

THE ALL-WAVE RADIO MAGAZINE





30 cents in Canada Including

Tax

The Short Wave Stations of North America The Long Wave Stations of the World Broadcast Reallocation in Europe The Beginner's Story of Radio "What's Wrong with My Set?"

No. 76

FEBRUARY DX CALENDAR

In addition to the following programs which are put on by courtesy of the stations for the benefit of distant listeners, more than 300 other stations are holding monthly frequency checks for monitoring by the Federal Detter Courting in a static usceners, more than 300 other stations are noting monthly frequency checks for monitoring by the Federal Radio Commission. These monthly checks appeared in the September issue by days of the week, in November by frequencies, and in December by states and cities. The following programs are arranged in order by Eastern Standard Time. Power is given in parenthesis in kilowatts. Distant readers should note that those programs which occur weekly, will probably be repeated on the same day of the week in March.

SUNDAY MORNINGS

Jan, 28

- **2:00-3:00**—CHWC, Regina, 1010 (.5) **4:30-5:00**—CKFC, Vancover, 1410 (.05) **6:00-7:00**—NGOA, Nanking, 660 (.73)

Feb. 4

- 1:00-2:00-WWAE, Hammond, 1200 (.1) 2:30-4:30-CKBI, Prince Albert, 1210 (.1) 3:00-6:00-WGCM, Gulfport, 1210 (.25)

Feb. 4-18

5:00-6:00-XFB, Jalapa, 1290 (1)

Feb. 4-25

3:00-5:00-CMCU, Havana, 1100 (.5)

Feb. 11

1:00-1:30-	WKY, Oklahoma City, 900 (1
1:00-2:00-	KUSD, Vermillion, 890 (.5)
3:00-4:00	WOS, Jefferson City, 630 (.5)

- 3:00+1:30 KFOX, Long Beach, 1250 (1) 3:304+1:30 KFOX, Long Beach, 1250 (1) 3:304+1:30 CKWX, Vancouver, 1010, (1) 4:00-5:00 WBIZ, Ponca City, 1200 (1) 5:00-6:00 WCLO, Janesville, 1200 (1)

Feb. 11-25

- 4:00-5:00-CMGF, Matanzas, 971 (.1)
- Feb. 11-18-25

1:00-3:30-WIBM, Jackson, 1370 (.1)

Feb. 18

- 2:00-3:00-KOH, Reno. 1380 (.5)

- 3:00-7:00 KGIR, Butte, 1360 (.5)

Feb. 25

12	:00-4:	00 -	-MESG,	1.08	Angeles,	1120(.5)	

- 1:00-2:00 NEFW, Tampico, 1280 (.07) 3:00-5:00 WHAZ, Troy, 1300 (.5) 4:00-5:00 WHBG, Gleuside, 970 (.1)
- - Feb. 4-11-18-25

- 4:00-3:00-0: WIGG, Villensing, 3:00 (1)

 Feb. 4:11:18:25

 12:00-1:00 CMBW, Havana, 1:140 (.6)

 CMX, Havana, 875 (1)

 XETW, Nexico City, 830 (.5)

 12:00-1:30 WMBC, Detroit, 1420 (.1)

 12:00-3:00 CMCD, Havana, 955 (.5)

 WGES, Chicago, 1360 (.5)

 1:00-2:00 WCCO, Minneapolis, 810 (50.)

 WDOD, Chattanooga, 1280 (1)

 1:00-2:00 WECO, Minneapolis, 810 (50.)

 2:00-5:00 CMBW, Havana, 955 (.25)

 2:00-5:00 CMBW, Havana, 965 (.25)

 2:00-5:00 CMBW, Fairmont, 890 (.25)

 2:00-5:00 KPIM, Preseott, 1500 (.1)

 3:00-4:00 KTXM, San Bernardino, 1210 (.1)

 S:00-5:00 CJAT, Trail, 1200 (.05)

 CKOV, Kelowna, 1200 (.05)

 CKOV, Kelowna, 1200 (.05)

 CKOV, Kandhosa, 1200 (.1)

 3:00-6:00 KFXM, Canaguey, 700 (.5)

 4:00-5:00 CFJC, Kanaloos, 1120 (.1)

 CMJK, Canaguey, 700 (.5)

 4:00-6:00 XEFV, Juarez, 1370 (.1)

 *PO, Bay 144, Sandiego, Calif.

MONDAY MORNINGS

Jan. 29

- 6:00-7:00-XGOA, Nauking, 660 (.75)
 - Feb. 5
- 3:00-5:00—KPCB, Seattle, 650 (.1) 3:45-4:00—KUJ, Walla Walla, 1370 (.1)

Feb. 19

2:30-3:30-HIH, San Pedro de M., 1395 (.015) 3:30-4:30 -* WHBU, Anderson, 1210 (.1) *Wants 5c for verification.

Feb. 5-12-19-26

- 12:00-3:00 WGES, Chicago, 1360 (.5) 12:30-1:00 KSOO, Sioux Falls, 1110 (2.5) 2:00-3:00 KFSG, Los Angeles, 1120 (.5)

TUESDAY MORNINGS

Jan 30 6:00-7:00-XGOA, Nanking, 660 (.75)

Feb. 6

- 5:00-5:30-WKFI, Greenville, 1210 (.1)
 - Feb. 20
- 2:30-3:30-HJN, Bogota, 681 (.5)
 - - Feb. 27
- 2:00-3:00-HIZ, Santo Domingo, 1300 (.01)
 - Feb. 6-13-20-27
- 12:00-1:00 -XEH, Monterrey, 1132 (.25) 1:00-1:30 -WTOC, Savannah, 1260 (.5) 1:00-3:00 -CMCW, Havana, 965 (.15)

- 1:00-1:00
- WSUI, lowa City, 880 (.5) -WCAH, Columbus, 1430 (.5) 4:00-5:00-
- 5:00-6:00 -WAWZ, Zarephath, 1350 (.25)

WEDNESDAY MORNINGS

- Feb. 7 1:00-2:30—KFYR. Bismarek, 550 (1) 4:30-5:00—WCAL, Northfield, 1250 (1)
- Feb. 14 1:00-2:00-WIBG, Glenside, 970 (.1)
 - - Feb. 21
- 2:00-2:30 -- KWCR, Cedar Rapids, 1420 (.1)

2:00-4:00-WNRA, Muscle Shoals, 1420 (.1)

6:00-7:00-WOOD, Grand Rapids, 1270 (.5)

3:00-1:00 -- WR DW, Augusta, 1500 (.1) 4:30-5:00 -- WCBS, Springfield, 1210 (.1) 5:00-6:00-- WRAW, Reading, 1310 (.1)

3:00-4:00-WIIBQ, Memphis, 1370 (.1)

2:00-4:00—CMK, Havana, 730 (5) 2:00-4:00—WEDC, Chicago, 1210 (.1)

2:00-3:00—WRUF, Gainesville, 830 (5) 4:00-5:00—WSPA, Spartanburg, 1420 (.25)

Feb. 1-15 1:00-2:00—H111, San Pedro de M., 1395 (.015) Feb. 8 2:00-3:00- KWCR, Cedar Rapids, 1420 (.1)

- 2:00-2:30 -- KWCR, Cedar Rapids, 1420 3:00-3:30 -- KSO, Des Moines, 1370 (.1) 3:00-7:00 -- WOPI, Bristol, 1500 (.1) 5:00-5:30 -- WIAS, Ottumwa, 1310 (.1)
- - Feb. 28 Feb. 7-14-21-28

THURSDAY MORNINGS Feb. 1

Feb. 15

Feb. 22

Feb. 1-8-15-22

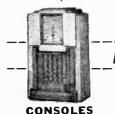
(Continued on page 97)



THRILLS FOR **EVEN HARDEST-**BOILED D-X HOUNDS with

to give WORLD WIDE





Specially designed cabinets —correct in furniture beauty and in scientific acoustic quality-are provided.

Address

Town

Don't envy the fellow with a big list of verifications-have a bigger collection yourself!

It's a cinch with the SCOTT ALL-WAVE Deluxe. Owners all over the face of the globe are proving it daily-and the SCOTT'S reputation as a star distance-getter has for years stood supreme.

No other radio set in the world ever hung up a record such as that of three SCOTT owners who, dur-ing a six-month period, received 3410 foreign verifications from 158 stations in more than 26 countries. During this same time, more than 200 other SCOTT owners reported reception of 15,847 other foreign programs from 320 stations in 46 foreign countries.

And distance-on the short waves alone---isn't everything. The SCOTT ALL-WAVE Deluxe provides just as remarkable performance on the regular broadcast band, with tone quality beyond compare.

On a recent voyage to Australia, for instance, Mr. Scott, using one of his ALL-WAVE Deluxe receivers, kept in constant touch with WBBM in Chicago, all the 10,000 miles to Australia and return.

You will get real thrills-real S t



HERE'S MY **IRON-CLAD** WARRANTY

If, after 80 days trial in your home, you not convinced that are not the SCOTT ALL-WAVE Deluxe has finer tone, greatsensitivity er and selectivity, and brings in more foreign stations, more stations on the broadcast band and more stations on the short wave bands than any other receiver that may be compared with it, you can return it to us and have every cent you paid for it promptly refunded. In addition to this, every part (except tubes) is guaranteed for five years.

State

atisfaction—out of SCOTT owner- hip. And it costs less than you hink. Send today for details.	President.
E. H. SCOTT RADIO LABORA 4450 Ravenswood Ave., Dept. RX24,	TORIES, Inc. Chicago, III.
AIL COUPON FOR FU	
. H. Scott Radio Laboratories, Inc 450 Ravenswood Ave Dept. RX24, Chicago. III. Send me at once, without obligation, all particul VAVE Deluxe, and PRCOFS of its ability.	ars regarding the SCOTT ALL
Vame	

[1]

FEBRUARY 1, 1934



B. FRANCIS DASHIELL Technical Editor

TENTH YEAR

\$1.75 per Year



FRED CLAYTON BUTLER Editor and Publisher



PAGE TAYLOR Sbort Wave Editor NUMBER 76

CONTENTS

Frontispiece—Portland Hoffa (Mrs. Fred Allen) On the "Bath Club" CBS Sundays 9 p. m.

The February DX Calendar of Special Programs.	Second Cover
The Beginners' Story of Radio, Tuning the Radio Frequency Circuit	
Little Life Stories of Radio Folk, by "Betty"	
The Editor and the "Family"	
With the High Frequency Fans, by Page Taylor	
How to Use Microphones and Pickups, by B. Francis Dashiell.	
Stories of the Log Builders, The Foreigners Are Coming In	
"What's Wrong with My Set?" Answered by the Technical Editor	
The Short Wave Stations of North America, by Frequencies	
Reallocation in Europe, a Grand Shift on January 15.	
Condensed Cream of the DX Reports	
The Long Wave Stations of the World	
The Verification Problem Discussed by Our Readers	
"What's on the Air Tonight?" The Weekly Network Programs	
Classified Index to the Chain Features	
The Old Reliable Index to Broadcasting Stations	
Stations of North America Arranged by Locations	
Index by Call Letters with Owners' Names	
Short Wave Relay Broadcasters of North America	
Around the Clock on the Short Waves	
One Hundred Best Short Wave Stations by Calls.	
The Month's Changes in Station Data	

Published Monthly Excepting July and August See Subscription Blank on Page 96

25c Per Copy

THE RADEX PRESS, INC.

Publication Office, 404 No. Wesley Ave., Mount Morris, Illinois. Editorial and Executive Office, Hanna Building, Cleveland, Ohio Entered as second-class matter November 7, 1932, at the post office at Mount Morris, Ill., under the Act of March 3, 1879. Printed in U. S. A. ADDRESS ALL CORRESPONDENCE TO CLEVELAND OFFICE

The BEGINNERS' STORY of RADIO

PART FIVE

Tuning the Radio-Frequency Circuits

• • • B_{γ} B. FRANCIS DASHIELL

HILE studying the actions of condensers we made an interesting discovery. It was: When a condenser is set to a given capacity, it will permit an alternating current of a given frequency to pass through its circuit. Then, when the capacity is changed somewhat, another alternating current of a different frequency will flow. Therefore. because of this definite relationship between capacity and frequency, we can make use of the variable condenser to select any frequency of broadcast wave that may be desired. The selection of these certain frequencies, or radio waves, is performed only in the radio-frequency circuit by the act of tuning.

If the frequency of the broadcast wave or signal that is being received is high, a condenser of small capacity is used (a small portion of the variable condenser's total plate area); when the frequency is low, the capacity must be large (all of the variable condenser's plate area in use). For broadcast station reception, a variable condenser having a maximum capacity of .0005 microfarad (500 micro-microfarads) will permit all frequencies between 550,-000 and 1,500,000 cycles (550 and 1,500 kilocycles) to pass through the circuit which it tunes.

Now we will return to the receiving set for a moment. If we adjust the dial that controls the tuning condenser, we will find that we have set the condenser to some given capacity (value unknown), and that it will then be in *tune* with some given frequency. At this setting the condenser offers little resistance to one particular electrical vibration coming down from the antenna yet to all other frequencies it presents an effective resistance. Tuning a receiver is a simple matter. Let us see how it works.

Tuning a Receiver

The resistance a condenser offers to the "apparent" flow of electricity is called *capacitive reactance*. Now, when the condenser is tuned to a state of *minimum* reactance, a given frequency will flow easily through the circuit. A tuned radio circuit, therefore, permits the passage of just one



Hi, Skippy! In real life he is Franklin Adams, aged 12 years and a student in the seventh grade at grammar school. He finds time for football and baseball when off the air and is also intensely interested in the collection of stamps. On the CBS, Mondays to Fridays at 5:00 p. m.

a.c. frequency, and prevents the flow of unwanted frequencies. This tuning effect enables us to select any particular radio signal from the chaos of vibrating waves that exists in the air about us.

But the condenser alone is not the only instrument at our command for the control of electrical vibrations in our radio sets. A single coil of wire -an inductance-also offers considerable resistance to the flow of an alternating current. And, like the condenser, its resistance to an alternating current is also a reactance—inductive reactance. Let us take some fixed The higher the freinductance: quency of the current, the greater will be the reactance of the coil; the lower the frequency, the smaller the reactance. Also, like condensers, small coils pass high frequencies; and large coils pass the low frequencies. That is why short wave receivers use small radio-frequency coils, or inductances, and broadcast receivers use larger coils.

Purpose of the Coils

Tune in a station with a fixed inductance, and then change the number of turns of wire on the coil. Immediately we vary the amount of inductance or reactance the coil presents to the flow of the given frequency, and that station is tuned out. But a new station frequency is tuned in. We have, therefore, changed the reactance so that a new radio frequency will flow easily through the coil. The coil inductance has been tuned to a given wave length or broadcast frequency. In the early days of radio, coils were tuned by means of switches and sliders. Today, in modern radio, we tune the inductances simply by means of variable condensers.

A coiled conductor, wound into an inductance, can be tuned by a variable capacity "shunted" around the coil. Such a coil is a radio-frequency coil, transformer or inductance, for all tuning is confined to the radiofrequency portion of a radio circuit. The coil must be tuned in order to find a point where one frequency will pass through without opposition. This condition is called *resonance*. We can create hundreds of these points of resonance as we slowly turn the tuning condenser shaft. We really balance the inductive reactance of the coil by connecting the capacity reactance in parallel around the radiofrequency coil. The circuit now offers minimum reactance, and at this resonant point the tuned-in radio frequency will flow at its maximum strength. Other signals will be tuned out.

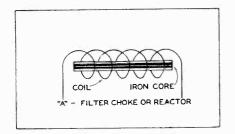
The "Why" of Tuning

What is inductive reactance? Why does it permit a single frequency of alternating current to be selected for passage through the circuit while all other frequencies, which also may be present, are choked back?

