	1000 - 1000 - 1000 1000 1000 1000 1000	WHIS WOBU WMMIN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHA WIBA N WOMT WHAD WISN C WTMJ N WIBU WRJN WHISL WEBC N	1310  1410 580 890 580 1160  2 1330 1420 1200 1200 2 1380 940 1210 1120 1120 1120 1210 1370 1410 900 1210
Dublin P-14 El Paso P-9 I Fort Worth P-15 I Galveston R-16 I Greenville O-15 Harlingen T-14 Houston R-16 I San Angelo Q-13 San Antonio R-14 I San Antonio R-14 I Waco Q-15 Wichita Falls O-14  UTAH Ogden I-7 Salt Lake City I-7 VERMONT Burlington F-27 Rutland G-27 St. Albans F-27 II	00 WFAA 1 00 WFAR 1 00 WFR 1 00 KFPL 0 00 KTSM 0 00 KFZ 0 00 KTAT 0 00 WBAP 1 00 KFLX 0 00 KFLX 0 00 KFLX 0 00 KFUL 15 KFPM 0 00 KRGV 0 00 KRGV 0 00 KRGV 0 00 KRGV 0 00 KRGV 0 00 KGKL 0 00 WASA 1 00 WACO 0	N 800 C 1280 1310 1310 1310 1320 1240 1250 1420 1370 C 1290 N 1190 C 1240 570 C 1290 N 1130 C 1240 570 1370 C 1290 N 1130 C 1240 1370 C 1290 N 1130 C 1240 1370 C 1290 N 1130 C 1240 1370 1370 C 1290 N 1130 1500 C 1240 1370 1370 1370 1370 1370	Yakima D-4  WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24  WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19 Poynette H-19 Racine I-20 Sheboygan H-20 Stevens Point G-19 Superior F-17  WYOMING Casper H-10  C.	1000 - 10000 - 100000 - 10000	WHIS WOBU WMMN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD CFAC CFCN	1310  1410 580 890 580 1160  1420 1200 1200 1200 1200 1200 1200 12
Dublin P-14 El Paso P-9 It El Paso P-9 It Fort Worth P-15 It	00 WFAA 10 00 WFAPL 000 KFPL 000 KTSM 000 KTSM 000 KFIZ 000 KFIZ 000 KFUL 15 KFPM 000 KFUL 15 KFPM 000 KFUL 16 KFPM 000 KTRH 000 KTRH 000 KTRH 000 KTRH 000 KTRH 000 KGKB 000 WASD 000 WGAS	N 800 1310 1310 1310 1320 1220 1220 N 1130 12370 1220 N 1130 1370 1220 N 1130 1370 1220 N 1130 1370 1220 N 1130 12370 N 1190 N 1190 N 1200 N 1200 N 1130 1200 N 1200 N 1130 1200 N 1130 1200 N 1130 1200 N 1130 1200 N 1130 1200 1200 N 1130 1200 1200 N 1130 1200 1200 N 1130 1200 1200 1200 1200 1200 1200 1200	Yakima D-4  WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24  WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19  Poynette H-19 Racine I-20 Stevens Point G-19 Superior F-17  WYOMING Casper H-10  C. ALBERTA	1000 - 1000 - 1000 1000 1000 1000 1000	WHIS WOBU WMMN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD WISN WHAD CFAC CFCN	1310  1410 580 890 580 1160  2 1330 1420 1200 1200 2 1380 940 1210 1120 1120 1120 1210 1370 1410 900 1210
Dublin P-14 El Paso P-9 It El Paso P-9 It Fort Worth P-15 It	00 WFAA 1 00 WFAR 1 00 WFR 1 00 KFPL 0 00 KTSM 0 00 KFZ 0 00 KTAT 0 00 WBAP 1 00 KFLX 0 00 KFLX 0 00 KFLX 0 00 KFUL 15 KFPM 0 00 KRGV 0 00 KRGV 0 00 KRGV 0 00 KRGV 0 00 KRGV 0 00 KGKL 0 00 WASA 1 00 WACO 0	N 800 C 1280 1310 1310 1310 1320 1240 1250 1420 1370 C 1290 N 1190 C 1240 570 C 1290 N 1130 C 1240 570 1370 C 1290 N 1130 C 1240 1370 C 1290 N 1130 C 1240 1370 C 1290 N 1130 C 1240 1370 1370 C 1290 N 1130 1500 C 1240 1370 1370 1370 1370 1370	Yakima D-4  WEST VIRGI Bluefield L-24 Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24  WISCONSIN Eau Claire G-18 Fond du Lac H-19 Green Bay G-19 Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19  Poynette H-19 Racine I-20 Stevens Point G-19 Superior F-17  WYOMING Casper H-10  C. ALBERTA	1000 - 10000 - 100000 - 10000	WHIS WOBU WMMIN WSAZ WWVA C KFIZ WHBY WCLO WKBH C WHA WIBA N WOMT WHAD WISN C WTMJ N WIBU WRJN WHISL WEBC N	1310  1410 580 890 580 1160  1420 1200 1200 1200 1200 1200 1200 12

Columbia: C. National: Red, R; Blue, B; Both, N.

Edmonton A-8	250	CHMA	580		Watts		Kcys.
	500 500	CJCA CKUA	745 580	Quebec D-27	100	CHRC	645
Lethbridge C-8	100	CIOC	1120	2	100	CKCI CKCV	645
Red Deer A-8	1000	CKLC	840	·	50 50	CKCV	880 880
BRITISH COLU	1000 MBT A	CNRD	840	SASKATCHEW		Crary	000
Chilliwack B-3	100	CHWK	665	Fleming C-13	1000	CJRW CJRM	665
Kamloops B-5	100	CFJC CKOV	1120	Moose Jaw C-11	500 25	CĴRM 10-AB	665 1200
Kelowna C-5 Trail C-6	100 25	CKOV 10-AT	1200 1155	Regina C-12	500	CHWC	960
Vancouver B-3	100	CHLS	730 1210		500	CJBR CKCK	960
	500 100	CJOR CKCD	1210 730		500 500	CNRR	960 960
	50	CKFC	730	Saskatoon B-11	500	CFOC	910
	100	CKMO	730	Yorkton B-13	500 500	CNRS CJGX	910 630
•	100 500	CKWX CNRV	730 1030				-
Victoria C-3	500	CFCT	630	NEWFO		LAND VOAS	610
MANITOBA				St. Johns A-35	75 30	VONA	810 950
Brandon D-14	500	CKX	930		500	VOWR	675
Winnipeg D-15	5000 5000	CKY CNRW	780 780	CENTRAI	LAM	ERICA	
NEW BRUNSWI				COSTA RICA			
Fredericton D-29	50	CFNB	1210	Heredia FF-23	15	TI4NRH	980
Moncton D-30 St. John D-30	500 500	CNRA CFBO	630 890	San Jose FF-23	50	TICR	911
-	300	СГБО	090	GUATAMALA			
NOVA SCOTIA	2000	VAS	685	Guatamala CC-19	50	TGW	570
Glace Bay C-32 Halifax E-31	500	CHNS	815	HONDURAS			
	500 100	CNRH VCX	815 690	Tegucigalpa CC-21	2300	HRB	1370
Sydney C-32	50	CJCB CKIC	880	SALVADOR	2000		20,0
Wolfville D-31	50	CKIC	1010	Salvador CC-19	500	RUS	664
ONTARIO					XICO		004
Brantford H-23 Chatham H-22	15 250	10-BQ CFCO	1200 1210			,	
Cobalt E-23	100	CKMC	1210	AGUASCALIEN			
Ft. William E-19 Hamilton H-24	50 50	CKPR CHML	890 880	Aguascalientes W-10	250	XFC	810
	500	CKOC	635 930	BAJA CALIFOI		******	0.45
Kingston G-25 London H-23	50 5000	CFRC CJGC CNRL	910	Tiajuana N-3	300	XEFD	845
	5000 100	CNRL CFCH	910 930	CHIHUAHUA	100	veer	1000
North Bay E-23 Ottawa F-25	100	CKCO	890	Chihuahua R-9	100 250	XEFI XFF	1000 875
Descript F 25	500	CNRO CFLC	600	Juarez P-9	101	XFF XEJ	1000
Prescott F-25 Preston H-23	100 100	CKPC	915 880	COAHUILA	5000	XEQ	<b>750</b>
St. Catherines H-24 Toronto G-24	500 500	CKTB CFCA	635 1120		25	XEL	1000
Toronto G-24	500	CFCL	580	Saltillo, Coah. U-12 Torreon U-11	125	XETB	1380
	<b>7000</b>	CFRB C	690	Villa Acuna R-12	100 75000	XETG XER	1000 735
	500 5000	CKCL CKGW N	580 840	D. F.	70000	71.	700
	500	CKNC	960	Coyoacan Y-13	100	XETZ	1500
	500 4000	CNRT CNRX	1120 690	Mexico City Y-13	1000	XEB	1030
	5000	CPRY	840		250 250	XEFA XEG	1250
Waterloo G-23 Windsor H-22	100 1000	CKCR CKWO	645 540		101	XEK	1070 990
Wingham G-23	15	10-BP	1200		1000	XEN	<i>7</i> 11
PRINCE EDWA					5000 500	XEO XETA	940 1140
Charlottestown C-31	500	CFCY	580		100	XETQ	1230
Summerside C-31	100 500	CHCK CHGS	960 1120		2500 5000	XETR XEW	610 910
OUEBEC	000	21100	-120		500	XEX	1210
Montreal E-26	500	CFCF N	1030		500 2000	XEZ XFG	780 638
	5000	CHYC	<i>7</i> 30		1000	XFI	818
	5000 5000	CKAC C CNRM	730 730	Toluca. Y-12	500 50	XFX XEC	867 1000
							_500