We have seen, in Part Two, that an alternating current will build up oscillating magnetic fields of force about a coil through which the current flows. This current alternates two times in every cycle, and so does the magnetic field. When the voltage drops from maximum potential at the peak of one alternation, as shown at "B." Part Two, there also is a failure of the surrounding magnetic field. There is a slight lag between the two; the magnetic lines of force collapse upon the turns of wire, and induce additional voltages in the coil, just when the next alternation of current is beginning to appear from the other direction. Thus, these two currents tend to oppose each other, and the secondary effect is called reactance, counter-electromotive-force, or selfinductance.

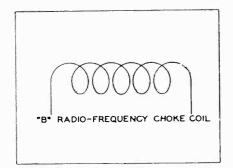
Impeding All But One Frequency

Self-inductance, then, tends to prevent the flow of alternating or pulsating currents through a coil of wire. However, there will be one certain frequency which will vibrate at the proper rate so that its self-induction and the original current will rise and fall between alternations at the proper moment. Both will be in step



or *phase*, and there will be no a.c. resistance, or self-induced reactance that will hinder the flow of the original current. Reactance is measured in ohms, and *impedance*, which is a certain combination of wire resistance, reactance and capacity, also is indicated in ohms.

The unit of self-inductance is called the henry. Smaller units are: the millihenry, which is one-thousandth part of a henry; and the microhenry, the millionth part of a henry. In a inductance--of considerable coil about 30 to 50 henries-which offers high reactance against the flow of most all alternating, pulsating, or rippling currents, the high reactance voltage developed will prevent potential changes in the current. This type of coil is called a choke, reactor, or filter, and the symbol used to indicate it in radio diagrams is shown at "A." Such coils have heavy iron cores with many turns of wire. The filtering effect is obtained because of the tendency of the inductance to smooth out all pulsations and ripples in the rectified current so the result-

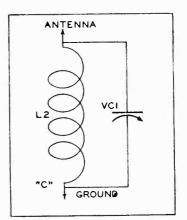


ing direct current will flow with a steady value. But we will hear more about chokes and filters when we discuss the power units of radio sets.

The Primary Circuit

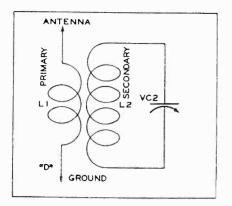
Smaller inductances used in radio circuits, are known as *radio-frequency chokes.* The circuit diagram symbol is shown at "B." They are wound on open tubes, and have values ranging from .05 henry (50 millihenries), down to .0005 henry (500 microhenries). These tiny coils choke back the faster radio frequencies, but pernit the passage of the slower audiofrequency currents.

When we tune a radio circuit we simply turn a dial and adjust the capacity of one or more variable condensers. By so doing we bring the tuning inductance and the capacitance in resonance. The high reactance of the coil is balanced by the low reactance of the condenser when tuned to some given radio frequency. Such a tuning arrangement is shown in "C."



The variable condenser VC1 is connected across the ends of the coil L2. A change of VC1 will balance its capacity against the inductive reactance of L2 (which always is a fixed value), and change the total reactance so as to tune in some other radio frequency. Any slight movement of

[5]



the condenser rotor plates will change this state of balance to another point of resonance. Each change, then, tunes in some new signal.

The Secondary Circuit

Connect a small, second coil (L1) between the antenna and ground, and couple it inductively to the inductance L2, which is tuned by the condenser VC1. We now obtain the scheme shown at "D." The small coil-about ten turns-becomes the primary: the larger coil-about 70 turns-becomes the secondary. Both, so arranged. make a radio-frequency transformer (see illustrations "G" and "H" in Part Three of this series). By tuning the secondary of this transformer we provide an *clementary* radio-frequency circuit. Only the radio-frequency circuits of a receiver are tuned to select broadcasting stations. It is here that the selectivity of the set is determined, and where radio-frequency amplification of the weak, original signals from the antenna is accomplished by the transformer action of the r.f. inductances or coils.

Hundreds of weak electrical vibrations are being constantly induced in the radio antenna by every passing radio wave. The broadcast wave, from the transmitting station, is a swinging, vibrating magnetic field. As it cuts past any metallic conductor within its range, it induces a slight current of electricity in the conductor. This action is similar to that described in Part Three, illustrations "D" and "E." If it were not possible for us to tune our sets, all of these induced waves would pass through in a bedlam of interference. That is why, when a receiver is not selective and has poor tuning and resonance, there is much station interference.

The T. R. F. Circuit

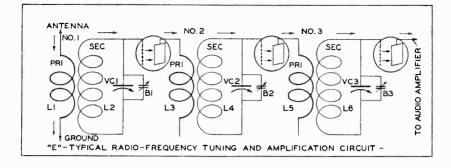
In the diagram "D," which now makes use of the radio circuit symbols shown in Part Three and Part Four, we see the primary coil L1. It permits most of the radio waves to pass down to earth because its reactance is very low; it is an *untuned* circuit. The currents passing through L1 will induce stronger currents in the secondary L2. But the inductance value of L2 is higher and, therefore, only those frequencies falling within its resonant limits—the broadcast band —will be reproduced.

It is necessary to tune out all of those frequencies induced in L2, within its resonant limits, for we wish to retain but a single wave for further amplification. This selection can be accomplished by varying the capacity reactance of the condenser VC1. The tuned signal, in this case, is stronger than the one selected by the arrangement shown in "C," for we have had the benefit of transformer action, or radio-frequency amplification.

Building Up the Signal

We can add a second radio-frequency unit, similar in all details to the first, shown at "D," and thus provide two stages of radio-frequency transformers and tuning. At "E" these two stages are seen. The tuned, and amplified, signal, from the coil L2, is passed to the primary coil L3 of the second r.f. transformer. It induces stronger amplification in the secondary coil, L4, which is tuned anew by the condenser, VC2.

And we can add still another unit, and there will be *three* stages of r.f. amplification and tuning, as shown completely at "E." The strong, and



now sharply tuned signal, from L4, is passed to the primary L5 of r.f. transformer No. 3. Here, it induces, in the secondary coil L6, which is tuned by VC3, a very powerful current having the modulated carrierwave characteristics shown at "E" in The three stages of in-Part Two. duction, amplification and tuning, provide a sharply resonant circuit extending from L1 to L6, for one frequency only. A change of VC1 will require changes in VC2 and VC3 so as to make all three radio-frequency stages again resonant at some particular radio frequency coming from the antenna. If the coils L2, L4 and L6 are identical, and the condensers VC1, VC2 and VC3 similar, the tuning can be accomplished by placing the rotor plates of the condensers on a single shaft and turning them simultaneously with one dial. Slight variations in VC1, VC2 and VC3, can be balanced by the tiny balancing condensers B1, B2 and B3, A radiofrequency circuit, sharply tuned and balanced, will pass but one frequency at a time. The signal is increased in intensity, or amplitude, and is ready to be sent to the detector and thence into the audio-frequency circuit for further amplification before it will operate the loud speaker.

(Since the reader already has been introduced to the mysterious electron. in Part Four, it will be appropriate to take him, next month, on a journey through the maze of screens, grids, plates, cathodes and filaments of our radio tubes.)

Queries

- 1. In what two ways may one particular wave be picked out of the hundreds in the air?
- 2. What is the effect of adding turns of wire to a tuning coil?
- 3. What is the effect of meshing more plate area in a condenser?
- 4. How is the condenser connected to a coil for tuning?
- 5. How is a radio signal amplified?
 6. When coil and condenser are in tune to some particular wave, what is it termed?
- 7. What is the unit of inductance? Of reactance? Of impedance?
- 8. If you were to attach phones to the r. f. circuit, what would you hear? Why?
- 9. How does a tuning coil differ from a choke coil?
- Explain why, given a certain inductance and a certain capacitance, only one fre-quency of radio wave is permitted to Dass.

Those Radio Program "Slates" fill a long-felt want. Made of heavy, coated card stock, entries may be made and erased as your favorites change. Spaces are provided for every 15-minute period of each evening of the week and for Sunday afternoon.

Make up your own slate of programs and avoid missing those things you particularly wanted to hear. Price 10c each. two for 15c, four for 25c postpaid.

Little Life Stories of RADIO FOLK

ENDELL HALL, Red Headed Music Maker of radio's early days, was born in St. George, Kansas, in 1896. Except for a few years in Florida, Chicago has been Hall's home since he was three years old, and he and Mrs. Hall and the two little Halls, Wendell Woods, Jr., and Lowell Martin, now reside in Wilmette, a residential suburb on the north shore.

Wendell attended grade and high schools in Chicago, but he evinced a remarkable musical talent from the first and his parents wisely encouraged him. He sang in church choirs. quartets or wherever else he could find the opportunity until he reached the age of eighteen, whereupon he decided to take up orchestral music and proceeded to master, in turn, the clarinet, saxophone, trombone, zylophone and later the ukulele. He went on the vaudeville stage as the "Singing Xylophonist" in 1917, but the war came along and he headed for France with the Fifth Anti-Aircraft Machine Gun Corps.

After the war, Wendell came back and resumed his vaudeville tour. But a new medium of entertainment was springing up, radio. Wise enough to see its possibilities early, the young singer in 1921 trekked over to KYW, the first radio station in Chicago, and offered his services.

He Started the Thing

He was put on, singing his own songs, first without pay, and later for \$25 a week. It was while singing at KYW that Wendell composed and first sang his most popular hit, "It Ain't Gonna No More." The response was immediate, and from that time on he was "made."

Later, on his own initiative and backing, he made a nation-wide tour of thirty-five radio stations. In 1924 he married "the little girl in Chi-

• • • by "BETTY"

cago," whom he had wooed over radio, in a radio wedding. They were married, at the demand of millions of radio listeners, in the studio of WEAF, with WCAP, WJAR, and WGN plugged in, the first network ever arranged for a private citizen. The bride was Miss Marion Martin, an employe of the reference department of the Chicago Tribune.

Wendell had the first national radio advertising contract, traveling from station to station as the "Eveready entertainer." If there is one characteristic predominant in Wendell it is originality. He turned up with fifty brand new songs when he went on the Fitch program, and he wrote both words and music for every one of them. Other singers have one voice, but Wendell sings in three, and yet it is not these novelties which have made him so universally popular. It is his personality.



The Red-Headed Music Maker

A Story of Three Jacques

Two hundred and seventy-five pounds of flesh ought to make a heavyweight, but in the case of Jacques Renard it composes a musician, not a prize-fighter. This mighty maestro is heard over the Columbia network on bi-weekly programs with Col. Stoopnagle and Budd and the Sunday broadcasts of "Songs Your Mother Used to Sing."

There was a time when Jacques Renard was mistaken for a boxer. It was at Hot Springs, Ark., and a French heavyweight by the name of Jacques Renault was staying at the same hotel. By mistake the orchestra leader received and opened the fighter's mail. Renard immediately went to work and melted away sixtyfour pounds, just to make sure there wouldn't be any more embarrassing cases of mistaken identity.

Several other facts about the portly Jacques, however, are of more importance than these weighty matters. Just when he was learning to play on the floors of his parents' home in Kiev, Russia, Jacques and the family moved to Boston. Shortly thereafter Jacques was able to hold a violin in his chubby hands and his father saw to it, with the aid of a flogging when necessary, that the lad practised and became proficient with the instrument in case visitors arrived who wanted to be entertained. Young Jacques not only got his musical start through the urgings of his father, but also learned to speak Italian fluently because of his parent's business. Father Renard, a former Cossack in the Imperial Army, had become an importer of Italian foods and Jacques had to help handle the foreign-speaking customers.

Between attending school and aiding the family's commercial enterprises, Jacques studied music with Jacques Hoffman. This early training created that desire to reach greater heights which Renard believes is largely responsible for shaping his career.

At the age of sixteen Renard



Monsieur Jacques Renard

toured South America as a violinist for the f a m o us dancer Pavlowa. Later he accepted the baton of a Boston dance orchestra. The new position was so interesting that he was inspired to form his own orchestra and open his own clubs, the Mayfair and the Cocoanut Grove.

Renard is married and the father of four children. The family lives happily in Forest Hills, occupying a penthouse in New York when they come to town for a change from suburban life.

Strolling About Radio Row

B. A. Rolfe, the maestro, is known as the merriest man in radio, and Julius Tannen the saddest.

Frank Black, the NBC general musical director, has the largest and strongest hands, and Victor Young, the composer-maestro, the smallest hands.

Lee Wiley is given credit for being the radio star with the most chic; Jane Froman with being the loveliest lark in radio; Gertrude Niesen with being the most alluring; Connie Boswell with being the girl who waged the greatest fight against odds; Ethel Waters with being the greatest female stylist among the singers; and Rosaline Greene with being the best actress in radio.

George Beatty is credited with being the stage star to make the greatest overnight hit in radio since Ed Wynn's debut; Albert Spalding with being the "high brow" who became a "regular fellow" with the musicians: Bert Lahr with being a comedian utterly without conceit; The Men About Town with being the slickest handlers of comedy lyrics; and the Revelers with being the most adept male quartet in history as well as radio; Rudy Vallee with being the celeb who has stood at the top longest despite scores of efforts to dethrone him; Johnny Marvin, the lonesome singer, with having the sweetest disposition; Frank Luther with having the most friends; Eddie and Ralph "Sisters of the Skillet" with being the safest bet a sponsor can pick when he needs immediate response; Will Rogers with being the one fellow nobody - even a sponsor - can guess what he will say next; and Edwin C. Hill with being the most forceful speaker.

How They Got Their Start

Columbia has just taken a census to discover what musical instrument is most popular among the maestros themselves, and discovers that in most cases the orchestra leaders mastered the piano, fiddle or saxophone before they took up the baton.

Among the ranks of pianists are Jack Denny, Little Jack Little, Eddie Duchin, Vincent Lopez, Claude Hopkins, Isham Jones, Joe Hymes, Freddie Rich, Lennie Hayton, Don Voorhees, Nat Shilkret, and Willard Robison, who also sings. Jones also is famous on the sax.

The most retiring member of the fiddle section is Guy Lombardo, who holds one in his left arm as a "prop," but has never played it since he took lessons as a boy in London, Ontario. However, Mark Warnow, Erno Rapee, George Hall, Enoch Light, Vincent Sorey and Leon Belasco still make the strings hum. The saxophone contingent has distinguished members in Glen Gray, Wayne King, and Carmen Lombardo, Guy's assistant and member of the sax trio of Royal Canadians.

Frank LaMarr makes a bid for originality as a xylophone manipulator, Freddy Martin and Abe Lyman turn to the drums, Louis Panico whoops it up on a trumpet, and Fess Williams the clarinet.

A Song-Writing Taxi Driver

Here's a thumbnail sketch of Abe Lyman who completes with Glen Gray as tall man of the New York Maestros and who is so broadshouldered he threatens to burst out of his tuxedo. Abe drove the first yellow taxi to appear on the streets of his home town, Chicago . . . played drums from childhood . . . abandoned the steering wheel of his taxi to thrash out syncopation in the Windy City's movie houses for \$5.00 a week . . . always got fired . . . Abe didn't like to be bossed and solved the problem by becoming boss himself . . . Organized a band for the Ship Cafe, Venice, Calif., and his music attracted the film stars of that time — Norma and Constance Talmadge. Thomas Meighan, Gloria Swanson, Charles Ray and Bebe Daniels . . . added four men to his 5piece band and moved into the Cocoanut Grove at the Ambassador Hotel in Los Angeles where he made his fame and fortune . . . since then he's played the high spots of this continent and Europe . . . has written song hits-""Mary Lou," "Mandalay," "What Can I Say, Dear, After I Say I'm Sorry?" . . . Abe once loaned \$20 to a good-looking young foreigner who had been attempting to break into pictures . . . he was the late Rudolph Valentino.