01110			
CFAC 690	CKCK 960	CMCB 1070	CNRL 910
Calgary, Alta.	Regina, Sask.	Havana, Cuba CMCD 925	London, Ont. CNRM 730
CFBO 890 St. John, N. B.	CKCL 580 Toronto, Ont.	CMCD 925 Havana, Cuba	CNRM 730 Montreal, Que.
CFCA 1120	II CKCO 890	CMCF 890	CNRO 600
Toronto, Ont.	Ottawa, Ont.	Havana, Cuba	Ottawa, Ont.
CFCF 1030	CKCR 645	CMCG 1345 Havana, Cuba	CNRQ 880 Quebec, Que.
Montreal, Que. CFCH 930	Waterloo, Ont	CMCH 1405	CNRR 960
North Bay, Ont.	Quebec, Que.	Havana, Cuba	Regina, Sask.
CFCL 580	CKFC 730	CMCJ 630	CNRS 910
Toronto, Ont.	Vancouver, B. C. CKGW 840	Havana, Cuba CMCM 1405	Saskatoon, Sask. CNRT 1120
CFCN 985 Calgary, Alta.	Toronto, Ont.	Havana, Cuba	Toronto, Ont.
CFCO 1210	CKIC 1010	CMCN 925	CNRV 1030
Chatham, Ont.	Wolfville, N. S.	Havana, Cuba	Vancouver, B. C.
CFCT 630	CKLC 840	CMCO 660	CNRW 780
Victoria, B. C. CFCY 580	Red Deer, Alta CKMC 1210	Havana, Cuba CMCQ 1150	Winnipeg, Man. CNRX 690
Ch'lottet'n, P.E.I.	CKMC 1210 Cobalt, Int.	Havana, Cuba	Toronto, Ont.
CFJC 1120	CKMO 730	CMCR 1345	CPRY 840
Kamloops, B. C.	Vancouver, B. C	Havana, Cuba	Toronto, Ont.
CFLC 915	CKNC 960	CMCU 1270 Havana, Cuba	HHK 920 Port au Prince, H.
Prescott, Ont. CFNB 1210	Toronto, Ont. CKOC 635	CMCW 1285	HIX 630
Fredericton, N.B.	Hamilton, Ont.	Havana, Cuba	Santo Domingo
CFQC 910	CKOV 1200	CMCY 1345	HRB 1370
Saskatoon, Sask.	Kelowna, B. C. CKPC 880	Havana, Cuba CMDC 660	Tequeigalpa
CFRB 690 Toronto, Ont.	CKPC 880 Preston, Ont.	Havana, Cuba	KABC 1420 San Antonio, Tex.
CFRC 930	CKPR 890	CMGB 1205	KARK 890
Kingston, Ont.	Ft. William, Ont.	Matanzas, Cuba	Lit. Rock, Ark.
CHCK 960	CKTB 635	CMGC 820	KBPS 1420
Ch'lottet'n,P.E.I. CHGS 1120	St. Cath., Ont CKUA 580	Matanzas, Cuba CMGE 1375	Portland, Ore. KBTM 1200
Sum'rside, P.E.I. CHLS 730	Edmonton, Alta.	Cardenas, Cuba	Paragould, Ark.
CHLS 730	CKWO 540	CMGF 977	Paragould, Ark. KCMC 1420
Vancouver, B.C.	Windsor, Ont. CKWX 730	Matanzas, Cuba CMGH 1050	Texarkana, Ark. KCRC 1370
Edmonton, Alta.	Vancouver, B. C.	Matanzas, Cuba	Enid. Okla.
CHML 880	CKX 930	CMGI   1150	Enid, Okla. KCRJ 1310
Hamilton, Ont.	Brandon, Man.	Colon, Cuba	Jerome, Ariz.
CHNS 815 Halifax, N. S.	CKY 780	CMHC 790 Tuinucu, Cuba	KDB 1500
CHRC 645	Winnipeg, Man CMAB 1249	CMHD 950	S. Barbara, Cal. KDFN 1210
Quebec, Que.	Pinar del Rio, Cu	Caibarien, Cuba	Casper, Wyo.
CHWC 960	CMBC 965	CMHI 1110	KDKA 980
Regina, Sask. CHWK 665	Havana, Cuba CMBD 965	Santa Clara, Cu CMHJ 645	Pittsburgh, Pa. KDLR 1210
Chilliwack, B. C	Havana, Cuba	Cienfuegos, Cuba CMJC 1382	Devils Lake, N.D.
CHYC 730	CMBG   1070	CMJC 1382	KDYL 1290
Montreal, Que.	Havana, Cuba	Camaguey, Cuba CMJE 1180	Salt Lake City
CJBR 960 Regina, Sask.	CMBI 1405 Havana, Cuba	Camaguey, Cuba	KECA 1430
CJCA 745	CMBL 1500	CMJF 930	Los Angeles, Cal. KELW 780
Edmonton, Alta	Havana, Cuba	Camaguey, Cuba	Burbank, Cal.
CJCB 880	CMBN 1405	CMJG 1200	KERN 1200
Sydney, N. S. CJCJ 690	Havana, Cuba CMBQ 1500	Camaguey, Cuba CMJH 1017	Bakersfield, Cal.
Calgary, Alta.	Havana, Cuba	Ciego de Avila, C.	KEX 1180 Portland, Ore.
CJGC 910	CMBR 1500	CMK 730	KFAB 770
London, Ont.	Havana, Cuba	Havana, Cuba	Lincoln, Nebr.
CJGX 630	CMBS 790	CMKC 1034	KFAC 1300
Yorkton, Sask. CJOC 1120	Havana, Cuba CMBT 790	Santiago, Cuba CMQ 1150	Los Angeles, Cal KFBB 1280
Lethbridge, Alta.	Havana, Cuba	Havana, Cuba	Great Fis., Mont.
CJOR 1210	CMBW 1010	CM W 588	KFB1 1050
Vancouver, B. C.	Havana, Cuba	Hayana, Cuba	Milford, Kans.
CJRM 665 Moose Jaw, Sask.	CMBY 1225 Havana, Cuba	CMX 885 Havana, Cuba	KFBK 1310 Sacramento, Cal.
CJRW 665	CMBZ 1010	CNRA 630	KFBL 1370
Fleming, Sask.	Havana, Cuba	Moncton, N. B.	Everett, Wash.
CKAC 730	II CMC 842	CNRD 840	KFDM 560
Montreal, Que	— Havana, Cuba —	Red Deer, Alta. CNRH 815	Beaumont, Tex.
Vancouver, B. C.	CMCA 1235	Halifax, N. S.	KFDY 550 Brookings, S. D.
CKCI 645	Havana, Cuba		
Quebec, Que.			-
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KFEL 920	KFXD 1420	KGHI 1200	KMAC 1370
Denver, Colo. KFEQ 680	Nampa, Idano	Little Rock, Ark KGHL 950	San Antonio, Tex KMBC 950
KFEQ 680 St. Joseph, Mo.	Denver Colo	Billings, Mont.	Kan. City Mo.
KFGQ 1310	KFXJ 1310 Grand Junc.,Col. KFXM 1210		Kan. City Mo. KMED 1310
KFGQ 1310 Boone, Iowa	Grand Junc.,Col.	Butte, Mont. KGIW 1420	Medford, Ore.
KFH 1300 Wichita, Kansas	KFXM 1210 San Ber'd no,Cal.	KGIW 1420 Trinidad, Colo.	KMJ 1210
K N KAN	KFXR 1310		Fresno, Cal. KMLB 1200
Los Angeles, Cal.	Oklahoma City	Las Vegas, Nev. KGIZ 1500 Grant City, Mo	
KEIO 1120	KFXY 1420	KGIZ 1500	Monroe, La. KMMJ 740 Clay Ctr., Nebr. KMO 860 Tacoma, Wash. KMOX 1090
Spokane, Wash.	Flagstaff, Ariz. KFYO 1420	Grant City, Mo KGKB 1500	Clay Ctr., Nebr.
KFIZ 1420 Fond du Lac, Wis.	Abilene, Texas	Tyler Teves	Tacoma Wash
KFJB 1200	KFYR 55°	Tyler, Texas KGKL 1370	KMOX 1090
Marshalltown, Ia.	KFYR 55° Bismarck, N D.	San Angelo, Tex. KGKO 570	i St. Louis, Mo.
KFJF 1480 .	KGA 1470 Spokane, Wash.	KGKO 570	KMPC 710
Oklahoma City KFJI 1210	KGAR 1370	Wichita Flls.,Tex KGKX 1420	Beverly Hills, Cal KMTR 570
Klamath Falls Ore	Tucson, Arizona	Sand Point Idaho	Hollywood, Cal.
KFJM 1370	KGB 1330	KCKY 1500 Scottsbluff, Nebr.	TENTOWN 1500
Grd. Forks. N.D.	San Diego, Cal.	Scottsbluff, Nebr.	Austin, Tex.
KFJR 1300	KGBU 900	KGMB 1320 Honolulu, T. H.	
Portland, Ore.	Ketchikan, Al'ka KGBX 1310	KGMP 1210	Hollywood, Cal. KOA 830
KFJZ 1370 Ft. Worth, Tex.	II St. Joseph. Mo.	Elk City, Okla.	Denver, Colo.
	KGBZ 930 York, Nebr. KGCA 1270	KGNF 1430	I KUAU - 550
Greeley, Colo.	York, Nebr.	No Platte Nehr	Corvallis, Ore.
Arau 1220	KGCA 1270	KGNO 1210	State Col N. M.
Lawrence, Kans. KFKX 1929	Decorah, Iowa KGCR 1210	KGNO 1210 Dodge City, Kas. KGO 790 San F'ncisco, Cal.	KOB 1180 State Col., N. M. KOCW 1400
Chicago, Ill.	Watertown, S. D.	San F'ncisco. Cal.	
KFLV 1416 Rockford, Ill.	KGCU 1240 Mandan, N. D.	KGRS 1410	KOH 1380
Rockford, Ill.	Mandan, N. D.	Amarillo, Texas	Reno, Nevada
KFLX 1370	KGCX 1310 Wolf P't, Mont. KGDA 1370	KGU 750 Honolulu, Hawaii	KOH 1380 Reno, Nevada KOIL 1260 Council Bluffs,Ia.
Galveston, Tex. KFMX 1250 N'thfield, Minn.	KGDA 1370	KGVO   1420	KOIN 940
N'thfield, Minn.	Mitchell, S. D.	Missoula, Mont.	Portland, Ore.
	KGDE 1200	KGW   620	
Shenandoah, Ia. KFOR 1210	Fergus Falls, Minn KGDM 1100	Portland, Ore.	Seattle, Wash. KOMO 920
Lincoln, Nebr.	II Stoolston Col	KGY 1200 Olympia, Wash.	Seattle, Wash.
KFOX 1250	KGDY 1200		I KONO 1370
Long Beach, Cal KFPL 1310	KGDY 1200 Huron, S. D. KGEK 1200 Yuma, Colo. KGER 1360	Los Angeles, Cal.	San Antonio, Tex. KOOS 1370
KFPL 1310	KGEK 1200	KHQ 590 Spokane, Wash.	KOOS 1370
Dublin, Texas KFPM 1310	- I uma, Colo.	KICA 1370	Marshfield, Ore. KORE 1420
Greenville, Texas	Long Beach, Cal.	Clovis, N. M.	Eugene, Ore.
KFPW 1349	Long Beach, Cal. KGEW 1200	II KICK 1420	I KOY 1390
Ft. Smith, Ark.	Ft.Morgan, Colo.	Red Oak, Iowa	Phoenix, Arizona
KFPY 1340 Spokane, Wash.	KGEZ 1310 Kalispell, Mont.	KID 1320	KPCB 650 Souttle Wesh
KFQD 1230	KGFF 1420	KID 1320 Idaho Falls, 'da. KIDO 1350	KPCB 650 Seattle, Wash. KPJM 1500
Anchorage, Alas. KFRC 610	KGFF 1420 Shawnee, Okla.	Boise, Idano	Prescott, Ariz.
KFRC 610	KGrG 1570	H K19 1316   1	KPO 680 San F'ncisco, Cal.
San F'ncisco, Cal. KFRU 630	Oklahoma City KGFI 1500	Yakima, Wash. KJBS 1070	San F'ncisco, Cal KPOF 880
Columbia, Mo.	Corp's Ch'stı, Tex	San F'ncisco, Cal.	Denver, Colo.
KFSD 600	KGFJ   1200	KJR 970	KPPC   1210
San Diego, Cal. KFSG 1120	Los Angeles, Cal.	Seattle, Wash.	Pasadena, Cal.
KFSG 1120	KGFK 1500	KLCN 1290	
Los Angeles, Cal. KFUL 1290	Moorhead, Minn.	Blytheville, Ark. KLO 1400	Wenatchee, Wash KPRC 920
Galveston, Texas	KGFL 1370 Raton, N. M. KGFW 1310	Ogden, Utah	Houston, Texas
KFUO 550	KGFW 1310	Ogden, Utah KLPM 1240	1 KV 1360
St. Louis, Mo.	Kearney, Nehr.	Minot, N. Dak.	Pittsburgh, Pa.
KFVD 1000	KGFX 630	KLRA 1390	KQW 1010
Culver City, Cal. KFVS 1210	Pierre, S. D KGGC 1420	Little Rock, Ark KLS 1440	San Jose, Cal. KRE 1370
Cape Gir'rd'u, Mo	San F'ncisco, Cal.	Oakland, Cal.	Berkeley, Cal.
KEWB 950	KGGF 1010	KLX 880	KREG 1500
Hollywood, Cal.	Coffeyville, Kans. KGGM 1230	Oakland, Cal.	Santa Ana, Cal. KRGV 1260
KKWK 1200	KGGM 1230		KRGV 1260
St. Louis, Mo. KFWI 930	Albuq'rque, N.M KGHF 1320	Denver, Colo. KMA 930	Harlingen, Texas KRKD 1120
San F'ncisco, Cai.	Pueblo, Colo.	Shenandoah, Ia.	Los Angeles, Cal.
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KRLD 1040		KWKC 1370		WAPI 1140	WCAP 1280	
Dallas, Texas KRMD 1310		Kansas City, Mo. KWKH 850		Birmingham, Ala WASH 1270	Asbury Pk., N. J. — WCAT 1200	
Shreveport, La. KROW 930		Shreveport, La.		Gr. Rapids Mich.	Rapid City, S. D.	
KROW 930		Shreveport, La. KWLC 1270		WAWZ 1350	Rapid City, S. D	
Dakland, Cal.		Decorah, Iowa		Zarephath, N. J WBAA 1400	Philadelphia, Pa.	
KRSC 1120 Seattle, Wash.		KWSC 1220 Pullman, Wash.		Lafayette, Ind.	WCAX 1200	
KSAC 580				WBAK 1430	Burlington, Vt. WCAZ 1070	_
Manh'tt'n. Kans.		Brownsville, Tex.		Harrisburg, Pa.	Carthage, Ill.	
CSCJ 1330		KXA 760		Harrisburg, Pa. WBAL 760-1060	WCBA 1440	
Sioux City, Ia. KSD 550		Seattle, Wash.		Baltimore, Md:	Allentown, Pa.	, -
KSD 550 St. Louis, Mo.		Portland, Ore.		WBAP 800 Fort Worth, Tex.	WCBD 1080 Zion, Ill.	
SEI 900				WBAX 1210	WCBM 1370	
Pocatello, Idaho		El Centro, Cal. KXRO 1310		Wilkes-Barre, Pa.	Baltimore, Md. WCBS 1210	
KSL 1130		KXRO 1310		WBBC 1400	WCBS 1210	
alt Lake City SO 1380		Aberdeen, Wash.		Brooklyn, N. Y. WBBL 1210	Springfield, Ill.	
larinda, Iowa		KXYZ 1420 Houston, Texas		WBBL 1210 Richmond Va	WCCO 810	
		I KYA 1920		Richmond, Va. WBBM 770	Minneap., Minn WCDA 1350	
ioux Falls, S. D.		San F'ncisco, Cal.		Chicago, Ill.	New York City	
S1P 1460		KYW 1020		WBBR 1300	WCFL 970	
t. Paul, Minn. TAB 560		Chicago, Ill.		Brooklyn, N. Y WBBZ 1200	Chicago, Ill. WCGU 1400	
an F'ncisco, Cal.		KZKA 1110 Manilla, P. I.		Ponca City, Okla WBCM 1410	Brooklyn, N. Y.	
an F'ncisco, Cal. TAR 620		KZRC 937.5		WBCM 1410	WCHI 1490	
Phoenix, Ariz.		KZRC 937.5 Cebu, P. I. KZRM 618.5		Bay City, Mich.	Chicago, Ill.	
TAT 1240		Manila B T		WBEN 900	WCKY 1490	
t. Worth, Tex. TBR 1300		Manila, P. I. NAA 690		Buffalo, N. Y. WBEO 1310	Covington, Ky. — WCLO 1200	_
ortland, Ore.		Arlington, Va.		Marquette, Mich.	Janesville, Wis.	
TBS 1450		RUS 664		WBGF 1370	II WCLS 1310	
hreveport, La. TFI 1240		Salvador		Glens Falls, N. Y.	Joliet, Ill WCMA 1400	
TFI 1240		TGW 570 Guatamala	1	WBHS 1200	WCMA 1400 Culver, Ind.	
win Falls, Ida. THS 1040		TICR 911		Huntsville, Ala. WBIG 1440	WCOA 1340	
iot odes Ark.		San Jose, C. R.		Greensboro, N.C.	Pensacola, Fla.	
CTLC 1310		TI4NRH 980		WBIS 1230	WCOC 880	
Houston, Texas		Heredia, C. R. VAS 685		Boston, Mass. WBMS 1450	Meridian, Miss. — WCOD 1200	_
os Angeles, Cal.		VAS 685 Glace Bay, N. S.		Hackensack, N.J.	Harrisburg, Pa.	
TKH 1120		1 VCX 690		I WBNX 1350	WCOH 1210	_
Houston, Texas		Halifax, N. S.		New York City	Yonkers, N. Y.	
TSA 1290		VOAS 810		WBOQ 860 New York City	WCRW 1210	
an Antonio, Tex. TSM 1310		St. John's, N. F. VONA 950		WBOW 1310	Chicago, Ill. WCSC 1360	
ll Paso, Texas		St. John's, N. F.		Terre Haute, Ind.	Charleston, S. C	
TW 1220		VOWR 675		WBRC 930	WCSH 940	
eattle, Wash.		St. Johns, N F.		Birmingham, Ala.	Portland, Maine	
U <b>J</b> 1370 Valla Wal., Wash.		VPN 610 Nassau, B. I		WBRE 1310 Wilkes-Barre, Pa.	WDAE 1220 Tampa, Fla.	
CUOA 1390		WAAB 1410		WBSO 920	WDAF 610	
ayetteville, Ark.		Boston, Mass.		Needham, Mass.	Kansas City, Mo	
USD 890		WAAF 920		WBT 1080	II WDAG 1410	
ermillion, S. D.		Chicago, Ill.		Charlotte, N. C.	Amarillo, Texas	
VI 570 acoma, Wash.		WAAM 1250 Newark, N. J.		WBTM 1370 Danville, Va.	WDAH 1310 El Paso, Texas	
VL 1370		WAAT 940		WBZ 990	WDAS 1370	
eattle, Wash.		Jersey City, N. J.		Boston, Mass.	Philadelphia, Pa.	
VOA 1260		WAAW 660		WBZA 990	WDAY 940	
ucson, Arizona VOO 1140		Omaha, Nebr.		Springfield, Mass.	WDAY 940 Fargo, N. D. WDBJ 930	
VOO 1140 ulsa, Okla.		WABC 860 New York City		WCAC 600 Storrs, Conn.	WDBJ 930 Rosnoke Vs	
VOR 1270		WABI 1200		WCAD 1220	Roanoke, Va. WDBO 1120	_
ol. Sp'gs, Colo. VOS 1200		Bangor, Maine		Canton, N. Y.	Orlando, Fla	
VOS 1200		WABZ 1200		WCAE 1220	WDEL 1120	
ellingh'm, Wash. WCR 1420		New Orleans, La.		Pittsburgh, Pa.	Wilmington, Del.	
WCR 1420 edar Rapids, Ia.		WACO 1240 Waco, Texas	<b> </b>	WCAH 1430 Columbus, Ohio	WDEV 1420 Waterbury, Vt.	
WEA 1210		WADC 1320		WCAJ 590	WDGY 1180	
hreveport, La.		Akron, Ohio		Lincoln, Nebr.	Minneap., Minn	
WG 1200		WAGM 1420		WCAL 1250	WDOD 1280	
		Presque Isle, Me. WAIU 640	·	Northfield, Minn.	Chattan'ga, Tenn WDRC 1330	
tockton, Cal.				WCAM 1280 Camden, N. J.	WDRC 1330 Hartford, Conn.	
WJJ 1060		I Columbus Ohio				
tockton, Cal. WJJ 1060 Portland, Ore. WK 1350		Columbus, Ohio WALR 1210		WCAO 600	Hartioru, Conn.	
WJJ 1060 ortland, Ore.		WALR 1210 Zanesville, Ohio		WCAO 600 Baltimore, Md.	Hartioru, conn.	