Lee Wiley, the songstress, has been worried for some time for fear that the melancholy note that inevitably creeps into her singing would not be entertaining to the lis-

(Continued on page 48)

The EDITOR and the FAMILY

O those hundreds of readers who sent us Christmas and New Year greetings and good wishes, we give our thanks. We are sorry we cannot reply to each one in kind personally but that being quite impossible, we take this opportunity to make a most fervent wish-that 1934 may be what it now promises to be, the threshold of a new prosperity and a new happiness. The wearv months through which we all have passed, like a cold and gloomy night, will only serve to make the sun more welcome and make us more deeply appreciative and worthy of our blessings.

Our hearts have been touched many times in the months gone by, with letters from our readers who frankly confessed to the hardships they were undergoing and who were yet making real sacrifices to continue their subscriptions to our magazine. One, we recall, wrote that he was sacrificing his lunch that day in order to use his lunch money for a new RADEX. Such loyalty and appreciation both humbles and exaits us.

That a new day is dawning we, at least, can no longer doubt. Our thanks go out to a great leader who dared to lead, who dared to take the offensive when weaker souls counseled caution and delay. The tide of battle has turned, the enemy is all but routed. It is at such a moment that loyalty and cooperation are needed. Let us follow our leader cheerfully and unquestioningly even into his mistakes and loyally depend upon him to lead us out of them again.

It is a matter of great satisfaction for us to mark the business improvement in our own small sphere. The month of October, 1933, was our best October since 1930. November was

A Happy New Year

the best since 1929. And December was the best month we ever had in our ten years' existence! So here's to 1934.

Confliction in Club Activities

"In the January issue, I noticed comment on the duplication of DX programs because numerous clubs arrange them ignorant of the plans of contemporaries," comments Clement Van Velsor, 1033 Sanford Ave., Irvington, N. J. "The NNRC with over 2000 members, arranges a DX program for a Sunday morning, for instance, and then a club with five or ten members arranges with another station on the same wave and about the same time. This confusion of programs is very detrimental. The NNRC has about 26 stations announc-



May we present "Happy-am-I," the Elder Solomon Lightfoot Michaux, pastor of the little church on the Potomac, who presents their unique services via WJSV and the CBS every Saturday from 7:80 to 8:00 p. m.

ing DX tips and some twelve newspapers publish them. As a result, thousands all over the country are listening for those programs and hear interference because a club with a dozen or so members has arranged a program for their benefit. It costs time and money to arrange these programs.

"Personally I think a club with a few members ought not to try to arrange programs. When it has grown to a fair size, it should cooperate with other organizations to eliminate confusion. The CDXR and the ARC are large clubs and their work as well as ours is spoiled by a small group."

It is obvious that there should be some sort of a "clearing-house" for DX programs. Each club should report its DX programs as fast as they are scheduled and when a certain wave for a certain hour has been preempted, "first come, first served," any later programs scheduled for such conflicting hour and wave, should be canceled or changed by the club reporting, upon notice from the "clearing-house." Were it not for the vast amount of work that would be involved, RADEX would offer to do this work as it now receives notice of all special programs direct from the stations involved. It is possible the cost of the work might be borne by assessment upon the clubs either in proportion to membership or to number of programs arranged. The entire matter is referred to the attention of the DX clubs in the hope that a joint committee may be appointed to work out a solution for this vexing question.

Our World-Wide Staff

We receive many comments on the accurate and up-to-the-minute data published in this magazine. Although we subscribe to radio publications from a number of foreign countries, our biggest asset is the great number of reporters we have (our readers) scattered all over the world from the northernmost shore of Alaska and Yukon to the most southerly in Chile, Argentine, New Zealand and South Africa. To the lovalty and keen interest of these readers, we owe our success in keeping abreast of the ever-changing radio picture. As an instance, a single mail brought us five letters from New Zealand, each containing a notice of the reallocation in that country as published in our December issue. On behalf of the rest of our readers we thank these five friends for their prompt and thoughtful courtesy. They were S. N. Cartwright, Hakari, Mokon River, Mokon. N. Z.; George E. Bott, 507 Southampton St., E. Hastings; Frank Carr. 21 Lowther St., Wanganui; S. Robson, President of the NZDX Club, 100 Islington St., Invercargill; and H. B. George Lewis, 22 Union St., Palmerston N.

Says Mr. Carr: "2YA, formerly on 720 will be on 570 and 3YA will be on 720 after Dec. 1, with their new 3000 watt transmitters. I use a Philco 9-tube Model 90-E; my antenna is the four-wire type, 60 feet high, 600 feet long. I have verified over 200 American stations and others in different parts of the world. Would be pleased if any American DXer would write."

And from Mr. Robson: "Conditions for reception of American stations have been excellent during the past winter (the U. S. summer) and many new stations have been reported. Since writing last, I have verified a number of new ones among which were KWCR, WFEA, WABZ, KERN. KWG, WHBL. KGGM. KWSC, KMA, KMO, KMJ, KFBK, and KGFJ. September 10 was a great night with American stations coming in at great volume and I heard the calls of eight 100-watt: KDB. KIT, K FXM, KWG, KERN, KGFJ, KP Q and WEBR. Of these, KFBK and KGFJ were new to me and I have since received their verifications. European stations have not been quite so good in comparison with the three previous years but I have logged 20 new ones. My verifications

from European stations number 31 on the b. c. band."

Radio Buyers Beware

Another "dodge" which might well have been included in our story "Gypping the Radio Buyer" in the December issue, is that of selling a receiver that will "get the short waves" when it will only reach down to 75 meters. "I have a Fada allwave midget set," writes F. W. Einstein, 601 West 141st Street, New York City, on which the salesman assured me I could pick up the s. w. It tunes from 75 to 550 stations. meters and all I can get on the short waves are the police, airport and television and, of course, the 'hams.' Is there anything I can do to get some of the world stations." Unfortunately, as will be seen from the lists of s. w. stations we publish, there is very little between the b. c. band and 75 meters except the amateurs, police, airport and television stations. The "world" stations are pretty well all below 60 meters and therefore entirely out of the range of this "allwave" set. There are a number of sets on the market which "reach into" the short waves but they are not all-wave receivers by any possible stretch of the imagination and readers should thoroughly understand this when buying them.

This and That

"For the past month," complains Donald Weber, 1377 Park Ave., Plainfield, N. J., "I have been troubled with a strange buzzing noise in my set-in fact, all three sets in our house pick it up. When the antenna is removed it stops." The fact that three sets in the house pick this noise up is proof that the trouble is not in the set. This is also indicated by the noise stopping when aerial is remov-The next step is to see if the ed. sets in neighbors' homes are troubled by the same noise. If they are it is coming from some place in the neighborhood. If they are not it is from within the house.



Blue-eyed bluesinger, Loretta Lee, with George Hall's Hotel Taft Orchestra on the Sea-Bee-Ess, Saturdays at 0:30. This raven-locked, nineteen-year-old is a fellow-native with the Boswell Sisters of N'Orleans.

Robert H. Weaver, 603 West Market Street, York, Pa., President of the National Radio Club, thinks it would be of great help if we could print a list of the mail addresses for the principal foreign stations on the b. c. band. None of the lists we receive from foreign countries contains the addresses. Can our readers help us? Send them in and we will compile them. This applies to Europe, Russia, Africa, Japan and China. We have the addresses for Oceania.

"My biggest peeve," concludes Kenneth Buxton, 282 Elgin St., Sarnia, Ont., "is that station that seems to delight to break into the middle of an overture to make a commercial announcement. Then I have to scramble all over the dial to find another station with the same program. I was listening to a band concert the other day and I had to get three stations to finish one program and then had to tune in a Canadian station to get the conclusion of an American band concert!"

From "Old Man" Henderson

Comes a letter protesting against our story in the December issue. He writes: "During the time intervening between the breakdown of the Department of Commerce and the borning of the Federal Radio Commission (which I claim was illegitimately borned), I went to Chicago and purchased the largest generator I could buy or that was manufactured at that time. Although my license, issued to me by the Department of Commerce who had been exercising authority they did not rightfully possess, called for 1000 watts. I put my power up to 3500 watts as at that particular time I had the right to do.

"I put the best coffee money could buy in a can, and the label, carton, postage on the package delivered anywhere in the United States for \$1.00. I explained that the coffee was not worth a dollar but the profit I could make on it was being used in my campaign to bring the people truths they couldn't get in the papers and leading magazines like yours.

"I did organize the Merchants' Minute Men (at a dollar a month dues) and furnished them with a card to hang in their windows, those who were not too cowardly to do so, but I furnished them with something you could or would not do—the truth. I have not consulted my books but I am sure the amount was not \$400,000.00. And —what if it was? I submitted to the Federal Radio Commission the amount of the station and employing over a hundred people and I had nothing whatever to hide from them.

"Your next statement—'Henderson is now retiring from the air because of financial troubles' is only partly true. I have had my full quota of financial troubles, having been worth at least two million dollars in substantial properties which I was unable to hold, and by paying the debts of the different lines of endeavors I was in, and actually took bankruptcy, giving up every single thing I possessed."

Mr. Henderson denies that the FRC refused to renew his license for KWKH and that, as a matter of fact, it was renewed as the "Hello World Broadcasting Corporation" with a blank of approval of transfer to the International Corp.

Last-Minute NOTES

SOME stations have evidently been excused from the frequency tests and some have been added. So far as we know, however, the tests are continuing monthly but we regret we have been unable to secure a revised list. Ray E. Everly, Newton, Ill., tells us that WEED, Greenville, N. C., on 1420 will test the first Tuesday of each month from 2:30-2:50 EST and that WOPI, Bristol, Tenn., on 1500, will test the same day from 2:50-3:10.

C. Hesterman of the CDXR, wants us to call special attention to the DX program on Feb. 24 of CFQC as this will be the first and last of the year for CFQC which has agreed to put on the program only on the assurance that they will not be flooded with requests from other clubs for specials. Again illustrating the danger of oversolicitation by clubs. Mr. Hesterman and Stan Clifton will do the announcing and the former agrees to verify personally every correct report received provided it is accompanied by Canadian postage or three pennies. His address is 610 Third Ave., E., Saskatoon, Sask.

KFLV, Rockford, Ill., on 1420 has evidently changed its call to WROK as several have reported picking it up on test and the call was clear.

CJRM writes to Harvey Kees, Beulah, N. Dak.: "The CJRM transmitter you are now hearing was originally CJRW at Fleming, Sask. We moved it out to Belle Plains, mid-

(Continued on page 47)

With the High Frequency FANS

SHORT WAVE DX CALENDAR
Eastern Standard Time:
Jan. 27, 12:30 to 1:30 am, CP5
Jan. 27, 11 pm to 1:00 am, PAOASD
Jan. 28, 2:30 to 4:00 am, VE9CS
Feb. 4, 9:00 to 11:00 pm, CR7AA
Feb. 5, 5:00 to 6:30 am, PK1WK
Feb. 10, 5:00 to 6:30 am, PK1WK
Feb. 10, 9:30 to 10:30 pm, YV3BC
Feb. 15, 5:00 to 6:30 am, PK1WK
Feb. 24, 12:00 to 1:00 am, EAJ25

Station CP5, 49.3 meters or 6.080 megs., La Paz, Bolivia, will dedicate their special program of Jan. 27 to readers of RADEX. Any fan who has not yet heard the interesting programs originating from this station should take advantage of this opportunity of hearing a truly unusual program. CP5 is owned by Compañia Radio Boliviana, Casilla 637, La Paz, Bolivia. They may be identified by the expression "Radio Illimani." CP5 is on the air daily with a power of 1 kw. from 9 to 11:30 pm, EST. On Monday, Wednesday and Friday they also work from 6:30 to 7:30 pm, and on Tuesday, Thursday and Saturday from 6:30 to 8 pm.

A Dutch Amateur

PAOASD is an amateur station owned by W. F. Jacot of Euterpestraat 73, Amsterdam, Holland. The wavelength used by this station, 79.57 meters is, unfortunately, usually covered with interference and atmospherics and it is doubtful that it will be heard with the small amount of power used.

CR7AA, like PAOASD, will transmit their special program at what is perhaps the best hour for reception in this country, but on account of the long wavelength and low power, it is doubtful that this station will be heard. CR7AA works on 84.67 meters and can be addressed at Box 183, Laurenco Marques, Mozambique. The programs from PAOASD and CR7AA

• • • and PAGE TAYLOR

were arranged through the courtesy of the International DX'ers Alliance of Bloomington, Ill.

Radio Service Engineers, Ltd., 734 Davie St., Vancouver, B. C., announce that on January 28 their radio stations CKFC and VE9CS will transmit special DX programs which will be dedicated to all radio clubs. VE9CS will work on 6070 kcs. or 49.39 meters with 5 watts power from 2:30 to 4 am, EST.

Those PK1WK Specials

A letter received from Mr. de Kort and printed in the January number of this magazine states that PK1WK works on wavelengths of 49.02 and 49.5 meters, but Mr. de Kort didn't mention which of these wavelengths would be used for the special transmissions which will be dedicated es-



Howard Marsh, ranking tenor of the light operatic stage and renowned for his leading role in "The Student Prince," is now on the new Buick program via the CBS, Mondays, 9.15 to 9:30 EST.

pecially to American listeners on Feb. 5, 10 and 15. As the two waves lie in the same band, however, it will be possible to skip back and forth between 49.02 and 49.5 until the station is heard. Address reports to Mr. J. F. W. de Kort, Radiohandel, Bragaweg 34, Bandoeng, Java.

EAJ25, The Barcelona Radio Club, Barcelona, Spain, works on 6.000 megs. or 49.97 meters.

A Happy New S.W. Year

1934 promises to be a very interesting short wave year. Many new stations are scheduled to make an appearance this year, and already some of these have been reported, such as RNE and UOR3. Before the end of the year short wave listeners can expect to hear programs directly from Ceylon, New Zealand, from various French possessions in Africa, and from Christmas Island. At the present time we can record the arrival on the air of Radio Budapest HAT, which was heard and reported simultaneously by Roger D. Causse, P. O. Box 6688, Lester, Pa., and Sam Kiamie, 2857 Sampson Ave., New York City. Mr. Kiamie writes. "This is a new station and came in like a ton of bricks last Sunday. They employ a female announcer and announcements are made very rarely. She says 'Radio Budapest HAT', first in Hungarian and then in French." Mr. Causse gives the wavelength as 41.53 meters (7.220 megs.), and the time of his reception as 3.22 to 3:47 pm. EST, also on a Sunday.

Wants Our Help

The French Colonial station requests the assistance of all shortwave listeners in helping them determine how their transmissions may be improved. Several readers have received questionnaires along with their verifications from this station, but all readers of this magazine can be of assistance if they will report on their reception of the various programs offered and include in their reports the answers to the following questions: 1. What is your exact location? (Latitude, longitude, City, State, Country).

2. Are you situated in a mountainous region? wooded? dry? humid? near the seashore? What is the altitude?

3. At what time of the year and at what hour is reception best?

4. What receiving equipment do you use?

5. What other shortwave stations do you hear regularly? their wavelengths? Are they better or less well received than Radio-Coloniale Francaise?

6. Do atmospheric disturbances annoy you? When are they most annoying? Are they as bothersome on wavelenths above 50 meters?

7. What do you think of our programs?

8. What programs interest you most?

9. How much time do you spend listening to them? What hours are most convenient for you to listen to them? At the present time these stations have four transmission schedules, given below in EST.

1. 8:00 to 11:00 am, 19.68 meters (15.234 megs.)

2. 11:15 am to 2:15 pm, 25.2 meters (11.898 megs.)

3. 3:00 to 6:00 pm, 25.2 and 25.6 meters.

4. 6:15 to 9:00 pm, 25.6 meters (11.711 megs.) 10 pm to midnight, 25.2 meters.

Letters to this station should be addressed to: Ministère des Postes, Télégraphs & Téléphones, Direction de la Radiodiffusion, 103 Rue de Grenelle, Paris VII, France.