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WDSU 1250		WFOX 1400		WHN 1010	WJJD 1130	
New Orleans, La. WDZ 1070		Brookiyn, N. Y. WGAL 1310		New York City WHO 1000	 Mooseheart, Ill. WJKS 1360	
Tuscola, Ill.		Lancaster, Pa.		Des Moines, Ia. WHOM 1450	Gary, Ind.	
WEAF 660		I WGAR 1450		WHOM 1450	Gary, Ind. WJMS 1420	
New York City		Cleveland, Ohio WGBB 1210		Jersey City, N. J. WHP 1430	 Ironwood, Mich.	
WEAF 660 New York City WEAI 1270 Ithaca, N. Y. WEAN 780 Providence, R. I. WEAO 570 Columbus Obto		Freeport, N. Y.		Harrisburg, Pa.	Detroit, Mich.	
WEAN 780		I WGBF 630		WIAS 1310	I WJSV 1460	
Providence, R. I.		Evansville, Ind. WGBI 880		Ottumwa, Iowa WIBA 1280	 Alexandria, Va. WJTL 1370	
Columbus, Ohio		Scranton Pa		Madison, Wis.	Atlanta (la	
WEBC 1290		WGCM 1210 Gulfport, Miss. WGCP 1250		WIBG   930	 WJW 1210 Mansfield, Ohio WJZ 760	
Superior, Wis.		Gulfport, Miss.		Elkins Park, Pa. WIBM 1370	 Mansfield, Ohio WJZ 760	
WEBQ 1210 Harrisburg, Ill.		WGCP 1250 Newark, N. J. WGES 1360		Jackson, Mich.	WJZ 760 New York City	
WEBR 1310				WIBO 560	 WKAQ 890	
Buffalo, N. Y.		Chicago, Ill.		Chicago, Ill.	 San Juan, P. R.	
WEDC 1210 Chicago, Ill.		WGH 1310 Newp't News, Va.		WIBU 1210 Poynette, Wis.	WKAR 1040 E. Lansing, Mich.	
		WGL 1370		WIBW 580	 WKAV 1310	
Boston, Mass.		WGL 1370 Ft. Wayne, Ind.		Topeka, Kansas	 WKAV 1310 Laconia, N. H.	
WEEU 830 Reading, Pa.		WGN 720		WIBX 1200	WKBB 1310 Joliet, Ill.	
WEILC 1950		WGR 550		Utica, N. Y. WICC 600	 WKBC 1310	
Emory, Va.		WGR 550 Buffalo, N. Y. WGST 890 Atlanta, Ga.		Bridgeport, Conn WIL 1200	 Birmingham, Ala.	
WEHS 1420		WGST 890 Atlanta, Ga.		WIL 1200	WKBF 1400	
Cicero, Ill. WELL 1420		WGY 790		St. Louis, Mo. WILL 890	 Indianapolis, Ind. WKBH 1380	
Battle C'k, Mich.		Schenec'dy, N. Y.		Urbana, Ill.	La Crosse, Wis. WKBI 1420	
WENC 1420		WHA 940		WILM 1420	WKBI 1420	
Americus, Ga. WENR 870		Madison, Wis. WHAD 1120	<del></del>	Wilmington, Del.	 Cicero, Ill. WKBN 570	
Chicago, Ill.		Milwaukee, Wis.		WINS 1180 New York City	Youngstown, O.	
WERE 1420		WEIAWI 1150		WIOD 1300	WKBS 1310	
Erie, Pa. WEVD 1300		Rochester, N. Y. WHAS 820		Miami, Fla. WIP 610	 Galesburg, Ill. WKBV 1500	
New York City		Louisville, Kv.		Philadelphia, Pa.	Connersville, Ind.	
WEW 760		Louisville, Ky. WHAT 1310		1010 1010	 I WKKW 1480	
St. Louis, Mo. WEXL 1310		Philadelphia, Pa. WHAZ 1300		Columbia, S. C. WISN 1120	 Buffalo, N. Y. WKBZ 1500	
Royal Oak, Mich.	· ·	Troy, N. Y.		Milwaukee, Wis.	Ludington, Mich.	
WFAA 800 Dallas, Texas		Troy, N. Y. WHB 860		Milwaukee, Wis. WJAC 1310	 Ludington, Mich. WKJC 1200 Lancaster, Pa.	
WFAB 1300		WHEC 1200		Johnstown, Pa. WJAG 1060	 Lancaster, Pa.	
New York City	_	Canton, Ohio		Norfolk, Nebr.	WKRC 550 Cincinnati, Ohio WKY 900	
New York City WFAM 1200		1 WHBD 1370		WJAK 1310	WKY 900	
So. Bend, Ind. WFAN 610		Mt. Orab, Ohio WHBF 1210		Elkhart, Ind. WJAR 890	 Oklahoma City WKZO 590	<u>-</u>
Philadelphia Pa		Rock Island, Ill. WHBL 1410 Sheboygan, Wis. WHBQ 1370 Memphis, Tenn. WHBI		Providence, R. I.	Kalamazoo, Mich.	
WFBC 1200 Knoxville, Tenn WFBE 1200		WHBL 1410		WJAS 1290	Kalamazoo, Mich. WLAC 1470	
Knoxville, Tenn		Sheboygan, Wis.		Pittsburgh, Pa. WJAX 900	 Nashville, Tenn. WLAP 1200	
		Memphis, Tenn.		Jacksonville, Fla.	Louisville, Ky.	
WFBG 1310 Altoona, Pa.	-	WHBU 1210 Anderson, Ind. WHBY 1200		I WIAV SIO I	 1 WLD 1290	
Altoona, Pa. WFBL 1360		Anderson, Ind. WHBY 1200		Cleveland, Ohio WJBC 1200	 St. Paul, Minn. WLBC 1310	
Syracuse, N. Y.		Green Bay, Wis.		La Salle, Ill.	WLBC 1310 Muncie, Ind.	
WFBM 1230		Green Bay, Wis. WHDF 1370		WJRI 1210		
Indianapolis, Ind.		Calumet, Mich.		Red Bank, N. J.	 Kansas City, Ks. WLBG 1200	
WFBR 1270 Baltimore, Md.		WHDH 830 Boston, Mass		WJBK 1370 Detroit, Mich.	Ettrick, Va.	
WFDF 1210		WHDL 1420		WJBL 1200	 WLBL 900	
Flint, Mich.		TupperLake, N.Y.		Decatur, Ill.	 Stevens Pt., Wis. WLBW 1260	
Flint, Mich. WFDV 1500 Rome, Ga.		WHEB 740 Portsmouth, N.H.		WJBO 1420 New Orleans, La.	WLBW 1260	
WFDW 1420		WHEC 1430		WJBU 1210	 Oil City, Pa. WLBX 1500	
Anniston, Ala.		Rochester, N. Y.		Lewisburg, Pa.	 L. I. City, N. Y.	
WFEA 1430		I WHFC 1420		WJBW 1200	L. I. City, N. Y. WLBZ 620 Bangor, Maine WLCI 1210	
Manchester, N.H. WFI 560		Cicero, Ill. WHIS 1410		New Orleans, La. WJBY 1210	 WLCI 1210	
Philadelphia, Pa.		Bluefield, W. Va.		Gadsden, Ala.	 i itnaca. N. Y.	
WF1W 940		WHK 1390		WJDX 1270	WLEY 1370	
Hopkinsville, Ky. WFLA 620		Cleveland, Ohio		Jackson, Miss.	 Lexington, Mass.	
Clearwater, Fla.						
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WLIT 560 Philadelphia, Pa.	WNOX 560 Knoxville, Tenn.	I 1	WQDX 1210 Thomasville, Ga.	WSUN 620
WLOE 1500	WNYC 570		WRAK 1370	St. Petersb'g, Fla. WSVS 1370
Boston, Mass. WLS 870	New York City WOAI 1190		Williamsport, Pa. WRAM 1370	Buffalo, N. Y. WSYB 1500
Chicago, Ill.	San Antonio, Tex.		Wilmington, N.C.	II Rutland Vt
WLTH 1400 Brooklyn, N. Y.	WOAX 1280 Trenton, N. J.		WRAW 1310	H WSYK 570
WLVA 1370	WOBU 580		Reading, Pa. WRAX 1020	Syracuse, N. Y. WTAD 1440
Lynchburg, Va. WLW 700	Charlest'n, W.Va. WOC 1000		Philadelphia, Pa.	Quincy, Ill.
WLW 700 Cincinnati, Ohio WLWL 1100	Davenport, Iowa WOCL 1210		WRBL 1200 Columbus, Ga.	WTAG 580 Worcester, Mass.
WLWL 1100	WOCL 1210		WRBQ 1210	WTAM 1070
New York City WMAC 570	Jamestown, N. Y. WODA 1250		Greenville, Miss WRBX 1410	Cleveland, Ohio WTAQ 1330
WMAC 570 Syracuse, N. Y.	Paterson, N. J.		Roanoke, Va.	Eau Claire, Wis. WTAR 780
WMAL 630 Washington, D.C.	WODX 1410 Mobile, Ala.		WRC 950 Washington, D.C.	WTAR 780 Norfolk, Va.
WMAQ 670	WOI 640		WRDO 1370	II WTAW 1120
Chicago, Ill. WMAZ 1180 Macon, Ga.	Ames, Iowa WOKO 1430		Augusta, Maine WRDW 1500	College Sta., Tex. WTAX 1210
Macon, Ga.	WOKO 1430 Albany, N. Y.		Augusta, Ga.	Springfield, Ill.
WMBA 1500 Newport, R. I.	WOL 1310 Washington, D.C.		WREC 600 Memphis, Tenn.	WTBO 1420
WMBC 1420	WOMT   1210		WREN 1220	Cumberland, Md. —— WTEL 1310
Detroit, Mich.	Manitowoc, Wis. WOOD 1270		Lawrence, Kans.	Philadelphia, Pa.
WMBD 1440 Peoria Hghts,,Ill.	Gr. Rapids, Mich.		WRHM 1250 Minneap., Minn.	WTFI 1450 Athens, Ga.
WMBG 1210	WOPI 1500		WRJN 1370	WTIC 660-1060
Richmond, Va. WMBH 1420	Bristol, Tenn. WOQ 1300		Racine, Wis. WRNY 1010	Hartford, Conn. WTJS 1310
Joplin. Mo.	Kansas City Mo		New York City	Jackson, Tenn.
WMBI 1080 Chicago, Ill.	WOR 710 Newark, N. J. WORC 1200		WROL 1310	WTMJ 620 Milwaukee, Wis.
WMBO 1310 Auburn, N. Y.	WORC 1200		Knoxville, Tenn. WRR 1280	WTOC 1260
Auburn, N. Y. WMBQ 1500 Brooklyn N. Y	Worcester, Mass. WORK 1000		Dallas, Texas WRUF 830	Savannah, Ga. WTSL 1310
	York, Pa.	<u>'</u>	Gainesville, Fla.	Laurel, Miss.
WMBR 1370 Tampa, Fla. WMC 780	WOS 630 Jeff's'n City, Mo.		WRVA 1110	WWAE 1200
WMC 780	11 WOY 1130		Richmond, Va. WSAI 1330	Hammond, Ind.
mempus, renn.	New York City		Cincinnati, Ohio	Detroit, Mich.
WMCA 570 New York City	WOW 590 Omaha, Nebr.		WSAJ 1310 Grove City, Pa	
WMIL 1500	Omaha, Nebr. WOWO 1160		Grove City, Pa. WSAN 1440	New Orleans, La. WWNC 570
Brookiyn, N. Y. WMMN 890	Ft. Wayne, Ind. WPAD 1420		Allentown, Pa. WSAR 1450	Asheville, N. C. WWRL 1500
Fairmont, W. Va.	Paducah, Ky.		Fall River, Mass.	Woodside, N. Y. WWSW 1500
WMPC 1500 Lapeer, Mich.	WPAP 1010 New York City		WSAZ 580	WWSW 1500
WMRJ 1210	WPCC 560		Hunt'gton, W.Va WSB 740	Pittsburgh, Pa. WWVA 1160
Jamaica, N. Y. 🛛 📙	Chicago, Ill.		Atlanta, Ga.	Wheeling, W. Va
WMSG 1350 New York City	WPCH 810 New York City	ŀ	WSBC 1210 Chicago, Ill.	WXYZ 1240 Detroit, Mich.
WMT 600	New York City WPEN 1500		WSBT 1230	II XEA 1000
Waterloo, Iowa WNAC 1230	Philadelphia, Pa. WPFB 1370		South Bend, Ind WSEN 1210	Guad'l'jara, Mex XEB 1030
Boston, Mass.	Hattiesb'g., Miss. WPG 1100		Columbus, Ohio	Mexico City
WNAD 1010 Norman, Okla.	WPG 1100 Atl'ntic City, N.J.		WSFA 1410	XEC 1000
TENTA V ETA	II WPOR 780		Montgomery, Ala WSIX 1210	Toluca, Mexico ——
Vankton S. D.	Norfolk, Va.		Springfield, Tenn.	Reynosa, Mexico
WNBF 1500 Ringh'mt'n N V	WPRO 1210 Providence, R. I.		WSJS 1310 WinstSal., N. C.	Oaxaco, Mexico
WNBF 1500 Bingh'mt'n, N.Y. WNBH 1310			WSM 650	AEFA   1250
New B'df'd, Mass WNBO 1200	State College, Pa. WPTF 680		Nashville, Tenn.	Mexico City
Washington, Pa	WPTF 680 Raleigh, N. C.		WSMB 1320 New Orleans, La.	XEFB 1315 Monterrey, Mex.
WNBR 1430	WQAM 560		WSMK 1380	XEFC 1050
Memphis, Tenn. WNBW 1200	Miami, Fla. WQAN 880		Dayton, Ohio	Merida, Mex. XEFD 845
Carbondale, Pa.	II Scranton, Pa.		Gastonia, N. C.	Tijuana, Mex.
WNRX 1200	WQAO 1010 New York City		WSPA 1420	II YEEE 1000
Springfield, Vt. WNBZ 1290	II WQBC 1360		Spartanburg, S.C WSPD 1340	Laredo, Mexico XEFI 1000
Sar'n'c L'ke,N.Y. 🗀	Vicksburg, Miss. WQDM 1370	·	Toledo, Ohio	Chihuahua, Mex
WNJ 1450 Newark, N. J.	WQDM 1370 St. Albans, Vt.		WSUI 880 Iowa City, Iowa	XEFS 1000
	St. Albans, vt.		10wa Oity, 10wa	Queretaro, Mex XEG 1070
_	—— <u> </u>			Mexico, Mex.