From Our Fans

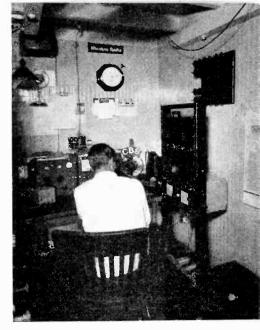
"G6RX on 4302 kcs., 69.44 meters, roars in like a bear from 8 to 11 pm. This station is only testing but reception is wonderful; the volume and clearness amazes me. Records and short announcements make up the program with short intervals of dot and dash." This letter from Albert E. Lee, 30 Lakeside Ave., Pompton Lakes, N. J., is typical of many letters received. Richard M. Carter and Charles Perdicaro give the address as Rugby Radio Station, Hillmorton, near Rugby, Warwickshire, England. Others reporting G6RX are Mrs. A. Wilbur, 80 Green St., Newark, N. J.; Bernard Remilland, 53 Washington St., Brattleboro, Vt.; Wm. Ross, Jr., 3521 Kroger Ave., Cincinnati; Robert L. Weber; Clarence Sargent; R. W. Evans; Guy R. Bigbee of Ft. Benning, Ga.; and Sam Kiamie.

"The Voice of the Prairies, Ltd.," operators of VE9CA, Calgary, Alta., hope, at some not too distant date, to resume their broadcasting on shortwaves. VE9CA works on 6.030 megs. or 49.72 meters.

The Byrd Station

Many listeners continue to hear broadcasts direct from the S. S. Jacob Rupert, which must now be close to the Antarctic ice barrier. On the arrival of the Byrd Expedition in Little America, KJTY will be removed from the ship and set up at the Main Base, at which location it will be known under the new call sign KFZ. KFZ will radiate 1000 watts power, and will work on about the same frequencies as KJTY. Another station, KFY, with only 75 watts power, will be set up at the Forward Base, using the same frequencies as KFZ. These wavelengths are given in our complete list of USA stations this month.

Listeners should be very careful, when tuning for KJTY or KFZ, not to confuse these stations with many others which are on the air at the same time relaying their transmissions. Some readers are reporting reception of KJTY on frequencies which do not tally with their Federally assigned frequencies, but which do compare with those used by stations in Bolinas, Rocky Point, Kahuku or even Buenos Aires. The complete list of stations of the United States and its Possessions given this month will aid readers in properly identifying stations which might be heard relaying KJTY or KFZ. This caution,



Here's the tiny cabin from which engineer John N. Dyer operates the radio control on the broadcasts from the Byrd Expedition aboard the good ship "Jacob Ruppert." This is the only combination radio broadcasting studio and sleeping quarters in the world.

however, does not mean that KJTY cannot be directly received with good volume and clearness. Many interesting reports have been received, some of which follow.

"I have just left my receiver after picking up KJTY," writes Alfred H. Bacon, 928 13th St., New Westminster, B. C. "They were arranging Saturday's program for CBS and the position of the ship was given. They spoke of introducing the three stowaways in the program, and mentioned that their dogs also would have a part. They mentioned that the weather has been good and no icebergs have been encountered, although they expect to see some within three days. The operator said that the ship's bell and siren would be used as usual."

"Stations KEE, KKH, KKQ, KEJ and W2XBJ have been heard many times working KJTY," reports R. W. Evans, 832 Richie Ave., Lima, Ohio. "These tests usually take place on Tuesdays and Fridays from 9 pm on. and the actual broadcast is Saturday at 10 pm. KKH picks up the KJTY signal and relays it to KEE, who sends it to New York. I received KJTY on a new special freq. of 9520 kcs. at 11:40 pm. For some reason they never mention frequencies in their conversations, all mention of kilocycles being made by referring to 'No. 7' or 'No. 11', with the exception of 9520 and 11830, which don't seem to have a code number yet." These two special freqs. mentioned by Mr. Evans were assigned temporarily for a period ending January 5th.

Other readers reporting good reception of KJTY this month are A. B. Baadsgaard, Ponoka, Alta.; Robert L. Weber, Doyle E. Carpenter and Stuart Walmsley.

R. W. Evans of Lima, Ohio, includes this additional data in his let-"Station YVQ was heard on ter: 6700 kcs. rebroadcasting about YV1BC near 10 pm. Station XDC near 9350 kcs. has been testing with music at 5:30 pm EST. HJ1ABB seems to be working on both 6580 and 6500 kcs. now. CNR, Rabat, Morocco, was well received on 8050 kcs, on a Sunday afternoon. I received a very nice verification from CT1AA for a program I heard last July, so you see it takes quite a bit of time for them to get around to answering."

"Radio-Tananarive"

The Directeur des Postes et des Télégraphes of the Radiotelegraphic Service at Tananariye, Madagascar, advises us that the correct and only call sign of their station is "Radio Tananarive," not FIQA or FIUI. His letter reads: "The station does not have an indicative sign; the transmissions begin with a piece of recorded music entitled 'Ramona', and end with the French National Anthem. The station operates on 6000 kcs. with a power of 400 watts antenna. We transmit every day except Monday, programs consisting of musical selections rendered by artists, or record-

ings, as well as news flashes." The schedule is given correctly in our lists under the heading "Radio-Tenanarive."

"Quite a few of the South Americans have been coming through with fine volume lately and there are several that I have not identified yet," advises Stuart Walmsley, 1316 W. 58th Place, Los Angeles, Calif. "I notice that YV1BC is using a new wave, just slightly below W9XF, and they come through like a ton of bricks here, with their sign-off coming at about 6:30 pm, PST. YV3BC is another very good station. They are usually on until 7 pm, and, for the benefit of those who have not tuned them in, they announce every half hour, as do practically all the S. Americans. HC2RL is coming through fairly well with their Tuesday night broadcasts and I receive them best between 7:30 and 8 pm, PST. HIX, Santo Domingo, came through here on their last special broadcast although reception conditions were not good.

"All last week I heard a station broadcasting between W9XF and YV1BC. I could not catch the location when the announcement was given but their call sounded like TGR. There is no such station listed and I have not heard it again."

A New Peruvian

TI4NRH, Heredia, Costa Rica, was recently heard near 7 pm, EST by Clarence Sargent, Dansville, N. Y. "Their signals fade a lot," he writes. "The volume of this station varies, during a single broadcast, from R4 to R8, and the quality from QSA2 to 5. I have also heard a new station on about 48 meters, OCM, Lima, Peru. They broadcast very good music and request reports from SWL."

OCM has also been reported by J. A. Shanks of Russelville, Tenn. He postcards, "Do you know of a Colombian on the Hi frequency side of HJ1ABB? His call was HJ1A----(missed the last two letters). I also hear a Colombian on GSA's freq.,



Strange folks and stranger ports are brought to you each Thursday at 8:00 p.m. EST over NBC W1Z in Captain Diamond's Adventures. Al Swenson is the Cap'n, May Buckley plays his wife and Laddie Seaman, popular NBC juvenile, plays the part of Tommy.

which I think might be HJ4ABI."

And Other Colombian

Two readers report a new phone station in Barranquilla, Colombia, testing with WNC at Hialeah, Geo. W. Burns of 2466 Wahl Terrace, Cincinnati, stating that he believes the call letters are HJA3 and the frequency, 12.832 megs. Richard Carter, 820 McKinley, Ann Arbor, Mich., writes, "I heard a station on about 20.15 meters calling WNC and wishing to test with them. This station gave its location as Barranquilla, Colombia, and the call might have been HJS or HJF."

"My veri. from ZFS gives their address at Office of Superintendent of Telegraphs, Central Bay Street, Nassau N. P., Bahamas," contributes Mr. Carter of Ann Arbor. "Their traffic with England is irregular. Since then I've heard ZFS calling ZFV, South Africa, and a woman calling CQ to all ships. They sometimes have traffic with GYC and GYD, England, between

9 and 10 pm, EST, and have also been heard working VPSX. Tonight, 6:30 to 7:10 pm, I heard a station in Montevideo, Uruguay on approx. 29.3 calling New York. XETE was testing near 6:30 am one morning near 32 meters. IAC is coming in well again on 45.1 meters in the late afternoons. HIX has moved down to 49.5 meters to get away from the CW which seems to be ever present on 50 YVR on 32.7 m. frequently meters. works EHY, Madrid, near 4 pm. YVQ was heard relaying programs of YV1BC, and one evening they were heard on 44.96 meters rebroadcasting the German stations between 6 and $\overline{7}$ I note that their 22.48 meter pm. and 25.67 meter waves are almost always on at the same time."

Some Brief Reports

"I believe I have been very fortunate in reception on the short wave bands, even though a bus line runs right past my door," comments Wm. E. Lewis, 618 Quincy St., NW., Washington, D. C. "I have received six Daventry transmitters and have a very nice letter from the BBC in reply to my reports. I have also heard G6RX, Rugby. The Deutschlandsenders come in well here, so I have been able to log the four Zeesen stations. They are also very good about answering letters. I just received a verification from Mr. George Abbes, owner of HIZ, Santo Domingo. He states that HIZ is on the air daily from 4:40 to 5:40 pm EST and broadcast special DX programs every Saturday night from 10 to 12 pm, EST. They only use 20 watts power in the antenna, but their volume is very good at this point of reception. I use a Philco Model 490, 2-tube built-in converter, and it gives very faithful service, even with the aforementioned electrical interference ever present. I will answer any letters I may receive, but am especially anxious to hear from owners of Philco 490's."

Misses His European News

"A couple of Saturday nights I got the Byrd broadcast much better from KKH than I could get it from the network," contributes D. E. Carpenter, Emmetsburg, Ia. "I suppose Byrd was using 13.2 megs. which of course had faded out here much earlier. PSK is the only one of the S. Americans which is consistently good. I2RO has deserted me while Rue de Grenelle was heard only five times this month. I have a personal grievance with London for taking GSF off the morning schedule. They were the old stand-by for the early news from Europe."

"Here is some miscellaneous information and a few observations on s.w. stations heard lately," contributed by Robert L. Weber, West McHenry, TIL. "PSK, 36.65 meters, announces that they relay programs from PRAG. and they welcome SHORT reports and will verify with a card showing views of the City of Rio de Janeiro. I have been very fortunate in receiving all three stations listed in RADEX for the Dominican Republic. Heard HIX this morning on their DX special. HI1A, according to a card received from them, work from 8 to 10 pm daily. These hours are Santo Domingo time, which is 20 minutes faster than EST."

News from Australia is contained in a letter from Clement Van Velsor, 1033 Sanford Ave., Irvington, N. J. "My Aussie friend reports that CQN, city of Macao, on 49 plus, is being heard around 4 am, EST, several mornings a week, and that ZHI, 49 plus meters, Singapore, is reported around 5 to 8 am, EST."

Some Tips

"Here's a tip for those who like to listen in on the 'ham' bands," suggests K. P. Williamson, 1610 Sherbrooke St., W., Montreal, P. Q. "On two successive Sunday afternoons I have heard K4SA, Porto Rico, on 20meters. He comes in here with fine volume and I received a nice QSL card from him confirming my reception of his station. Prior to the bad spell on shortwaves, I was rather fortunate and added these new stations to my log: CNR, RV59, and SUZ, which was phoning DGU near 6 am, EST."

J. A. Shanks of Russellville, Tenn., and Roy E. Robinson of Providence, R. I., have confirmations from RNE. The Director of the station. Mme. Inna Marr. told Mr. Shanks that tests between the USSR and the USA take place each Monday from 1230 to 1500 GMT. The address is given as: Commisariat du Peuple des Communica-Eléctriques tions Postales et de l'URSS, No. 17 Gorki Street, Moscow, USSR.

"Less than a year ago, I received one of those wonderful Midwest 16tube superheterodynes," writes the Rev. Jerome Shiltz, 120 Courtland Street, Wellington, Ohio. "I have received many foreign stations—EAQ, I2RO, FYA, CT1AA, GSA-B-D-E, VK3ME, DJA-C-D, YVQ, GBB-U. Also, of course, many amateurs and police from Maine to California and from Canada to Florida. I would be glad to hear from other Midwest users."

"I am using one of the Midwest 16tube receivers which really goes after them," advises Richard F. Miller, 515 Ridgeway, Dallas, Texas. "GSA, 49.56 m., and DJC, 49.83 m., come in loud enough for rebroadcasting. I have EAQ, VK2ME and 3ME verified and will probably get one from Germany next month. GSA sent a nice card of thanks but did not verify. YV1BC and 3BC are almost like locals. LSN and KKP are very strong. But not a peep out of the Japs. Perhaps I don't get up early enough."

The second edition of the DX Log of the World will contain the reallocation in Europe and New Zealand. It will be on sale at most newsstands on February 1st. Price 10c.

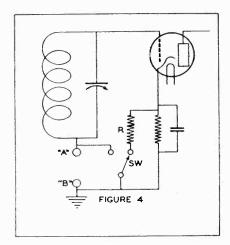
Using MICROPHONES and Phonograph PICKUPS

PART 2

• • *By* B. FRANCIS DASHIELL

LAST month we discussed a few simple methods of attaching phonograph pickups and microphones to radio receivers. For those readers who wish to make permanent installations, and get maximum results, we suggest three circuit alterations which are not complicated. Any reader, who is experimentally inclined, can make the connections without difficulty. A study of the circuit diagram of the receiver in question will quickly show how the unit is to be placed.

In Figure 4, the circuit at the "low" end of the grid coil of the detector tube is disconnected at the ground. One contact of a two point switch (SW) is attached to the end of the coil, then the "A" and "B" output terminals of the unit are connected in series with the coil and ground, as shown. The lever of the switch is next grounded. The second contact of SW connects to the cathode of the



tube through a 5,000-ohm resistor (R), inserted so as to increase the bias when the unit is used. When the switch lever is set on the righthand contact the resistor is cut in and the tube acts as a first audio amplifier, instead of biased detector. When the lever is set on the left-hand contact, the unit output is grounded, and the tube acts as the original detector for radio signals.

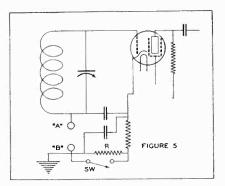
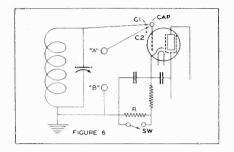


Figure 5 shows a somewhat similar method, except the switch (SW) merely shorts the resistor R. It is used when the detector grid is fed from an intermediate transformer stage (superheterodyne). When SW is closed, R is shorted, and the detector becomes an audio amplifier.

And, in Figure 6, we see an arrangement for any power detector of the tetrode type, such as a -24A, -32, -35, -36 and -51. The resistor R furnishes sufficient cathode bias so that the tube will act as an audio amplifier when the microphone unit is in use. Contacts are made to the control-grid cap of the tube. These two leads, shown at C1 and C2 must be changed whenever the unit is operated, for a



switch in the grid lead is impracticable. Similar arrangements can be made for detectors of the triode and pentode types, but changing the grid connections at the socket will be more difficult than at the top cap.

For diode tube circuits of the earlier types of tubes, the output unit ("A" and "B") can be applied to the leads across which the detected or rectified signal exists. For modern diodes, such as the -85 type of detector, the unit output is applied directly between the control grid and ground, or shunted across the grid-The triode section of bias resistor. the tube circuit is already taken care of by design, and the circuit is wired for audio amplification, so no alterations are necessary.

Radio in BELGIUM

I AM a constant reader of RADEX as my home is in Brooklyn. I am now visiting in Europe. I have over 350 stations logged from my New York residence. In Europe, my aim is not DX, though I must say I have received outstanding results without even looking for them. Twenty days out of every month, WEAF, WABC, WCAU, WTIC. WTAM, KOA. WBBM, and CKAC can easily be picked up here. The general signal is QSA 3-4, and R 7-8. These stations are all of a considerably lower power than most European stations. The maximum in the U.S. thus far is 50 kw. On the continent we have Prague with 150 kw., Luxembourg

with 120 kw., Leipzig with 150 and dozens of other high-powered transmitters which should certainly make themselves heard in North America. Yet the only European I was ever able to log in N. Y. was Radio Normandie. It's really some riddle.

European local reception can in no way be compared with that in N. Y. Save for one or two stations, the rest do not come in like those in N. Y. Besides the music, background noises can always be heard. This is not judged from the receiver I am using but from at least half a dozen in various locations.

Distant reception is something very puzzling. I can't make out how Moscow can come in here all day long without interruption. Surely no one in N. Y. can claim constant reception of even Chicago. It's just one of those mysteries which goes to make radio all the more interesting.

F. Maybarduk, 217 Rue de Campine, Liege, Belgium.



Maria Silveira is the possessor of the lovely soprano voice you hear on those Saturday night broadcasts over CBS for the Byrd Antarctic Expedition. She helps William Daly and his orchestra cheer up the explorers way down at the bottom of the world.

STORIES of the Log Builders

S CORES of readers are this month joining for the first time the "Heard-Other-Continents" Club. That program of LR5 on December 3, was the key that opened a new field for many.

"Thanks to your DX calendar, I enjoyed a whole hour of the program of LR5 this morning," writes Ray H. Zorn, Troy Grove, Ill. "They came in very well and had a nice variety of selections. This is my second S. A. on the b. c. On the morning of Nov. 18, I received CX26 at Montevideo on 1050. My log now stands at 352 with 122 using 100 watts or less. My best: KFPM, CHML, XEFV, KPCB, KXL, WSYB, XEFZ. I use two sets; an Echophone 6-tube, several years old, and a home-built 3tube which I use for local stations. I bought the first issue of your 'DX Log of the World' the minute I saw it and shall buy each succeeding copy. It is a much-needed and valuable book."

"Thanks to RADEX for a real radio thrill," exults B. S. Hastings, 4333 Coolbrooke Ave., Montreal. "I was able this morning to receive LR5, Buenos Aires, loudly and clearly on my 8-tube Atwater Kent. Don't cut any part of RADEX out," he adds. "My only interest to date has been the b. c. band but before many weeks, that s. w. section of yours is going to have me hunting a converter."

Another who received LR5 as a result of the notice of their DX program in our Calendar (thanks to the International DXers Alliance) was Frank Hilburn, 106 Mathew Street, Yoakum, Texas. Frank has heard several Japs and would like some tips on the best time to tune in some Aussies. He has increased his aerial from 25 feet to 200 and finds much better reception.

Among others who reported good reception of LR5 were Ivor Nixon,

The Foreigners Are Coming in

Room 505, 45 Richmond St., W., Toronto; C. R. Anderson, 1026 1st N. E., Mason City, Iowa; Joe Stokes, 7318 Woodlawn Ave., Swissvale, Pa.; Frank Wheeler, 406 Eagle Point, Lakeside, Erie, Pa.; Earl R. Roberts, Newark, Ohio; Paul W. Craven, 190 Commonwealth Ave., Buffalo, N. Y.

"I am an ardent DXer," confesses J. M. Forbes, Keewatin, Ont., "and my log now totals 316 counting four police on 1534 and 1574. Some of my best: 2YA, CX26, LR5, CMCW, CHAB, 10-AT, 10-BI, CHRC, CKMO, CKWX and many others. I have not been able to pull in Japan or Australia yet but hope to after receiving my Time Converter.

Defends Canadian Commission

"To the person who gives an unfavorable criticism of the Canadian Radio Commission in your December issue," continues Mr. Forbes, "I would like to say that, in my opinion, radio has never before been as well organized and of such a high standard in Canada before. I say, give Radio Commission a chance. the They've only started and I think they've made a wonderful beginning considering their handicaps and the terrible mess things were in when they started. As for the two-dollar license, I think it's cheap considering the fine entertainment sent out by the Commission with long harangues telling you what you ought to wear or eat or brush your teeth with."

And Clement Van Velsor, Irvington, N. J., adds: "The reader who complained about the set-up in Canada evidently likes the same type of program as many on this side, that is dance music and other such stuff. Whenever I cannot find anything but dance music in this country, I turn to Canadian stations where usually I can find good music."

"A new voice is joining your fellowship from North Hollywood." greets Richard L. Bullard, 5649 Irvine Ave., North Hollywood, Calif. "I am entering the season with a brand new Midwest 16-34 chassis, and I am getting all prepared to make this the greatest in my career for DX. Since I have had the set, I have just listened here and there, hit and miss, to see just what the set could do. I am more than satisfied. In the face of poor DX conditions here on the coast, I have logged in the past month YV1BC, YV3BC, YVQ, Prado, LSN, Santo Domingo, Pontoise. EAO. W3XAU, VE9JR, W8XK, W3XL, W1XAL, W3XAL, W2XE, W9XF, VE9GW, VE9CS, W2DAF-all on the s. w. On the b. c. band, I have received all the big stations and many smaller ones. On the long waves, above the b. c. band, I have had KCD, Oakland, KLK, Reno, KCAT, KCL and several others. You are going to hear from me often as I used to be an ardent DX fan with a 2-tube Harkness. I would be pleased to hear from other owners of the Midwest 16, telling about their results, aerial and ground installations, etc."

From Alaska and Arizona

From Curry, Alaska, (Box 14) comes this report from A. J. Bubnik: "I have a Scott all-wave receiver and during the past seven weeks I have logged on short waves, W8XK, GSB-D, EAQ, W2XAF, W3XL, Pontoise, W1XAL, PSK. All these stations come here daily. I have heard a lot more but was unable to identify them. On the b. c. band, I have so far around 120 stations as far east as N. Y. I hear every night five or six different stations in New Zealand and Australia; Honolulu and Japan every night. Conditions for reception here in Alaska are very bad, however, on my Scott deluxe, I have been able to catch quite a few stations in these few weeks that I have had it."

"Perhaps my most unusual catch was KZRM, Manila, on 618.5 at 4:00 a. m. MST, on the morning of December 3," thinks Howard G. Mathis, Box 301, Holbrook, Ariz. "The program was heard for an hour and a report has been sent in for verification. The station was strongly received but has not been heard since! On the b. c. band, I have received 384 stations including 2BL, 5CK, 2CO, 3FC, 2GB, 4QG, 4RK in Australia and 2YA in N. Z. My Japanese list has reached 22 and XGOA, Nanking, China. On the s. w., the list includes 32 b. c. stations, those outside the U.S. and Canada being GSB-C-E. DJB, EAQ, FYA, LSN, LSX, YV3BC, HJ1ABB, HI1A, XETE, [VK2M E-3ME], RV15 and J1AA."

Readers Report Progress

"I started DXing on December 25. 1931, and in exactly two years I have built up a log of 582 stations," sums up Stuart Russell Garnett, 4131 Wolf Road, Western Springs, Ill. "Of these I have 490 verified. Some of my best catches are YV1BC, LR5, 2YA, 10-AT, CKMO, KGFJ, KREG, WKAQ and CMCU. I have all the 10-s in Canada except BU. I have logged all the states but Rhode Island and Delaware and all the Canadian provinces but New Brunswick and Nova Scotia. My biggest surprise was winning a crate of apples as one of the three farthest listeners to KPQ's dedicatory program of their new 100-watt transmitter. Incidentally, this was my first 100-watter from the Coast."

"I received a fine veri from Radio Normandie just 19 days after I sent my report," announces Charles Leboeuf, Box 222, North Grosvernordale, Conn. "I expect one from Poste These two French Parisian soon. stations are on the air every morning at 2:15. I can hear their carrier wave about five minutes before they begin to broadcast. They broadcast phonograph records and news dispatches. I have also received LR5, KDFN, CMCA, CJOC, CRCS, 10-AK, CHNC, XEB, XEFO, FQN." Charles has a triangular-shaped aerial

about 300 feet in length in all. He states that it gives him good volume and very little fading.

Through the Chicago Barrage

"Although I am located in the city of Chicago, where there are stations on many waves," begins a new reader, Blake H. Page, 3045 W. Washington Blvd., "yet I have succeeded in logging 437 stations with my 14-tube Zenith Model 103 which I have had only since last March. On December 13, between noon and 4:30 p. m., I picked up 32 stations from Mexico to Minneapolis and from New York City to Dallas. I use a cage 30-foot antenna with a shielded lead-in of about 40 feet. I am also using an ICA line filter." Mr. Page submits a list of stations received showing every channel, a number of them being completed.

"My log now includes all states with many completely verified; all channels except 1030," remarks J. Kenneth Vetter, 964 Waukegan Road, Deerfield, Ill. "I find DX practically annihilated on either 1200 or 1210 due to all-night pests. It seems to me, even though little restriction is placed on using the air from midnight until six a. m., that these stations take a very selfish attitude in the matter. My best catches so far this season are 2CO and LR5. Other fair ones are XETB, CMBK, KERN, KIEM and XEAI. Although many DXers report that CRCM refuse to verify, I received a very nice letter from them about three weeks ago."

Notes and Tips

"We were obliged to suspend our DX programs six weeks ago after putting on only two or three," writes Wendell Cox of Station XES, Tampico, Tamps. "We now wish to resume these but would like for you to advise us the best days and the best hour. We intended to use the first and third Saturday morning of each month at 1:00 a. m., or just after KYW, Chicago, also on 1020, signs off, and that time would be convenient if no other station is on 1020 at that time." We have advised XES that inasmuch as they have practically a clear channel except for KYW, these hours should be entirely satisfactory. We may not have a confirmation from them in time for this month's calendar but listeners would do well to try to tune them in at the hours they mention.

We are glad to be advised by CHAB, Moose Jaw, Sask., that the report of their death, like that of Mark Twain, was "greatly exaggerated." "We are on the air broadcasting on regular schedule," writes H. C. Buch-"Our station is anan, Secretary. owned by the people of Moose Jaw." Also comes a correction from 10-BQ at Brantford: "On page 39, January issue, you state 'CKPC formerly 10BQ now Brantford.' Would you kindly make correction of the above. CKPC and 10BQ are separate stations. CKPC was formerly of Preston, Ont., is now located in Brantford. 10-BQ-"The Little Station of the Hill" is still operating in the same old way."



Here is the wicked "Ardala Valmar." the feminine villain of "Buck Rogers in the 25th Century." Monday to Thursday on the CBS. Elaine Melchior as the fascinating Ardala is plotting among the planets to rule over Venus. We're going to vote for her.

"The new radio station here in Springfield (Mo.) is to begin operating regularly at 6:00 a. m. CST, Monday (Christmas) morning. A lastminute change in call letters was made from KGIZ to KWTO ('Keep Watching The Ozarks'). It will be on 560 with 500 watts. I think they plan to use KGBX's frequency check in January." Thus reports James Owen, 1019 W. Webster, Springfield, Mo.

"Here is a tip for those who have not logged British Columbia," offers Richard M. Carter, Ann Arbor, Mich. "CRCV comes in well every night from 1:00-2:00 a. m., EST." Richard adds "Radio certainly is peculiar. I heard the harmonic of WDAS on 4,110 kcs. at 4:00 p. m. and that of WGLC on 6,850 at 8:00 p. m., both 100-watters and impossible for me to hear on the regular b. c. band at those hours."

"There are two Newfoundland stations you never list," points out Harold Canning, 617 W. Highland, San Angelo, Texas. "They are VO GT, 950 kcs. 100 watts, Bell Island, owned by the Rev. Mr. Rawlins, and Vo8A, 6800 kcs., St. Johns, owned by E. Ash." We were advised some time ago that VOGT was off the air. Can some of our eastern readers verify?

XEAE, Tijuana, B. C., on 980, has joined the all-nighters, according to Clarence C. Bargen, Mountain Lake, Minn. They will be on the air every morning except Sunday from late in the evening until 5:00 a. m., EST.

The new official list of the Canadian Radio Broadcasting Commission does not show CJ RW, Fleming, Sask. Has it been deleted or is this the new station CJRC, 1390, Middlechurch? Will some of our Saskatchewan readers please advise us?

"WCBM, Baltimore, broadcasts our DX tips every Friday morning at 12:01 EST and KDKA every Monday at 12:30 a. m.," says A. W. Oppel, Executive Secretary of the NNRC, and adds: "Radio Normandie, 1328 kcs., Fecamp, France, is coming through quite steadily every morning except Sunday for an hour after the start of their regular broadcast at 2:15 a. m., EST."

HELP WANTED Male *or* Female

WHAT good Samaritan will give these readers a helping hand in solving their problems?

"Tuesday a. m., Dec. 19, CST., I tuned in on my Majestic 131 t. r. f., a station on exactly 980 kcs. after XEAE had signed off at 1:30 a.m. This station announced they were in San Diego, Calif., and said they were the greatest little 50 watt station in the world. They played recordings and were ashamed to give their call letters. They were on until four a.m." This sounds like an outlaw. Perhaps some reader in San Diego can tell us.

"I always hear a very weak station on about 1054 kcs. at 2 to 3 a.m.," resumes Mr. Jesse L. Lausman, 717 S. Shelby St., Louisville, Ky. "They broadcast stock market reports of British controls and talk about farming, wheat crops, etc. Who could this be at such an hour?" The stations in Palmerston North, N. Z., were on 1050 until December first. Since that date Dunedin stations have been on that channel—4ZM and 4ZO—but these have only 100 and 25 watts respectively. Can anyone make a better guess?

* * *

F. Wiseman, 13 Kyle Street, Scotswood, Newcastle-on-Tyne, England, proves his reception in an unmistakable way by reproducing the program on a phonograph record and mailing it immediately to the station heard. Now he is stumped with a station heard on 1000-1010 kcs., below WBZ and above KWJ. The program was organ music. The speaker said "WHA (or WAK) broadcasts for James Winston . . . New Haven." Mr. Wiseman has played his record over and over and feels sure the call is WHA. It was not, of course, WHA on 940. Mr. Wiseman is exceedingly anxious to identify this station and if any reader can think of a solution, he should write Mr. Wiseman at the above address.

* *

"Since last writing you, my log has increased from 414 to 508," counts up David Walton, P. O. Box 87. Picton, Ont. "My recent catches include LR5, HIX and VE9EK. In answer to Ernest Byers in the January issue, I have heard the slogan 'The Voice of the Adirondacks' used by WHDL at Tupper Lake, N. Y., on 1420. Who can tell me what station was broadcasting on 1210 on the morning of Saturday, Dec. 23, using only Spanish? (XETZ is on 1210) Does WIND ever sign off before KTAB? Every time I try for the latter I am foiled by a 'Milkman's Matinee' or something."

"On Dec. 3, I heard a Frenchspeaking station on 1320 kcs. from 2:30 to 3 a.m.," says Paul W. Craven, 190 Commonwealth Ave., Buffaio, N. Y. "I couldn't identify him because of the heavy static. Did anyone else hear him? It wasn't a harmonic of CKAC because they weren't on at the time. (Ed. Fecamp, France, is on 1328 and has been rather widely heard in the U. S.) Am using a Stewart Warner all-wave 8-tuber. Would like to hear from anyone who has a similar set."

On Christmas morning, W. T. R. Morris, Jr., 3219 Garland Ave., Richmond, Va., picked up a mystery station on 1280 in a language he could not understand but which sounded like a mixture of German or Italian. The station faded at dawn which was another indication of its being a foreigner. He feels sure it must have been Lodz, Poland, on 1283. The program was typical of Christmas with a chorus which sang several well-known anthems. Did any other reader chance upon this program? It



If you've wondered if Rubinoff is as black as Eddie Cantor paints him—well, here they are in a studio on the movie lot in Hollywood with Eddie still in his "Roman Scandals" makeup.

was logged from 5:50 until 6:50 a.m., EST.