XEH 1132 Monterrey, Mex. XEI 1000 Morelia, Mexico XEJ 1000 Juarez, Mexico XEK 990 Mexico City	XEQ Juarez, Mexico XER 785 Villa Acuna, Mex. XES 890 Tampico, Mexico XET 690 Monterrey, Mex.	XETQ 1230   Mexico, Mex.   XETR 610   Mexico City   XETZ 1500   Coyoacan, Mex.   XEU 1000   Veracruz, Mex.	XFC 810 Aguascal'ntes, M. XFF 875 Chihuahua, Mex. XFG 683.3 Mexico City XFI 818 Mexico City
Saltillo, Mexico XEM 1300 Tampico, Mexico XEN 711 Mexico City XEO 940 Mexico City XEP 1400 Laredo, Mexico	Mexico City XETB 1380 Torreon, Mex. XETC 1000 Jalapa, Mex. XETF 630 Veracruz, Mex. XETG 1000 Torreon, Mex.	Puebla, Mexico XEW 910  Mexico City XEX 1210  Mexico City XEY 1000  Merida, Mexico XEZ 780  Mexico City	Mexico City 10-AB 1200 Moose Jaw, Sask. 10-AT 1155 Trail, B. C. 10-BP 1200 Wingham, Ont. 10-BQ 1200 Brantford, Ont.