"My set is a Stewart-Warner, Model 102-B. with a built-in converter, Model 301-B. Six tubes are used with two more in the converter. I have not been entirely satisfied with the operation of the converter. The only stations off the continent that I can pick up are Pontoise and GSE, Daventry, both on the 25 meter band. Have also heard BSA on 49.56 m. I would like to hear from someone who is using the same models as to their results on the s.w. converter." The inquirer is Edgar W. Jones, 1250 5th Ave., S., Lethbridge, Alberta. Who can help him?

"Every morning, about 3:00 or 4:00 some weak station broadcasts on the same channel as WTAM (1070)," says Joel H. Armantrout, 602 E. Magnolia St., Fitzgerald, Ga. "I cannot catch the call as the signal is too faint. Could you tell me what station this is? I have a 1934 6-tube Philco midget. I have had it only two months and in that time I have logged 306 stations on the regular b. c. band of which 76 are 100-watt." Joel wants to join a good DX club.

* *

"I recently purchased a 10-tube Clarion superhet. Sunday morning, Dec. 10, around four or five a.m., EST, I turned the dial to 559 kcs. and heard a program with the announcement "This is D9AN testing." To make sure I listened to another selection and then the same announcement. He talked about European broadcasting but I could hold them for only ten minutes then they faded completely. Can you help me identify this one?" This query is from Paul Spachman, 13 Hillside Ave., Souderton, Pa. Who can help?

* * *

It is our understanding that the Radio Commission is excusing some of the stations from further frequency tests, perhaps after they have b e en successfully and correctly checked. No announcement is made of such exceptions. William Benz, 4717 Morganford Road, St. Louis, writes that he has tried hard for WKAR, East Lansing, and WJEM, Tupelo, Miss., on their checks without success and wants to know if any others have logged them during these periods.

If anyone has succeeded in sharpening the tuning of his set in the lower frequencies, Philip Mehler, 97 Champlin Ave., Liberty, N. Y., would like to hear from them. He, like many others, is greatly troubled by cross-talk and heterodyning on the channels from 550 to 610.

* *

Some NEWSY Notes

UNDER date of December 13, Dan Davis, Principal of the High School, Maud, Okla., writes: "KO CW, formerly at Chickasha, Okla., and later moved to Tulsa, has never broadcast since the move and at present are in a U. S. bonded warehouse waiting some kind of legal settlement. Oklahoma, long noted as a land of outlaws, seems to have an outlaw of another nature in the form of a radio station M CO at Ada, Okla. They seem to be operating on about 15 watts power and have worked up quite a commercial business by advertising. They broadcast from noon until dark aod sometimes at night, operating on about 690 kcs.

"I suppose that I could not be classed as a regular DXer as I never ask for verifications but I am always sure of the station I receive. I always wait until I hear the call letters and the name of the town before I log it. At the present time, my log says 444 different stations. My best catches are JOBK-1 at Osaka, Japan, JOHK at Sendai, KGU, 10-AT, 10-AB, HHK, LR5, WKAQ, and quite a number of 50- and 100-watters. Radio is surely freakish. Since the one morning that the two Japs came in over the loudspeaker with volume sufficient for my wife to hear them in the next room, I have never been able to hear a sound at the same place on the dial. My radio is a Majestic 20; my aerial is a singe wire about 100 feet long, 10 feet above the one-story house in which I live. My ground is an old automobile spring buried in rock salt."

Tuning Other Continents

"I am happy to say that I am now a regular listener to the T-P VKs and ZLs, being able to tune them in nearly every morning," Charles Meyer, Jr., 411 Blake St., St. Joseph, Mo., arises to remark. "But I wish somebody would give me a receipe on how to tune in the JOs, though, as I have heard only one, JOHK, and that very faint. My total log is now 442 with my best catches being CX26, LT1, 10-BQ and 2UE. Here are some answers to inquiries: To D. F. Mason: Your station in all probability was LR2 as I receive occasionally several of the S. A. stations in the background of the U.S. stations. To A. Belanger: I can't give you any info on Y V1BC but you can, perhaps, log KGU when they sign off at 3:00 a. m. CST. To S. B. Leland: Your station is 2BL in Sydney, on 855, which I receive quite loud from 4:00 until 6:00 a. m. CST. Following are some DX tips from the IDA 'Globe Circler':

- 11:30 p. m. LR4, Buenos Aires, 990 kc. 20 kw.
 - 1:15 a.m. Poste-Parisian, 914 kc. 60 kw.
 - 5:00 p. m. Rabat, Morocco, 721 kc. 6 kw.
- 12:10 a.m. Beromunster, Switz., 653 kc. 60 kw.
 - 2:00 a.m. Bordeaux, France, 986 kc. 13 kw.
- Midnight, Frankfurt, Germany, 1157 kc. 17 kw.
- 8:30-10 p. m. LR5, Buenos Aires, 830 kc. 27 kw.

"The times are CST. Readers should keep trying for these at about these times and perhaps they, too, will be lucky enough to pick some of them up."

Tuning All Waves

"My set is a Scott all-wave now three years old but I would not trade it for any other set except another Scott," begins Rudolph Bossert, 294 Roycroft Drive, Rochester, N. Y. "Since last year I have learned how to find the short waves and now use my set all day long on short waves I receive all of the English only. stations like locals, also the Germans. I am listening to DJD as I write this (4:15 p. m.). The South Americans come in well now. I get VK3ME and VK2ME whenever I try for them when they are on. Have logged police phones from California to Texas and from Montreal to Florida, to say nothing about amateur and airports. Answering Russel Geiger, I also receive the station he mentions; it is CMCA, 834 kcs. Colon (suburb of Havana) as I heard it announced. CMCA moved (Has With WH AM from 1230? Ed.) right here in Rochester, I can tune in the stations on either side-KVOO WAPI on 1140, WO WO, and WWVA on 1160." Mr. Bossert has an aerial in his attic in the form of a coil, about 8 by 14 feet with 200 feet of enamel stranded wire. He says this aerial is good on long or short waves and receives equally well from all directions. The trouble, of course, with most inside aerials is that they pick up all the noises of the house wiring. Evidently Mr. Bossert is not troubled.

When Pests Are Silent

In his "first letter to any publication," J. R. Mappin, P. O. Box 1264, Avalon, Calif., says: "Regarding KGFJ, our 24-hour station, I notice some kicks from readers that it hogs the 1200 channel and prevents them from tuning in other stations on that frequency. You might publish the fact that during the monthly frequency tests, I have found KGFJ off the air." This is a good tip and applies to many other channels besides Instead of tuning for the 1200. station that is being checked, tune for others on that frequency who



Euch Saturday night on the Columbia net, George Jessel features a "phoned conversation" with his mother that has become a popular radio bit. During one of his recent broadcasts, Georgie's mother, Mrs. Charlotte Jessel, dropped in "in person."

may not be required to be silent because of distance from the station checked.

"I recently purchased a Philco allwave Model 16-B," goes on Mr. Mappin, "and have had very good results on both the b. c. and s. w. bands. On the s. w., my best are GSB-E-F, VK2-3ME, PRADO and YV1BC, RV15. On the b. c. I have received eight Japs and two Australians-2BL and one on 760-I only caught ----KY and cannot identify it. The announcer said, 'it is 15 to 9' when it was 15 to 3 a.m. CST. This checks with Australian time. Thanks to the December RADEX, I picked up KJTY. While listening to their program over the CBS Saturday, December 2, I tuned to 6.650 megs. and was surprised to hear them with just as good quality and volume as on the rebroadcast."

KJTY Better Direct

William Mundt, 828 Broawway. Bethlehem, Pa., had a similar experience. "When the CBS program was on (Dec. 2) I decided to try to tune in KJTY direct. In less than one minute I had them; they were then a few hundred miles off the coast of N. Z. When the program started I listened on our b. c. receiver and found that the quality of the speech as it was rebroadcast by WHAS wasn't nearly as clear as what I was getting direct from the ship on s. w. After the special was over, I kept KJTY and heard some very interesting bits of news about the expedition. At times I could hear footsteps in their radio room and I heard someone operating a typewriter. They were on about 41 m. They signed off at 11:50 p.m. EST. I had held them for an hour and 55 minutes. I have a 12-tube Lafavette b. c. receiver and a Silver-Marshall s. w. set with four tubes constructed five years ago.

Gets Europe Regularly

"When I wrote you last March, I had a log of 350; it is now 672," reports Robert Hough, 26 Ellerton Ave., New Rochelle, N. Y. "I replaced the detector tube (27) with a 56 and made the set about 40 per cent. more sensitive and about 25 per cent louder. The week preceding Christmas was sure swell for Europe. Ι have been getting Poste-Parisian regularly every morning at 2:12.From the 16th to the 23rd, inclusive, I logged: Toulouse, Bordeaux, P-P and Fecamp in France. (Incidentally P-P is having special programs for British listeners in English from 6:00-6:30 p. m. Sundays. If you can separate them from CRCM, they have excellent volume.)

"I also logged Stuttgart, Frankfurt-am-Main and Breslau in Germany and I1BA and I1TO in Italy. SBH in Sweden and Hilversum, Holland-eleven in all. I find that Germany comes in best from 1 to 2 a.m., France from 2 to 3 and Italy from 2:30 to 3:30. With eleven Europeans to my credit, I seem to have no luck with the Aussies or ZLs and haven't yet been able to get either Hawaii or Alaska. One hint to DXers-tune very slowly. Fecamp comes in on a hairline and with American stations on both sides, it is easy to miss him." Robert does not tell us what set he has.

Recipe for T-P's

"In regard to the letter of Mr. Welsh of Reynoldsville, Pa., who complains that the DXers who report reception of oriental stations fail to assist others who have been unfortunate in failing to receive them." preambles Raymond C. Corbett, 619 12th St., Sacramento, Calif., "as far as I know from my own experience, there are no definite means of telling whether the Japs are coming in or If the Aussies are coming in not. well, it doesn't indicate that the Japs will also be heard. I have discovered no definite rules by the sea-If all DXers will concentrate sons. on 770 kcs., I am positive that, sooner or later, if they have any good location at all, they will be able to hear JOHK at Sendai, Japan. This station actually comes in as loud as some of our Pacific Coast stations at times and their signals should penetrate the eastern part of the U. S. loud enough to be at least identified. JOCK on 830 and JOAK on 870 come in almost as well as JOHK. The best time for eastern listeners should be from 3:30 a. m. EST, on."

A Field on 1510

"In looking through RADEX, ĩ notice you have KFQD in Anchorage. Alaska, on 600 kcs. but in the last few months I have received them on their old frequency of 1230," says D. Stevenson, 3893 38th Ave., W., Vancouver, B. C. The FRC changed KFQD some months ago. Can any other readers verify Mr. Stevenson? "Fans here in Vancouver have one radio feature that others do not have," concludes Mr. Stevenson "That is many stations on 1510. Logging in the forests near here is extensive and a great many tugboats are employed to bring the logs to Vancouver. They are equipped with radio-phone transmitters using 50 or 100 watts power with a range of 50 miles. They are on the air at certain hours, carrying on conversations with their owners, coast stations and other tugs, about the weather, their positions, etc. It certainly makes good DXing although they cannot be verified. I have logged 20 tugs. 4 passenger ships and 3 coast stations out of 55 available."

A Tip on YV1BC

"That station Russell Geiger asks about on 835 is CMC, Havana." thinks R. B. Rolfe, 1741 Burnett, Waco. Texas. "I have picked them on three different nights and they are on 835 more nearly than 830. They always sign off with an announcement in English. The announcer talks Spanish very rapidly, so much so that, though I have been associated with Spanish-speaking people all my life, it is very difficult for me to understand him at times.

"I have at last gotten the muchreceived YV1BC, Caracas, Venz.,

and here is a tip for the boys in Texas who find they can't pick him up. XEAW does not come on the air until 7:30 p. m. now and, if they will tune very close around 960 kcs. between 6:00 and 7:30 p. m., they will likely hear YV1BC. I have had them three nights now with good speaker volume and a good, clear signal. My log stands at 256 with all the states but seven."

Radio DX in Haiti

From Port-au-Prince, Haiti, a fine list of stations received in that island Republic is submitted by R. A. Gravel who has concluded his diplomatic work with the treasury department of Haiti and returned to his home in Southbridge, Mass. Mr. Gravel reports that reception in Haiti is very difficult and while his pretty well covered the United States. Canada and Mexico, the stations were more or less limited to those above 10,000 watts. On the short waves, he received W3XAL in daytime and the volume of GSA would drown out Schenectady. Mr. Gravel adds: "I am sorry that my tour-of-duty in Haiti has been brought to an end at this particular time as I believe I could have registered many more stations," thus showing the true DX spirit.

T-P's in Tennessee

"It seems to me this section of the country should be ideal for DX tuning." observes a modest reader in Johnson City, Tenn. "In each issue of your magazine, I read letters from listeners who say they receive stations in Australia, Japan and New Zealand but none of them seems to be in my part of the country. T have a new 12-tube all-wave Silvertone and can pick up any station in this country as well as many in Mexico and Canada, but never one of the Australian or Japanese. I have stayed up many a night hoping to get at least one but have had no luck. As for the short-wave end, I receive Germany and England practically every day and have received others in South America and the Bermudas. I also picked up Byrd's ship when it was near the Canal Zone." Come on, Tennesseeans; let's see what you can do across the Pacific.

Wants All the Police

"I was glad to find that 'Just Above the 1500 Channel' in December issue," comments Bill Garrison, 122 E. William St., Bath, N. Y. "However, I believe it could be made even more useful to those of us who get coppers on our b. c. sets, if you included the police broadcasting on 1712 kcs. (In this issue you will find the s. w. stations of the U.S. by frequencies beginning with 1534 and running clear up to the Canadian police on 17.330. How's that for service? Ed.) I am sure I caught FQN on 572 between 3:26 and 5:30. They were so weak that all I could get was the time of several announcements, unidentified marches and several xylophone selections. Did anyone hear them?"

They Do Verify

B. L. Ahman, Jr., 3313 Westerwald Ave., Baltimore, thinks the station D. F. Mason heard near WABC was undoubtedly CMX who is supposed to be on 890 as he picked it up between WGBI and WABC or on WENR's channel. "I think some readers demand too much haste in a verification from their reports," adds Mr. Ahman. "I have verifications from every station except two that Mr. McPhole of West Philadelphia complains do not pay any attention to reports. From WTFI, a nice card, from WTOC a card, from WLBL a picture folder with veri., from KFDM a personal letter, from KFJB a nice card, from WBTM a printed reply with a personal postscript and from WIND a letter."

Boiled Briefs

"An old variocoupler makes a good tuning coil for the antenna and even on a superhet I think it pays," suggests Ivan D. Ide, Genoa, Ill. "I use a 12-tube super and with a tuning coil like that I can find stations that otherwise I would not be able to tune in. Then, too, I log many stations during the day time that I cannot get at night. A station like WSAZ on 1190 would be impossible for me at night because WO AI would drown them out, but in the daytime they are possible. KSOO, too, I picked up between noon and one o'clock."

Don Martinez, 1469 26th Ave., San Francisco, has received so many stations that he finds it difficult now to add new ones. He is having a s.w. converter built and is looking forward to exploring what is to him "The Japs have virgin territory. been bad lately for the first time in years," he adds, "but I have a few more Aussies on my list. XGOA is on 650 as, believe it or not. I heard their call letters in English four times on 650, three times by a man and once by a woman." (Several other readers have reported XGOA on 660.)

"Before I go into details, please refer me to a good DX club," prefaces F. B. Pitts, Belle Fourche, S. "I have a Majestic 8-tube Dak. Model 90-B and a Model 15 5-tube midget Majestic. I hooked up both radios with no power on the big one and did my tuning on the 5-tube. In that way I had the same as a 13-tube set! Vancouver on 100 watts came in too strong." Mr. Pitts seems to try odd experiments. He disconnected his ground from the midget and used as an aerial a short piece of wire with the free end in a glass of water and got better results than with a regular aerial!