(Continued from page 59)

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JALISCO v	Watts		Kcys.	Ciego de Avila W-26	15 CMJH	1017
Guadalajara, Jal. X-10	101	XEA	1000	Cienfuegos W-25 Colon W-24	40 CMHJ 30 CMGI	645 1150
•				Havana W-23	150 CMBC	965
MICHOACAN					250 CMBD	965
Morelia, Mich. Y-12	101	XEI	1000		150 CMBG 30 CMBI	1070 1405
NIETRIO I BONI					20 CMBL	1500
NEUVO LEON					30 CMBN	1405
Monterrey, N. L. U-13	50	XEFB	1315		50 CMBQ 15 CMBR	1500 1500
	1000	XEH XET	1132		150 CMBS	790
OAXACA	500	ALI	690		500 CMBT	790
				~	150 CMBW 350 CMBY	1010 1225
Oaxaca, Oak. AA-14	105	XEE	1000		150 CMBZ	1010
PUEBLA					500 CMC	842
	404	377377	1000		150 CMCA 150 CMCB	1235 1070
Puebla Z-13	101	XEV	1000		250 CMCD	925
QUERETARO					250 CMCF	890
Oueretaro X-12	40	XEFS	1000		30 CMCG	1345
• • •	40	AEI O	1000		15 CMCH 250 CMCJ	1405 630
TAMAULIPAS					15 CMCM	1405
N. Laredo S-13	101	XEFE	1000		250 CMCN	925
	200	XEP	1400		225 CMCO 600 CMCO	660 1150
Reynosa, Tams. T-14 Tampico, Tams. W-14	10000 500	XED XEM	965` 730		150 CMCR	1345
rampico, rams. w-14	500	XES	890		250 CMCU	1270
VERA CRUZ					150 CMCW 50 CMCY	1285 1345
VERA CRUZ					50 CMCY 500 CMDC	660
Jalapa Y-14	100	XETC	1000		3150 CMK	730
Veracruz, Ver. Z-14	500 101	XETF XEU	630 1000		250 CMQ	1150
YUCATAN	101	ALC	1000		2000 CMW 1000 CMX	588 885
				Matanzas W-24	30 CMGB	1205
Merida, Yuc. X-19	105	XEY	1000		100 CMGC	820
WEST 1	NTEN	TEC			50 CMGF	977
	ירואדן.	IE 3		Pinar del Rio W-22	150 CMGH 20 CMAB	1050 1249
BAHAMA				Santa Clara W-25	15 CMHI	1110
Nassau, U-26	500	VPN	610	Santiago X-28	150 CMKC	1034
CUBA				Tuinucu	100 CMHC	<b>7</b> 90
Caibarien W-25	250	CMHD	950	DOMINICAN R	EPUBLIC	
Camaguey W-26	150	CMJC	1382	Santo Domingo X-31	1000 HIX	630
0 0	20	CMJE	1180	Santo Bonningo 21-31	1000 11121	000
	50 30	<b>C</b> MJF CMJG	930 1200	HAITI		
Cardenas W-24	30	CMGE	1375	Port au Prince X-30	1000 HHK	920

# Principal Broadcasting Stations of the World

Fill in your dial numbers and you will then know where these foreign stations should be received on your set

1900   1900				9					•	
				500		-				-
					-	680	75000	I1RO	Rome	Italy
1000   RW11						680	500	JOLK	Fukuoka	
1000   1.171						080 685				Colombia
10000   SBD   Sundsval   Sweden   Sep			RW17			687	1200	RW46		
1200   RW41   Veliki Oustug   Russia   658   1000   SRA   Skock-holm   Australia   569   3000   T.   1000   V.   120   T.    554		SBD	Sundayall	Sweden						
1000	560	1200	RW41	Veliki Oustug	Russia			SCN		
1909   1909	563	1700			Germany				'Perth	
Section   Sect			VI.Z	Llujbijana Rige		690	1000	JODK	Keijo, Chosen	Japan
		600	VL7ZL	Hobart						
S88	581			Vienna	Austria	090	• • • • • •	• • • • • •	Deigrade	Jugosiavia
Sample			RV50						700	
	589		ON4RB	Brussels	Belgium				700	
10000	589		<b></b>	Velthem	Belgium				_	
Solid   Milan   Solid   Milan   Solid   Soli		10000	LP6		Argentina					
			IMI		Japan Italy		500	JOKK	Okayama	Japan
	000	5500			2001)	704		RW20	Kharkov	Russia
				600						
1750						708	1500	EAJ7	Madrid	Spain
	600	1750		Colombo	Covlon			LS1		
1900			ZL2ZK				300 200			
	600	150	ZL2ZR	Wellington	New Zealand	716	1700		Berlin	Germany
Vosesensis   Vos		1200	RA51	Ulyanovsk	Russia		5000	ZL2YA	Wellington	New Zealand
606         500         KGZ         Nanking         China         726         1500         2RN         Dublin         Irish Free San Juan           608         1200         RW32         Stavropol         Russia         730         1000         VK5CL         Adelaide         Australia           610         1000         VK3AR         Melbourne         Australia         730         1000         RW55         Rokrovsk         Adelaide         Australia           610         1000         CKPA         Montevideo         Uruguay           621         1000         CMAB         Santiago         Chile         731         1000         ZTD         Durban         South Afric           625         500         XOL         Tientsin         China         735         2200         Tartu         Estonia           625         500         JOQK         Nilgata         Japan         741         1000         JOK         Kokura         Japan           626         25000         G5GB         Daventry         England         743         1200         RW51         Nalchik         Russia           630         50         ZILZH         Hamilton         New Zealand         750	004	1200	L W 21		Russia					
1000   KW3AR   Melbourne   Australia   730   1000   TK5CL   Adelaide   Australia   730   1000   TK5CL   Adelaide   Australia   TK5CL		XGZ	Nanking	China	726	1500	2RN	Dublin	Irish Free Sta	
616         1000         VKSAR         Melbourne         Australia         730         1000         RW55         Pairovsk         Russia           616         5000         OKP         Prague         Czechoslovakia         730         1000         CX10         Montevideo         Uruguay           621         1200         RW40         Gomel         Russia         731         1000         CXT0         Montevideo         Uruguay           625         500         XOL         Tientsin         China         732         1000			LKT				5000	LT6	San Juan	Argentina
616         5000         OKP ORD         Prague Czechoslovakia         730         1000         CX10         Montevideo         Uruguay           621         1200         RW40         Gomel         Russia         731         1000         ZTD         Durban         South Afrie           625         500         XOL         Tientsin         China         735         2200         Tartu         Estonia           626         500         JOQK         Nigata         Japan         741         1000         JOK         Kokura         Japan           626         30000			VK3AR	Melbourne	Australia	730 730	1000	RW55	Adelaide Pokrovsk	
621         1200         CMAB         Santiago         Chile         731         1000         ZTD         Durban         South Africe           625         500         CML         Tentsin         China         735         2200         Tartu         Estonia           625         500         JOQK         Nigata         Japan         741         1000         JOSK         Kokura         Japan           626         25000         G5GB         Daventry         England         743         2500         Sottens         Switzerland           630         50         ZLILH Hamilton         New Zealand         750         700         LR         Buenos Aires         Argentina           630         400         RW52         Simferopol         Russia         750         1000         PRAA         Rio de Janeiro         Brazil           635         1700         L.         Langenburg         Germany         750         250         Mont-de-Marsan         France           635         1700         RW23         Groznyi         Russia         750         1000         VQTLO Nairobi         Kenya           636         300         RW28         Vladivostok         Russia	616	5000	oKP	Prague	Czechoslovakia	730	1000	CX10	Montevideo	Uruguay
625         500         XOL         Trentsin         China         735         2200         Tartu         Estonia           626         25000         JOQK         Nigata         Japan         741         1000         JOSK         Kokura         Japan           626         30000          Buenos Aires         Switzerland           630         50         ZL1ZH         Hamilton         New Zealand         750         1000         PRAA         Rio de Janeiro         Brazil           630         4000         RW52         Simferopol         Russia         750         1000         PRAA         Rio de Janeiro         Brazil           635         17000          Langenburg         Germany         750         1000         JOBK         Rosaca         Japan         750         1000         JOBK         Osaka         Japan         Japan         750         1000         JOBK         Osaka         Japan         Kenya         Mariotic         Spain         Kenya         Mariotic         Spain         Kenya         Kenya         Kenya         Kenya         Mariotic         Spain         Kenya         Mariotic         Spain         Kenya         Kenya         Mariotic	621			Gomel		731	1000	ZTD		South Africa
625   500   JOK   Nilgata   Japan   741   1000   JOSK   Kokura   Japan   Svitzerland   25000   G5GB   Daventry   England   743   25000   R. Sottens   Svitzerland   Svitzerland   Svitzerland   Svitzerland   Russia   Argentina   Argen				Tientsin		734 735	2200			Estonia
Begin   France   Fr	625	500	JOQK	Nilgata	Japan	741	1000	JOSK	Kokura	Japan
630         50         ZLIZH         Hamilton         New Zealand         750         7000         LR7         Buenos Aires         Argentina           630         400         RW52         Simferopol         Russia         750         1000         PRAA         Rio de Janeiro         France           635         500         JONK         Nagano         Japan         750         10000         JOBK         Osaka         Japan           636         1200         RW28         Vladivostok         Russia         750         700         RA8         Bogorodsk         Russia           638         50         PRAM         Amparo         Brazil         750         700         RA8         Bogorodsk         Russia           640         1200         RW56         Penza         Russia         752         1000         GSSC         Glasgow         Scotland           644         3000         YN         Lyon         France         759         500         LT4         Mendoza         Argentina           645         1200         RW48         Tomsk         Russia         759         12000         Bucharest         Rumania           650         0100         CX6			G5GB	Daventry	England England			D37751		
635   4000   RW52   Simferopol   Russia   750   1000   PRA   Rio de Janeiro   Brazil   635   17000   Langenburg   Germany   750   250   Mont-de-Marsan   France   636   300   RW23   Groznyi   Russia   750   10000   VQ7LO   Nairobi   Kenya   636   300   RW28   Vladivostok   Russia   750   700   RA8   Bogorodsk   Russia   638   50   PRAM   Amparo   Brazil   750   750   EAJ2   Madrid   Spain   640   1200   RW56   Penza   Russia   752   1000   GSSC   Glasgow   Scotland   644   3000   YN   Lyon   France   759   500   LT4   Mendoza   Argentina   645   1200   RW48   Tomsk   Russia   750   1000   JQAK   Grisbane   Australia   646   1200   RW33   Krasnodar   Russia   760   1000   JQAK   Dairen, Man- 650   1000   CX6   Montevideo   Uruguay   662   250   PTB   Danzig   Danzig   770   10000   JOHK   Sendai   Japan   662   200   IBZ   Bolzano   Italy   770   10000   JOHK   Sendai   Japan   662   200   IBZ   Bolzano   Italy   770   10000   JOHK   Sendai   Japan   662   110   LKM   Tromsoe   Norway   770   500   CX12   Montevideo   Uruguay   662   1500   EAS   San Sebastian   Spain   777   500   CX12   Montevideo   662   1000   EAS   San Sebastian   Spain   777   500   CX12   Montevideo   Uruguay   662   1500   LKD   Bodo   Norway   770   500   CX12   Montevideo   Uruguay   662   1000   EAS   San Sebastian   Spain   777   770   770   770   770   770   770   770   662   1000   EAS   San Sebastian   Spain   777   770   7			$\dot{z}$ L $1\dot{z}\dot{H}$	Hamilton	New Zealand					
635         500         JONK         Nagano         Japan         750         10000         JOBK         Osaka         Japan           636         1200         RW28         Croznyi         Russia         750         1000         VQ7LO         Nairobi         Kenya           636         300         RW28         Vladivostok         Russia         750         750         EAJ2         Madrid         Spain           640         1200         RW56         Penza         Russia         752         1000         GSC         Glasgow         Scotland           644         3000         YN         Lyon         France         759         500         LT4         Mendoza         Argentina           644         1200         RW48         Tomsk         Russia         759         12000          Bucharest         Rusnia         Russia         759         12000          Bucharest         Rusnia         Russia         759         12000          Bucharest         Rusnia         Rusnia         760         100         LVAQG         Brisbane         Australia         Russia         760         100         JQAK         Dairen, Mancharest         Rustralia	630	4000	RW52	Simferopol	Russia	750	1000	PRAA	Rio de Janeiro	Brazil
638         50         PRAM Amparo         Brazil         750         750         EAJ2 Madrid         Spain           440         1200         RW56         Penza         Russia         752         1000         GSSC         Glasgow         Scotland           644         3000         YN         Lyon         France         759         12000          Leurast         Argentina           648         500         ZL4YA         Dunedin         New Zealand         760         2500         VK4QG         Brisbane         Australia           650         1000         CX6         Montevideo         Uruguay         Churia         Lapan         Churia         Japan           653         6000          Beromunster         Switzerland         770         8000         Toulouse         France           662         500          Klagenfurt         Austria         770         1700          Frankfort         Germany           662         250         PTB         Danzig         770         1000         JOHK         Sendai         Japan           662         250         LKD         Bodo         Norway         770         1000	635		TONIZ	Langenburg			250	TODIT		
638         50         PRAM Amparo         Brazil         750         750         EAJ2 Madrid         Spain           440         1200         RW56         Penza         Russia         752         1000         GSSC         Glasgow         Scotland           644         3000         YN         Lyon         France         759         12000          Leurast         Argentina           648         500         ZL4YA         Dunedin         New Zealand         760         2500         VK4QG         Brisbane         Australia           650         1000         CX6         Montevideo         Uruguay         Churia         Lapan         Churia         Japan           653         6000          Beromunster         Switzerland         770         8000         Toulouse         France           662         500          Klagenfurt         Austria         770         1700          Frankfort         Germany           662         250         PTB         Danzig         770         1000         JOHK         Sendai         Japan           662         250         LKD         Bodo         Norway         770         1000			RW23	Groznyi				VO7LO	Usaka Nairobi	
638         50         PRAM Amparo         Brazil         750         750         EAJ2 Madrid         Spain           440         1200         RW56         Penza         Russia         752         1000         GSSC         Glasgow         Scotland           644         3000         YN         Lyon         France         759         12000          Leurast         Argentina           648         500         ZL4YA         Dunedin         New Zealand         760         2500         VK4QG         Brisbane         Australia           650         1000         CX6         Montevideo         Uruguay         Churia         Lapan         Churia         Japan           653         6000          Beromunster         Switzerland         770         8000         Toulouse         France           662         500          Klagenfurt         Austria         770         1700          Frankfort         Germany           662         250         PTB         Danzig         770         1000         JOHK         Sendai         Japan           662         250         LKD         Bodo         Norway         770         1000	636	300	RW28	Vladivostok	Russia	750	700	RA8	Bogorodsk	Russia
644         3000         YN         Lyon         France         759         500         LT4         Mendoza         Argentina           645         1200         RW48         Tomsk         Russia         759         1200         LYAQG         Brisbane         Australia           650         1000         RW33         Krasnodar         Russia         760         1000         JQAK         Dairen, Manchure         Churia         Lyra         churia         churia         churia         churia         Lyra         Lyra         Lyra         Lyra         Australia         770         8000          Toulouse         France         France         Germany         France         Germany         France         Germany         France         Germany         France         Germany         France         Germany         Madras         India         India         Japan         Germany         Madras         India         Japan         Germany         Madras         India         Japan         Germany         France         Germany         Madras         India         Japan         Germany         Madras         India         Japan         Germany         Markangelsk         Russia         Massia         Systersund <t< td=""><td></td><td></td><td>PRAM</td><td></td><td></td><td></td><td></td><td></td><td>Madrid</td><td></td></t<>			PRAM						Madrid	
645         1200         R.W48         Tomsk         Russia         759         12000          Bucharest         Rumania           648         500         ZL4YA         Dumedin         New Zealand         760         2500         V.K4G         Brisbane         Australia           650         1000         RW33         Krasnodar         Russia         760         1000         JQAK         Dairen, Manchira         Churia         Japan           653         60000          Beromunster         Switzerland         770         8000          Toulouse         France           662         250         PTB         Danzig         770         1700          Madras         India           662         250         IBZ         Bolzano         Italy         770         10000         JOHK         Sendai         Japan           662         250         LKD         Bodo         Norway         770         10000         RW36         Arkhangelsk         Russia           662         100         EAM         Tromsoe         Norway         770         500         CX12         Montevideo         Uruguay           662         100<									Glasgow Mandozo	
648         500         ZIAYA         Dunedin         New Zealand         760         2500         VK4QG         Brisbane         Australia           650         1000         RW33         Krasnodar         Russia         760         1000         JQAK         Dairen, Man-churia         Japan           651         1000         CX6         Montevideo         Uruguay         Toulouse         France         France           662         500          Klagenfurt         Austria         770         8000          Troulouse         France           662         500          Klagenfurt         Austria         770         1700          Frankfort         Germany           662         200         IBZ         Bolzano         Italy         770         10000         JOHK         Sendai         Japan           662         800         LKP         Porsgrund         Norway         770         600         SBF         Ostersund         Sweden           662         110         LKM         Tromsoe         Norway         770         500         CX12         Montevideo         Uruguay           662         150         SCT	645	1200	RW48	Tomsk	Russia		12000		Bucharest	Rumania
650         1000         CX6         Montevideo         Uruguay         churia         Japan           653         60000          Beromunster         Svitzerland         770         8000          Toulouse         France           662         250         PTB         Danzig         770         1700          Frankfort         Germany           662         200         IBZ         Bolzano         Italy         770         10000         JOHK         Sendai         Japan           662         800         LKD         Bodo         Norway         770         10000         RW36         Arkhangelsk         Russia           662         800         LKP         Porsgrund         Norway         770         600         SRF         Ostersund         Sweden           662         100         EAJS         San Sebastian         Spain         777         500         CX12         Montevideo         Uruguay           662         150         SCT         Upsala         Sweden         778         500         JOPK         Shidzuoka         Japan           663         150         ZVI         Johannesburg         Australia         779 <td></td> <td>500</td> <td>ZL4YA</td> <td></td> <td>New Zealand</td> <td></td> <td></td> <td>VK4QG</td> <td></td> <td>Australia</td>		500	ZL4YA		New Zealand			VK4QG		Australia
653         60000						760	1000	JQAK	Dairen, Man-	Janan
662         500	653	60000		Beromunster	Switzerland	770	8000		Toulouse	France
662         200         IBZ         Bolzano         Italy         770         10000         JOHK         Sendai         Japan           662         500         LKD         Bodo         Norway         770         10000         RW36         Arkhangelsk         Russia           662         800         LKP         Porsgrund         Norway         770         600         SBF         Ostersund         Sweden           662         100         EAJS         San Sebastian         Spain         777         500         CX12         Montevideo         Uruguay           662         150         SCT         Upsala         Sweden         778         500         JOPK         Shidzuoka         Japan           665         1000         VK2FC         Sydney         Australia         779          Lwow         Poland           667         15000         ZTJ         Johannesburg         So. Africa         779         500          Wilna         Poland           670         5000         LP4         Buenos Aires         Argentina         790         500         LU2         Bahia Blanca         Argentina           670         1000         JFAK	662	500	::::··		Austria	770	1700		Frankfort	Germany
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662         100         LKP         Porsgrund         Norway         770         600         SBF         Ostersund         Sweden           662         100         EAJS         San Sebastian         Spain         777         500         CX12         Montevideo         Uruguay           662         150         SCT         Upsala         Sweden         778         500         JOPK         Shidzuoka         Japan           667         15000         VK2FC         Sydney         Australia         779         500         Lwow         Poland           668         4000         RW13         Odessa         Russia         789         500         LU2         Bahia Blanca         Argentina           670         5000         LP4         Buenos Aires         Argentina         790         500         LK         Buenos Aires         Argentina           671         1000         FPTT         Paris         France         790         1500         OAX         Lima         Peru           671         300         LKA         Aalesund         Norway         793         1500         OAX         Lima         Feru						770	10000		Arkhangelsk	Russia
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662         150         SCT         Upsala         Sweden         778         500         JOPK         Shidzuoka         Japan           665         1000         VK2FC         Sydney         Australia         779										
665         1000         VK2FC         Sydney         Australia         779          Lwow         Poland           667         15000         ZTJ         Johannesburg         So. Africa         779         500          Wilha         Poland           670         5000         LP4         Buenos Aires         Argentina         789         500         LV2         Bahia Blanca         Argentina           670         10000         JFAK         Tokyo         Japan         790         1000         JOGK         Kumamoto         Japan           671         1000         FPTT         Paris         France         790         1500         OAX         Lima         Peru           671         300         LKA         Aalesund         Norway         793         1000         RW37         Moscow         Russia										
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1000   CX14   Montevideo   Uruguay   968   1000   G5WA Cardiff   Wales   Sil   1000   PRAE   Sao Paulo   Brazil   970   200   CX22   Montevideo   Uruguay   1000   250   CX22   Montevideo   250   CX22   CX2	810		HS7PJ	Bangkok		960		YV1BC	Caracas	
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S50   CX 16   Montevideo   Uruguay   1010   200   VKSHA   Hamilton   Australia   S55   1000   CX 24   Montevideo   Uruguay   S55   1000   VKSBL   Sydney   Australia   1010   1000   CX 24   Montevideo   Uruguay   S56   1200   RV36   Leningrad   Russia   1013   10000   CX 24   Montevideo   Uruguay   S56   2500   ESP1   Bangkok   Siam   1013   10000   TOT   Tallinn   Estonia   S57   200   PRAJ   Uits de Fora   Spanial   1016   250   CMAO   Santiago   Chile   Enzalia   S57   200   PRAJ   Enzelona   Spanial   1012   2500   OKK   Kosice   Czechoslovakia   S57   200   RW34   Piatigorek   Russia   1022   500   OKK   Kosice   Czechoslovakia   S57   10000   LR2   Buenos Aires   Argentina   1032   500   VKZUE   Sydney   Standard   China   1032   500   OKB   Companial	845	1500	ZBW	Victoria	Hong Kong					
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1075	12000	OKR	Bratislava	Czechoslovakia	1219	200	'ON4RW		Belgium
1075	2000	LT3	Rosario	Argentina	1219	250	ONTIN	Nice	France
1080	2000	VK7LA	Launceston	Australia	$\frac{1219}{1219}$	100	EAJ15	Contogono	Spain
1080	50	VK3SH		Australia	$1219 \\ 1220$	500		Cartagena Linz-an-der-	оран
	200	A IZSPIT	Caen	France	1220	300	• • • • • •	Donau	Austria
$\frac{1080}{1080}$	200	ZL4ZB	Dunedin	Now Zoolond	1220	50	TOTEOMY	Moss Vale	Australia
1080	45	ZL4ZM	Dunedin	New Zealand New Zealand	1220	100	VKSKC	Kalgoorlie	Australia
1080	30	ZL4ZO	Dunedin	New Zealand	1220	100		Abo	Finland
1085	60000	ZUIZO	Heilsburg	Germany	1220	1500		Bjorneborg	Finland
1085	1700		Konigsberg	Germany	1220	750		Jakobstad	Finland
1088	50	KSMS	Shanghai	China	1220	300		Kassel	Germany
1090		PRAQ	Bello Horizonte	Brazil	1220	000		Bloemendaal	Netherlands
1090	18	ZL1ZB	Auckland	New Zealand	1220	180	ZL4ZL	Dunedin	New Zealand
1090	40	ZL1ZR	Auckland	New Zealand	1220	200	SCB	Eskilstuna	Sweden
1091	250		Angers	France	1220	200	SCI	Kalmar	Sweden
1001	200			21,000	1220	200	SCL	Kiruna	Sweden
			1100		1220	400	SCP	Saffle	Sweden
					1220	50	CW34	Salto	Uruguay
					1224	100	CMAQ	Santiago	Chile
1100	20	VK7LA	Launceston	Australia	1229	10000	LS8	Buenos Aires	Argentina
1100	7.5	ZL2ZU	Dannevirke	New Zealand	1230	100	ZL2YB	New Plymouth	New Zealand
1103	1500		Rennes	France	1238	1000	G2BE	Belfast	Ireland
1110	200	VK2HD	Newcastle	Australia	1245	2000	VK2NC	Newcastle	Australia
1110	50	PRAZ	Franca	Brazil	$1247^{\circ}$	500	$_{ m LKS}$	Stavanger	Norway
1112	300		Kaiserslautern	Germany	1249	<b>500</b>	LT5	Parana	Argentina
1112	150	SCF	Hudkisvall	Sweden	1249		PRP1	Oporto	Portugal
1112	250	SCO.	Norrkoping	Sweden	1250	500		Nimes	France
1112	250	SCQ	Trollhattan	Sweden	1250	250	CX36	Montevideo	Uruguay
		•			1256	2300		Nuremburg	Germany
1118	1500		Valencia	Spain	1260	50	VK3WR	Wangaratta	Australia
1119	10000	EZJ13	Barcelona	Spain	1260	15	$_{ m ZL2ZH}$	Napier	New Zealand
1119	30	EAJ19	Oviedo	Spain	1260	30	CW36	Salto	Uruguay
1120	10	ZL2ZO	Palmerston		1265	200	SCV	Orebro	Sweden
			North	New Zealand	1270	1000	LS3	Buenos Aires	Argentina
1120		ZL2ZW	Wellington	New Zealand	1274	500	LKK	Kristianssand	Norway
1125	100	VK2UW		Australia	1277	50	RSC	Shanghai	China
1130	250	CX30	Montevideo	Uruguay	1280	200		Brisbane	Australia
1132	500		Lille	France	1280	50		Trafalgar	Australia
1135	300	VK6ML		Australia	1290	100	CX38	Montevideo	Uruguay
1140	65	LP2	Villaguay	Argentina	1292	300		Kiel	Germany
1140		CW30	Tucuarembo	Uruguay				1300	
1145	600	VK4BC	Brisbane	Australia				1300	
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1145 1145 1147 1148 1150	110 1000 10000	VK4BC VK3YB ZL2ZM G5NO LR8	Brisbane Melbourne Gisborne Newcastle Buenos Aires	Australia Australia New Zealand England Argentina	1300	30	VK3BA CW38	Ballarat Salto	Australia Uruguay Sweden
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Kcus.	Power	Call	City	Country
1388	200	ON4CE	Chatelineau	Belgium
1388	100	ON4EX	Ottomont	
		0111	Adriemont	Belgium
1391	200	SCE	Halmstad	Sweden
			1400	)
1400	50	VK3GL	Geelong	Australia
1410	20	CX44	Montevideo	Uruguay
1414	100	LU1	Mar del Plata	Argentina
1415	200		Newcastle	Australia
1420	30	CW44	Paysandu	Uruguay
1428	12	OA4M	Lima	Peru
1435	50	VK2WL	Wollongong	Australia
1441	1000	LT7	General Pico	Argentina
1448	100	ON4RC	Brussels	Belgium
1448	3000		Oporto	Portugal
1450	100	CX46	Montevideo	Uruguay
1455	50	ON4ED	Antwerp	Belgium
1455	25	ON4FG	Dampremy	Belgium
1455	100	ON4CE	Verviers	Belgium
1460	50	VK2MV	Moss Vale	Australia
1460	20	CW46	Tucuarembo	Uruguay
1470	200	SCE	Gavle	Sweden
1480	50	VK2AY	Albury	Australia
1480	250	SCM	Kristinehamn	Sweden
1490	250	SCH	Jonkoping	Sweden
1490	50	CX48	Montevideo	Uruguay
1500	50		Gunnedah	Australia
1500	130	G2LS	Leeds-Bradford	
		_		,