"I have finally identified the Cuban I heard on 635 kcs. as CMJH, Ciego de Avila," says R. M. Carter, Ann Arbor, Mich. "I have now heard them announce plainly several times." Who has anything definite from CMJH showing a change from their frequency of 1150? "I heard CFCH, North Bay, Ont., on 915 instead of 630," goes on Mr. Carter, "they were giving a DX program one morning recently. Wellington, 2YA, is being heard on their new frequency, 570, but not as well as they

(Continued on page 49)

What's the MATTER with My Set?

Answered by the Technical Editor

AM using a G. M. converter (remote control unit) with a Philco 43 receiver. At present this combination does not give good selection at 535 kcs. because of local stations on 540 kcs. The control used to work fine with a Kellogg receiver when set to 535 kcs. as recommended by the makers of the unit. Can I replace the condensers in the Philco to make a better selection at 535 kilocycles and reduce station interference?

The G. M. converter is a remote control unit suitable for use with any broadcast receiver. It is arranged to form a 535 kc. beat note with any receiver when a broadcast station is feeding this beat into the input of the set. To avoid trouble with 540 kcs., local stations, the converter padding or trimmer condenser system can be adjusted from 570 to 590 kcs., and the receiver tuned to this output. There are also any number of possibilities of beat notes being formed in the various circuits because of the two oscillators working together-one in the converter and one in the receiver.

The converter should be lined up for tracking, etc., just as any superheterodyne receiver. It can then be applied directly to any receiving set without difficulty. We suggest you have the converter adjusted at the trimming condensers to increase its frequency range as mentioned above, and then set your Philco 43 on about 570-590 kcs. Changing the condensers of the Philco will not help.

Changing Rectifier Tubes

Can I use the 83 type rectifier tube in my Scott all-wave set instead of the type -80?

We do not recommend this change. The 83 is a heavy duty rectifier tube and is intended to supply large amounts of d.c. power to receivers whose requirements are in excess of the output rating of the -80 tube. The 83 takes one ampere more of current, which perhaps your set can ill afford to give up. The -80 now gives you all the d.c. power the set requires and there is nothing to be gained by using an 83 or an -82 tube.

Power Line and Wave Trap

A nearby power transmission line gives me much constant interference. How can I combat this and to whom should I write or talk? Will you tell me how to make and use a wave trap to prevent this and other interferences?

Power line interference is a matter to be taken up with the power company. Complaint to the Radio Inspector in your district (Department of Commerce) is not likely to be effective in this case. Such interference usually is due to the electro-magnetic field that surrounds every high voltage a. c. power line. If a leaking insulator or transformer is at fault, then it is to the advantage of the company to catch the leaks.

Your aerial should be as far as possible from the line and will be less subject to interference if erected at right angles. Shielded lead-in wire, as explained in the October, 1933, issue of RADEX, will be valuable.

Wave traps can be of some little help when radio stations tend to interfere. Make such a trap by winding a coil on a tube $2\frac{1}{2}$ inches in diameter with 60 turns of No. 26 wire. Connect it in series between the aerial and the receiver's antenna terminal. Then attach a .0005 capacity variable condenser across the two ends of the coil for tuning.

Using Two-Volt Tubes

Is it practicable to change my Atwater-Kent, model 33, set, from -01A tubes to the 2-volt tubes?

Two-volt tubes can be used in this

set merely by substituting -30s for the 01As, and a -31 for the -12A. But the negative C battery must be increased to -22.5 volts, and the B battery for the plate of the -31 must be 135 volts. The audio fixed resistor attached to the center of the rheostat and connecting one side of the filaments of the last two, or audio, tubes, must be removed and replaced with a length of wire.

A two-volt battery is used. If other voltage is connected to the two terminal wires—red and black—a variable resistance must be inserted in series with one of the wires so that exactly two volts is impressed on the filaments when the set is operating.

Set Quits When Warmed Up

My General Electric set, model S-42, refuses to work as soon as it becomes warmed up. After a few moments of loud operation it becomes weaker and then quits. No sound from the speaker at all. The tubes have been tested and are perfect and there are no visible faults in the wiring. What shall I do?

While it is difficult to localize the exact cause of your trouble at long range it may be well to point out a few of the weaknesses in your set which tend to cause the trouble mentioned.

The trouble is characteristic of a defective high value resistor. Test or replace the 270,000 ohm resistor that connects between the positive B lead (22.5 volts) and the grid return of the first detector tube. Also, the 350.000 ohms resistor from the second detector grid return to the one just mentioned. Also look to the 350,000 ohms resistor from the second detector grid return to the negative B terminal. Test all high resistors in the second detector plate and first audio grid circuits. Other than these you must look at every resistor with suspicion. A carefully made meter test of the entire circuit will next be in order.

Hum and Motor-Boating

I have a Pilot a.c. Super-Wasp

short-wave receiver. I get a very bad hum. Also, when the set is turned on it has a motor boating or jumpy sound. Outside of this the set is perfect. I use a regular Pilot power pack unit.

Usually this trouble can be traced to the detector plate circuit. A plate series resistor of 20,000 to 50,000 ohms shunted with a 0.5 to 2.0 mfd. fixed condenser will serve as a filter to eliminate the motor boating sounds. A radio-frequency choke in the detector plate circuit, properly bypassed, is often very helpful. Some of the Pilot models have these chokes.

The hum ordinarily will be reduced by lowering the grid leak valve, but as the sensitivity will also be reduced it is not well to carry this method too far. If the hum increases with the degree of regeneration it will be well to shield the lead-in wire and see that the shielding of the set is adequate and properly fitted. Loose shield cans which need refastening and cleaning at contact surfaces may cause hum and chattering noises or undue oscillation. See that the tubes are testing perfectly.

Certain Short Waves Weak

I have a Philco, model 43, which suddenly lost its pep on the 9 to 20 megacycles band. Until a few days ago I have been receiving European stations regularly on strength R9. Overnight, the set lost its ability to pick up these stations. A service man claimed to have found that the set was unbalanced. But still the receiver is weak on that particular band to voice, and most of the c.w. code signals are not quite as good as formerly, but still do not seem poor enough to account for the sudden absence of the voice stations. The set is perfectly normal on all the other bands. I cannot even hear the carrier wave of EAQ-a station which has been heard every night for the past ten months. Can you advise me what is wrona?

Sometimes the oscillator tube will fail at the very high frequencies and

make one or more of the short-wave bands almost totally dead. It is therefore best to try several tubes until one is found which will oscillate strong enough to bring in the signals. An unbalanced condition of the circuits in this set under the circumstances outlined by you is hardly probable. One likely trouble is that of dirty contacts on the short wave band selector switch. The slightest resistance in one of these contacts will cause great trouble at high frequencies. This set is very sensitive to changes in antenna length or height and also to various ground connections. At very high frequencies the ground is usually unimportant, and in some cases even weakens reception. If any change was made in either the aerial or ground system this should be considered a possible source of trouble.

Of course, some changes in the condenser and balancing system could throw some part of the band out of adjustment in reference to the tuning dial but hardly prevent reception at all. Since you have had the set rebalanced this question can be ignored. Be sure that the first detector is a good tube, because any weakness here will first be noticeable on the highest frequencies.

Band Spreading

Can I use the "band spread" coil system on my National a.c. 45 shortwave receiver so as to make tuning easier?

Band spreading consists of opening the tuning dial spaces so that the wave bands are farther apart so as to make tuning easier and not crowded with interfering stations. Coils of smaller range or tuning limits that do not cover wide wave bands, together with smaller variable condensers, open the crowding and widen the tuning spaces between stations on the dial. But, in order to cover the entire wave band from lower to higher limits, it is necessary to have several more coils than usually utilized.

National band-spread coils are made particularly for amateur reception on the 20, 40, 80 and 160 meter bands which are so crowded with interfering operators. These coils have limits that range from just below to just above the wave lengths given above and will spread the amateurs over a large portion of the dial, some of them being as much as 50 points on the dial apart. These band spread coils are interchangeable with other plug-in coils in the National Thrill Box short wave receivers as well as some other types of short wave sets.

Using 6.3-Volt Tubes

Can either -37 or -44 type tubes be used in the RADEX short-wave converter in place of the 56 and 58 types? My Philco 91 receiver uses the 6.3volt tubes instead of the 2.5-volt types.

The converter was designed particularly for the 2.5-volt tubes—56s and 58s. You may use it with a Philco 91 or any set having 6.3-volt tubes merely by inserting 1-ohm resistors in series with each of the two filament wires of the converter leading from the wafer adapter that is slipped beneath one of the 6.3-volt tubes in your receiver.

Power-Line Filter

I am uncertain about winding the coils for the power line filtering device described in the April issue of RADEX. Is there a continuous wire laid in two layers or two separate layers with dcad ends?

Each tube has two layers wound on it with a single piece of wire, making up the full winding required. There will then be two ends to the length of wire. Start near the end of the tube and wind a layer of 100 turns evenly and smoothly, then return to the starting point after backwinding another 100 turns in the same direction-always away from you. One end of the coil connects to a plug prong of the plug used to attach to the 110-volt lighting socket; the other end connects to one hole of the outlet socket terminal used to receive the plug of the radio set cord. There are no dead or blank ends of the windings.

Can I attach headphones to my Zenith, model WH, receiver and still retain the volume and tone as it now is? Also, how about using new tubes in this set?

See the February, 1933, issue of RADEX for information about using headphones. The original tone and volume will be retained in this way for weak signals. Since your receiver uses one power tube, a -47, you may attach the phones as shown in Figure 3, page 3, of the February issue of RADEX, following the arrangement indicated by the lower right-hand corner of the diagram.

If you do not care to break the speaker lead and insert a silencing switch, for all practicable purposes one of the headset adapters advertized in RADEX will give you all the volume you will need for headphone reception. It does not make use of the last stage, or the power tube.

New Tubes and Noises

Nearby street cars cause much interference in my Majestic, model 52, receiver, and I wish to know whether new type tubes will help.

You can try a new 57 in place of the -24 first radio-frequency tube that is located first in the row of tubes. just in front of the -45 that is next to the -80. You will need a special adapter for this purpose. No other changes are recommended. But this will not decrease the street-car interference. That is picked up by the aerial, and a proper antenna location, shielding with a noise-reducing antenna, as described in the October, 1933, issue of RADEX, will be of value. Place your aerial itself as far from the street cars as may be possible; the length of lead-in wire when shielded will make little or no difference.

Tubes Light; No Sound

My Philco set, model 513, seems to be dead although the tubes all light up. The old tubes have been replaced with new ones that are good. Can you help me?

We believe you have made an error in the model number; model 531 seems to be your receiver. First, we suspect the windings of the two audio-frequency transformers. The primary windings are likely to burn out, and they should be tested for conductivity with a battery and voltmeter. If no current passes, the transformer must be replaced. Test the speaker windings to see that no breaks in the wires are present. If the windings are o.k., we suggest that you take a pair of phones or a d.c. voltmeter and place one of the contacts on the chassis of the set and touch the other contact to each of the plate springs of the tube sockets with the set turned on and all the tubes, except the rectifier, removed. Each contact of the plates should give a reading or click in the phones. If a dead point is found then look for a defect in the resistor some place in the circuit leading to that particular plate contact. It is quite apparent that some plate circuit in the set is not getting the proper plate direct-current supply from the power system.

Automatic Volume Control

I wish to have automatic volume control installed in my RCA model 80 receiver. Can this be done; if so will you tell me what to do? This set has a number of -24 tubes and I would like to replace them with 57s or 58s. if practicable.

The RCA 80 can be fitted with a.v.c. A 56 tube is necesary for this purpose, and it should be placed within the set at a convenient place close to the first intermediate-frequency tube. The grid return circuits of the first radio-frequency, the first intermediatefrequency, and the second intermediate-frequency tubes, are opened at the bottom of the coils connecting to the grid caps of those tubes, and fixed condensers of 0.1 mfds. capacity are inserted in series in the break in the circuit just made. Then three 250.000 ohms resistors are attached to these grid returns, at the bottom of the coils where the condensers were just at-

(Continued on page 48)

The Short Wave Stations

of North America

Arranged by Frequencies

This list includes all the American transmitters except the United States Airways stations which were published in November. Readers are advised not to request verifications from any of the commercial stations listed below. The foreign S. W. Stations appeared in the January issue.

United States and Possessions

		United States			
Megs.	Meters		2.416	124.09	KGPB, Minneapolis, Minn., police
1.534	195.45	KGHO, Des Moines, Iowa, State police WPGC, S. Schenectady, N.Y., State police	2.422	123.79	WPDS, St. Paul, Minn. KGPE, Kansas City, Mo., police
1.558	192.43	KGPD, San Francisco, Calif., Marine Fire WEY, Boston, Mass., Marine Fire			KGPG, Vallejo, Calif. KGZC, Topeka, Kans. KSW, Berkeley, Calif. WMJ, Buffalo, N. Y.
		WKDT, Detroit, Mich., Marine Fire			KSW, Berkeley, Calif.
1.570	191.08	WPEQ, Baton Rouge, La., police WPEW, Northampton, Mass., police			WPDW, Washington, D. C.
1.574	190.48	KGPY, Shreveport, La., police			WDEV New Orleans La
1.011	100/10	WMD E-mingham Mass State police	2.430	123.45	WPFU, Portland, Me. KGZD San Diego Calf. police
		WPEL, W. Bridgewater, Mass., police WPEV Portable in Mass	2.400	120.10	WPEU, Portland, Me. WGZD, San Diego, Calf., police KGZJ, Phoenix, Ariz.
		WRDS, E. Lansing, Mich., State police			WPDI, Columbus, Ohio WPDM, Dayton, Ohio
1.596	187.85	WPEL, W. Bridgewaiter, Mass., blice WPEL, W. Bridgewaiter, Mass., police WPEV, Portable in Mass. WRDS, E. Lansing, Mich., State police WCF, New York, N. Y., police WRDU, Brooklyn, N. Y., police WCW, Beckelsen Colf, police			WPFD, Highland Park, Ill.
1.658	180.83	KSW, Berkeley, Calif., police			WPFK, Hackensack, N. J. WPGI, Portsmouth, Ohio
$1.674 \\ 1.712$	$179.10 \\ 175.13$	Harrisburg, Pa., State police			Little Rock, Ark. Long Beach, Calif.
1.712	175.15	KSW, Berkeley, Call., Poince 			Long Beach, Calif. Minneapolis, Minn.
		KGPJ, Beaumont, Texas.			Santa Ana, Calif.
		KGPL, Los Angeles, Calif. KGPR, Fort Worth, Texas.	2.442	122.77	KGPP, Portland, Ore., police KGPX, Denver, Colo.
		KGZB, Houston, Texas			KCZH Klamath Bails Dre
		KGZI, Wichita Falls, Texas KGZL, Shreveport, La.			KGZR, Salem, Ore.
		KGZQ, Waco, Texas KVP, Dallas, Texas			KGZR, Salem, Ore. WMDZ, Indianapolis, Ind. WPDE, Louisville, Ky. WPDF, Flint, Mich.
		WKDU, Cincinnati, Ohio			WPDF, Flint, Mich.
		WPDB, Chicago, Ill.			WPDH, Richmond, Ind. WPDL, Lansing, Mich.
		WPDC, Chicago, Ill. WPDD, Chicago, Ill.			WPEB Grand Rapids, Mich.
		WPDU, Pittsburgh, Pa.			WPES, Saginaw, Mich.
		WPED, Arlington, Mass. WPEH, Somerville, Mass.			WPES, Saginaw, Mich. WPFC, Muskegon, Mich. WPFE, Reading, Pa.
		WPEL E. Providence, R. I.			WPFG, Jacksonville, Fla.
		WPEJ, Brookline, Mass. WPET, Lexington, Ky			WPFX, Town of Palm Beach, Fla.
		WPFA, Newton, Mass.			WPFZ, Miami, Fla. WPGA, Bay City, Mich.
		WPFJ, Hammond, Ind. WPFN, Fairhaven, Mass.			Binghamton N Y
		Providence, R. 1.	2.450	122.40	KGPH, Oklahoma City, Okla, police KGPO, Tulsa, Okla. KGPQ, Honolulu, Hawaii KGPZ, Wichita, Kans.
2.414	124.20	San Bernardino, Calif. KGPA, Seattle, Wash., police			KGPQ, Honolulu, Hawaii
0.111	121.20	KGPS, Bakersfield, Calif.			KGPZ, Wichita, Kans. KGZF, Chanute, Kans.
		KGZA, Fresno, Calif. KGZM, El Paso, Texas			KCZP Coffeyville Kans
		KGZN, Tacoma, Wash. KGZO, Santa Barbara, Calif.			WPDK, Milwaukee, Wis. WPEE, Brooklyn, N. Y. WPEF, Bronx, N. Y. WPEG, New York, N. Y.
		KGZO, Santa Barbara, Calif. KGZV, Aberdeen, Wash.			WPEF, Bronx, N. Y.
		KGZA, Albuquerque, N. Mex.	2.458	121.97	WPEG, New York, N. Y. KGHS, Spokane, Wash., police
		WCK, Detroit, Mich. WMO, Highland Park, Mich.	2.400	121.01	KGZW, Lubbock, Texas
		WPDA Tulare Calif.			WPDG, Youngstown, Ohio WPDN, Auburn, N. Y.
		WPDJ, Passaic, N. J. WPDX, Detroit, Mich. WPDY, Atlanta, Ga. WDFU, Beltimere, Md			WPDN, Akron, Ohio WPDR, Rochester, N. Y. WPDV, Charlotte, N. C. WPEA, Syracuse, N. Y.
		WPDY, Atlanta, Ga.			WPDR, Rochester, N. Y. WPDV Charlotte N. C.
		WPFH, Baltimore, Md. WPFI, Columbus, Ga.			WPEA, Syracuse, N. Y.
		WPFM Birmingham, Ala.			WPFS, Asheville, N. C. WPGD, Rockford, Ill.
		WPFP, Clarksburg, W. Va. WPFV, Vonkers, N. V			WRBH, Cleveland, Ohio
		WPFP, Clarksburg, W. Va. WPFY, Yonkers, N. Y. WPGB, Port Huron, Mich.	2.470	121.40	KGOZ, Cedar Rapids, Iowa, police KGPD, San Francisco, Calif.
		WPGJ, Utica, N. Y. WPGS, Mineola, N. Y.			KGPI, Omaha, Nebr.
		WRDR, Grosse Pointe, Mich.			KGPK, Sioux City, Iowa KGPM, San Jose, Calif.
		La Grange, Ga.			
		Santa Fe, N. Mex.		(Continued on page 94)