# Their Time On the Air Where Time is Given as CST | MST

PST

Your Zone

EST

TOI	Duby.o mb.	Add 1 hr. Subt. 1 hr. Subt.2 hrs.	Dube. I III.	Add 2	hrs. hr.
State California Sunda	Culv y, 8 a.m6	ty ( rer City I p.m.; 10-12 i m.; 10 p.m	XFVD 1 nid. PST.	Kcys. V .000	Vatts 250
Sunda	El C y, 7 a.m10	entro I p.m. PST.		500	100
				210 ST	50
Wedne Sunda	esday, 7 p.m San l y, 3 p.m5	9:15 p.m. ( Bernardino I p.m., PST.	Rest of wee	k silent.	100
Colorado	7 a.m 11 Yum	p.m. a. H 11 p.m1 a.		200	100
Georgia Sunda	Rom y, 9 a.m3 p	e V o.m.; 6-9 p.n	VFDV 1 a., CST.	500	100
Hawaii Daily,	Hone 6:15 a.m1	p.m., Hone	ζĠIJ	750	1000
Kansas Sunda	y, 7:30-10:30	yville H	5 p.m., CS7	010 Γ.	500
Tues. a p.m. Wedne	and Thurs., .; 9:15-10:30 sday, 7:30-1	n2 p.m.; 5- 7:30-10:30 a. p.m. 0:30 a.m.; 1	m.; 11:30-2		
Friday Saturd Louisiana Sunday	ay, 7:30-10: Shrey y, 7-10 a.m.;	a.m.; 11:30- 30 a.m.; 11:3 veport H ; 4-7 p.m., C , 7-10 a.m.;	30-2 p.m.; 5 KRMD 13 ST.	0:30 p.m -9:30 p.1 310	n. 50
Saturd Maine Sunday	ay, 7-10 a.n Bang y, 9 a.m12	n.; 2-5 p.m. or V n., EST.	VABI (	200	100
Michigan Sunday Daily (	Lape y, 7:30-11 p.		VMPC 1	500 3:30-6 p	100 .m.;

State	City	Call	Kcys.	Watts
Mississippi	Laurel p.m12 mid., ( d., Fri., 6-7 a.m urs., Sat., 1-9:3 re Laconia .m1 p.m.; 3-8 Troy Monday from	WTSL	1310	100
Mon We	p.m12 mid., t d Fri 6-7 a m	∪o1. . · 1-7 n m · 0	.30_12 m	id
Tues., Th	urs., Sat., 1-9:3	0 p.m.	II	ıu.
New Hampshi	re Laconia	WKAV	1310	100
Daily, 9 a	.m1 p.m.; 3-8	p.m., EST.	1200	500
DX every	Monday from	6 p.m12 mic	1 EST.	300
OHIO	Columbus	WEAD	570	750
Monday, S	)-11 a.m.; 1-3 p	.m.; 8-10 p.m	ı., EST.	
Wednesda	Thurs., 9-11 a.	m.; 1-3 p.m. 3 p.m.: 8-12 :	mid	
Friday, 9-	11 a.m.: 7-12 m	id.	mu.	
Saturday,	9-11 a.m.; 1-3 p Thurs., 9-11 a. y, 9-11 a.m.; 1- 11 a.m.; 7-12 m 1 p.m12 mid. Youngstown	No Sunday h	ours.	
Sunday 6	Youngstown	WKBN	570	500
Monday, 6	a.m12 mid., I	անը. 1 n.m.: 3-8 ։	n.m. • 10-1	2 mid.
Tues. and	3-9 a.m.; 11 a.m Thurs., 6-9 a.m	.; 11 a.m1 p	m.; 3-12	mid.
wednesda	y, b-9 a.m.; 11 :	a.m1 p.m.; a	3-8 p.m.	
	9 a.m11 a.m/ 6 a.m1 p.m.	7 p.m.		
Oklahoma	Norman	WNAD	1010	500
Tues. and	Thurs., 7:15-9: y, 8:15-9:15 p.n	15 p.m., CST		
Wednesda	y, 8:15-9:15 p.n	0. WMDW	1000	10
Pennsylvania	Carbondale m10 p.m., ES	WNBW	1200	10
Dany, o'a.	State College	e WPSC	1230	500
Sunday, 9	a.m1 p.m.: 2	p.msunset.	EST.	,
Daily, ex.	Sat., 11:45 a.m 11:45 a.m12:1	12:15 p.m.;	4-5:30 p.:	m.
Texas	Austin	S p.m. KNOW	1500	100
	:30-11 a.m.; 12			
Daily, 7:3	0 a.m1:30 p.m	.; 4-10 p.m.		
Vermont	St. Albans	WQDM	1370	100
Daily, 11	-2 p.m., EST. a.m2 p.m.			
Virginia.	Danville	WBTM	1370	100
Sunday, 7	·11 a.m.; 6-6-30	p.m.; 7 p.m.	till close	, EST.
Tues Th	-11 a.m.; 6-6-30 d., Fri., 7 a.m urs., Sat., 12 n.	1 p.m.; 2-6:30 -1 p.m.; 6-6:	) p.m. 30 n m ·	7 n m
till close		z p.m., o-o.	оо р.ш.,	. p.m.
Washington	Yakima	KIT	1310	100
Sunday, 9	a.m11 p.m., I m11 p.m. (Sat	'ST. turday on till	midnigh	٠,
Wyoming	Casper	KDFN	1210	100
Daily, ex.	Sunday, 9 a.m.	9 p.m., MST	<u>`</u>	
rest every	Tuesday morn	ing, 1:05-1:16	a.m.	
Date - Land	CANA	DA	700	100
British Columb	na vancouver Mon Tues T	CKMO	730	100
1:30 a.m	Mon., Tues., T		uni, 11.0	, p.m.
Newfoundland	St. Johns 3:30-1:30 p.m.; 9:45 a.m12:30 0-1:30 p.m.; 6:	VONA	950	30
Sunday, 12	30-1:30 p.m.; 10-45 a m =12-30	7:45-9 p.m.		
Daily, 12:3	60-1:30 p.m.; 6:	30-8 p.m.		
(Newfound	nand time — 1;	2 nours anea	d of East	ern.)
Sunday 11	St. Johns	VOWR	675	500
Tues, and	a.m12:30 p.n Thurs., 8:15 p.ı	n9:30 n.m.	1.	
2 -00. and	CUE			
Cuba	Havana	CMCU	1270	250
DX every	Sunday, 2 a.m. a.m.;12-3 p.m	5 a.m., EST.		
Dany, 6-11	a.m.;12-3 p.m	.; 1-10 p.m.		

# The Month's Changes

		Frequencies
570	KVI	Tacoma, Wash., from 760.
630	$\mathbf{KGFX}$	Pierre, S. D., from 580.
750	KGU	Honolulu, Hawaii, from 940,
760	KXA	Seattle, Wash., from 570.
820	CMGC	Matanzas, Cuba, from 1375.
845	$\mathbf{XEFD}$	Tiajuana, Mex., from 1020.
1050	CMGH	Matanzas, Cuba, from 1370.
1180	CMJE	Camaguey, Cuba, from 856.
1235	CMCA	Havana, Cuba, from 1225.
1270	CMCU	Havana, Cuba, from 1285.
1310	WIAS	Ottumwa, Iowa, from 1420.
1420	$\mathbf{KWCR}$	Cedar Rapids, Iowa, from 1310.
1500	$\mathbf{WFDV}$	Rome, Ga., from 1310.

		Power
588	CMW	Havana, Cuba, 1400 to 2000.
630	CFCT	Victoria, B. C., 50 to 500.
690	CFRB	Toronto, Ont., 4000 to 7000.
820	CMGC	Matanzas, Cuba, 30 to 100.
1120	CHGS	Summerside, P.E.I., 100 to 500.
1205	CMGB	Matanzas, Cuba, 7.5 to 30.
1270	CMCU	Havana, Cuba, 150 to 250
1420	WENC	Americus, Ga., 50 to 100.
		Owners
630	wos	Jefferson City, Mo., to Missouri State Marketing Bureau.
630	XETF	Veracruz, Mex., to Cia. Difusora Mexicana, S. A.
1200	WABI	Bangor Maine, to First Universalist
1310	KRMD	Society.
1420	KGKX	Shreveport, La., to KRMD, Inc. Sandpoint, Idaho, to Sandpoint Broad-
1420	MGKA	casting Co.
		New
540	CKWO	Windsor, Ont.
610	XETR	Mexico City, Mexico.
1150	$\mathbf{CMGI}$	Colon, Cuba.
1500	• • • • • • • •	Kosciusko, Miss.
	~~~~	Calls
820	CMGC	Matanzas, Cuba, from CMAC.
1300	WFAB	New York City, from WHAP.  Deleted
834	CMGA	Colon, Cuba.
1310	KFJY	Fort Dodge, Iowa.
1010	11.01	
820	CMGC	Location Matanzas, Cuba, from Pinar del R o.
020	CMGC	
1010	TOM	Reinstated
1210	KGMP	Elk City, Okla.
4.00	Terror	Chains
1420	KWCR	Cedar Rapids, Iowa, new NBC.
	P	ermit to Change Frequency
860	KMO	Tacoma, Wash., to 1330.
1210	WGCM .	Gulfport, Miss., to 590.
1420	KFXD	Nampa, Idaho, to 1200.
		Permit to Increase Power
1200	WRBL	Columbus, Ga., 50 to 100.
1210	WGCM	Gulfport, Miss., 100 to 1000.
1310	KRMD	Shreveport, La., 50 to 100
	TTTTTT	Heard on Other Waves
1240	KTFI	Twin Falls, Idaho, on 1220.

## Your Radio Friends

(Continued from page 17)

worked so hard to attain with the more popular material. He studied Mexican and Spanish folk songs and popular melodies, arranging them in classic style. In 1929 Tito came to New York to make records of his unique renditions of Spanish and Mexican songs. At the expiration of the original contract, Guizar was offered another on similar terms, but by this time officials of the CBS had heard his mellow voice and signed him for radio performances. Tito Guizar was born in Guadalajara, Mexico, in 1905. He is now featured with Vincent Sorey's orchestra on the Gauchos program each Sunday at 11:30 p.m.; Thursdays at 5:00 p.m.; also with Leon Belasco's orchestra on Friday at 9:30 p.m. EST, over the Columbia network.

## Back Issues of RADEX

We still have a small supply of each issue of RADEX back as far as No. 41 of September, 1930. These old numbers constitute a valuable library for the radio fan and we are epitomizing the contents of each issue. They may be secured at the regular subscription rates of 25 cents per copy, five for \$1.00 and ten for \$1.75.

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42 October, 1930
High Frequency Interference.
Progress of Television.

43 November, 1930 Multiple Speakers and Remote Control The Mechanics of Chain Programs.

44 December, 1930Adding Your Own Tone Control.Wave Trap Increases Selectivity.

45 January, 1931 Building a Short Wave Adapter.

46 February, 1931 Reducing the Effect of Static.

47 March, 1931
Theory of Radio in a Nutshell.
Attaching Phones to Majestic Sets.
Neutralizing Oscillation of R.F. Tubes.

48 April, 1931
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Faults of Superheterodynes.

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January, 1932Buying and Servicing a New Set.

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