[37]

REALLOCATION in Europe

THE "Plan de Lucerne" which resulted from the conference in that city in May of the present year, went into effect on January 15, 1934. This Plan was signed by 27 European states. Seven countries— Finland, Greece, Holland, Hungary, Lithuania, Poland and Sweden—did not sign the Convention at the time but it is generally felt that they too will be guided by the new arrangement.

The Plan covers 232 stations which are allotted 130 channels of which 55 are exclusive while the remainder are shared. Roughly, those stations allotted frequencies between 1500 and 1250 kcs. are give a maximum power of 30 kw. Between 1250 and 1100, the maximum is 60 kw. Between 1100 and 550, 100 kw. For frequencies below 300 kcs the maximum is 150 kw. with the exception of Moscow-1 which has 500 kw.

Only a few of the more important stations with their new frequencies can be given here. The complete list of stations with their revised wavelength will appear in the January-February-March issue of the DX Log of the World. While many of the stations will not at first be found with the higher power to which they are entitled, many countries, notably Germany and France, are preparing to transmit on these higher powers.

The interesting notes regarding the stations given here, were sent us by an English reader, W. H. Turner, 144 Parrswood Road, N., Withington, Manchester. Times mentioned are G. M. T.

Long Wave Stations

Huizen and Hilversum, 223 and 995

The power of Hilversum is raised to 20 k.w. from 5-40 p.m., and that of Huizen to 50 k.w. from 3-40 p.m. daily, the latter transmission being from the new Government station at Kootwyk. These two stations change wavelengths every three months, i. e., in January, April, July and October.

Grand Shift on January 15

Radio Paris, 75 k.w., 167

A favorite French station for British listeners. In January it becomes the French longwave National station, with a power of 100 kilowatts. Provision is being made for a further increase to 150 k.w. if required.

Berlin (Deutschlandsender), 60 k. w., 191

This German long-wave station (formerly Zeezen) has now its own programmes, and also relays concerts and other features from other cities. Its power is to be raised to 150 kilowatts in January.

Eiffel Tower (Paris), 13 k.w.

One of the first European broadcasters, this station will close down in January, being afterwards used for Government and commercial transmissions.

Warsaw (Poland), 120 k.w., 230

First European station to use over 100 k.w. Has high-class concerts and frequent transmissions of Chopin pianoforte music. It is announced as "Varshava."

Motala (Sweden), 30 k.w., 216

Relays the Stockholm programmes and takes concerts occasionally from Goteborg and Horby.

Radio Luxembourg, 200 k.w., 1249

May not accept low wavelength allotted under Lucerne plan. Broadcasts sponsored programmes, varied by gramophone and other music.

Kalundborg (Denmark), 30 k.w., 238

Recently raised from 7 k.w., and is now a favourite day and night station in this country. Relays Copenhagen.

Monte Ceneri (Switzerland), 15 k.w., 126.8

A new Swiss station designed to serve the Italian-speaking population of the country. Announces frequently in Italian, and relays Italian opera.

Oslo (Norway), 60 k.w., 253

Gives an orchestral concert every night, and also features instrumental music.

BROADCAST BAND

Budapest (Hungary) 18.5 k.w., 546

Is just within tuning range of majority of receivers. Announces "Hallo, Hier Radio Budapest!" frequently, and is easily recognized by it unique instrumental music.

Munich (Germany), 60 k.w., 740

This main German station may shortly increase its power to 100 k.w. Provides many of its own programmes, and is relayed by Augsberg and Nurnberg.

Vienna (Austria), 100 k.w., 592

Has recently increased its power. Broadcasts many popular orchestral programmes, including the waltzes of Strauss and other Viennese composers.

Brussels No. 1 (Belgium), 15 k.w., 620

Provides continuous orchestral music from eight to ten almost every evening. Announcements are made only in French, its sister station being reserved for Flemish listeners.

Prague (Czecho-Slovakia), 120 k.w., 638

Broadcasts first-class orchestral, military band, string and pianoforte music, and frequently relays grand opera.

Lyons (France), 11/2 k.w., 648

Though of very small power is often well received in this country. Plans to go up to 60 k.w. in near future.

Langenburg (Germany) 60 k.w., 658

Will shortly raise its power to 100 k.w. Will be less than 7 metres from North Regional in January, but fortunately has an exclusive wavelength.

Beromunster (Switzerland), 60 k.w., 556

"On the air" at 5-50 a.m. daily with music for gymnastic exercises. Relays the best of the Berne, Basle, and Zurich programmes.

Rome (Italy), 50 k.w., 713

Famous for opera and orchestral broadcasts, which are relayed by the 25.4 metres transmitter and Milan and Naples.

Stockholm (Sweden), 55 k.w., 704

Often broadcasts old English dance music, and gives prominence to popular orchestral, string, and instrumental music.

Madrid (Spain), 2 k.w.

Often transmits until well into the morning hours and, in spite of its low rating and great distance, comes over at good volume when other stations have closed down.

Funkstunde (Berlin), 1.5 k.w., 841

German National station, replacing Witzleben. Will transmit on 60 k.w. when changing wavelength.

Athlone (Irish Free State) 60 k.w., 565

An established favourite with many listeners, and one of the strongest outside stations received in the north of England. Will be outside the wavelength range of many receivers in January, but can be brought in by a small condenser across aerial and earth.

Katowice (Poland), 16 k.w., 758

Has a large following owing to their Radio Club including so many British listeners. Many of these are replied to over the ether.

Sottens (Switzerland), 25 k.w., 677

Takes its programmes from Lausanne and Geneva, and gives occasional relays from Eiffel Tower and Strasbourg.

Leipzig (Germany), 120 k.w., 785

One of Germany's most powerful stations, famous for orchestral concerts by the Leipzig Symphony and Dresden Orchestras, and also its frequent transmission of old and new dances.

Toulouse (France), 8 k.w., 776

Popular station with British listeners on account of its short and bright programmes, many of which only last fifteen minutes, and rarely exceeding half an hour. Will shortly raise its power to 60 k.w.

Hamburg (Germany), 1.5 k.w., 776

One of the lowest-powered German stations regularly received in this country. Will shortly increase its power to 100 k.w. under the German reorganization scheme.

Stuttgart (Germany), 60 k.w., 576

Another station which will shortly increase its power to 100 k.w. On its new wavelength it should be one of the best German stations received in this country.

Barcelona EAJ1 (Spain), 8 k. w.

Gives very little original orchestral music, mostly using gramophone records. Occasionally broadcasts plays, and gives tango dance music after midnight.

Strasbourg (France), 11.5 k.w., 859

Gives an orchestral concert at 5 p. m. daily, and probably broadcasts more orchestral, trio and string quartet music than any other European station.

Brno (Czecho-Slovakia), 35 k.w., 922

Relays the best of the Prague programme items. Announcements are made in Czech, German, French, and English.

Brussels No. 2 (Belgium), 15 k.w., 932

Broadcasts excellent orchestral music. A two-hour concert at noon, and another of the same length figure in the programmes almost every day.

Milan (Italy), 50 k.w., 814

A powerful Italian relay station taking the majority of its programmes from Turin. Relayed also by Genoa, Trieste, and Florence.

Post-Parisian, 60 k.w., 959

Is "on the air" at 7-10 a. m., and gives bright and varied programmes for sixteen hours daily. Is one of the few foreigners on the broadcast band receivable at good strength in daylight.

Breslau (Germany), 60 k.w., 950

Comes on the air at 5 a. m., and continues with music and talks until nearly midnight. The talks are often of a scientific nature, dealing with astrology, astronomy, everyday science, and a weekly talk on wireless.

Genoa (Italy), 10 k.w., 986

A medium-power station, working in conjunction with Milan, Turin, Trieste, and Flor-

Bordeaux-Lafayette, 13 k.w., 1077

One of the French Government stations, relaying programmes from Eiffel Tower and Grenoble, Lyons and Strasbourg.

Hilversum and Huizen, 8.5 k.w., 995-223

The power of Hilversum is increased to 20 k.w. from 5-40 p. m., and that of Huizen to 50 k.w. from 3-40 p. m. daily. These stations change wave-lengths in January, April, July and October.

Lisbon (Portugal), 20 k.w., 629

A new station just beginning its tests. Can be easily located between Heilsberg and Hilversum. Call sign, Radio Lisbon.

Heilsberg (Germany), 60 k.w., 1031

Transmissions from 5-15 a.m., and features concerts by the Konisberg Opera House and Dresden Symphony Orchestras.

Turin (Italy), 7 k.w., 1140

Small power but important Italian station. Gives relays of opera, which are taken by Milan, Genoa, Trieste, and Florence.

Moravska-Ostrava (Cz.), 11 k.w., 1158

Comes on the air at 5-15 a.m. Gives its own afternoon concerts, afterwards relaying the Prague programme.

(Continued on page 46)

Condensed CREAM of the DX Reports

FROM a Californian, Jack Watrous, 113 North Orange St., Los Angeles: "I am using a Zenith all-wave, 9-tube and have received 199 stations on the b. c. b. Some of my best are 2YA, WCLO, WMBH, KFPL, and numerous Japs. I have just erected a new aerial about 70 feet long and am using the ground described in the October RADEX and find that it helps in pulling in the 100-watters. For the benefit of those who want Oregon. KALE is on from midnight to one each Sunday morning with an organ program. The RADEX Time Converter is marvelous; how I did without it is more than I can see?" Jack wants to join a Coast DX Club.

"Last Columbus Day, I purchased my first RADEX and that evening I started to do a bit of DXing," reports Walter C. Birch, 189 Essex Street, Lynn, Mass. "To date I have logged I have every station 361 stations. of 5000 watts and over on the continent except WOI and WCBD. I have every state but Wyoming and every province in Canada. I use an RCA-Victor 10-tube biacoustic super, Model R-90 and I would like to hear from others using a similar set. To me it is unbeatable for tone quality and as to selectivity, I am able to bring in a station on every channel at 6:45 p. m."

"Here is our record on a Midwest 16-tube all-wave set," submits R. W. Putnam, 1857 Nelson Ave., Grand Rapids, Mich. "Amateurs whose call, city and state were distinctly heard, 275; stations on the b. c. band, including 44 states, Cuba, Mexico and Canada, 267; weather stations 13; short wave, foreign and U. S., 43; police 66; a total of 664. This was all in six weeks." Among his short wave catches, Mr. Putnam lists: PRADO, JT8, JW9, HJ5ABF, HJ5ABB, LSN-X, PSF, YV1BC, YVR, XETE, VK3ME, VE9GW, EAQ, GSA-B-D, DJA-D. "My log has grown to 475 thanks to the DX calendar," says Lloyd Harrison, 130, S. Hague Ave., Columbus, Ohio. "I have verified only 50 as I have just started to verify in earnest but even now verify only what I consider extra good catches, 250 watts or under and over 1000 miles. Have every state but Wyoming and all channels. I think the FRC checks are a snap especially for beginners building a log. I would like to get in touch with someone who has the same set as mine, a McMillan 9-tube superhet."

"Have you any information on the Cuban station on 1030 kcs.?" asks Earl R. Roberts, 42 Burt Ave., Newark, Ohio. "I heard it Monday night (Dec. 18) and the call in Spanish sounded like CMVT or CMBT and the city almost like Havana but more like It came in with good LaHavana. volume. CKCR on 1510 comes in very well. LR4 seems to be on about 992 instead of 990. HIX was received about 598 instead of 579. It was quite weak. XEAE on 980 has been coming in fine lately until three a. m. or later."

"What is the address of Poste-Parisian," asks Robert Hough, 26 Ellenton Ave., New Rochelle, N. Y. "At present I have 624 stations, my latest being KIEM, KGIW, KIDW, KFPL, KGFI and KFXJ which I tried for for a year. Other good catches were XEFV, CMQ, CMCD, YV1BC and YV3BC. Poste-Parisian came in Nov. 24, 25 and 27. They seem to be on every morning except Sunday. They come on at 2:12 a. m. on the dot with good volume. At 2:30 they start to fade and by 2:58 they are gone."

"I once noted in RADEX a fellow with a log of over 200 and no T-Ps," says Ernest Ball, 39 Delaware Ave., Ottawa, Ont. "My record is worse than that. I have over 550 logged with no T-Ps, not even KGU. However, I have P-P, VONF, LR5, HJN, YV1BC, HIX, WKAQ and CMCW. In the low power I have two 10-watters, VE9EK and WHBC, two 15watters, 10-AK and 10-BQ, two 25s, WIBG and 10-BP. Have all the states and all the provinces but one each."

"My log of stations heard has increased to 715 with 552 verified and letters out to LR5, CX26, KGU, KGBU and Poste-Parisian," writes Lloyd S. Hahn, P. R. R. Y. M. C. A., New York City. "I heeded the admonition to clean up my set contained in the article in the November RADEX. When I removed the shield around the condensers I found a mouse so dead that it crumbled. It had evidently gotten in there when the set stood in the salesroom."

Writes Donald W. Shields, Roseville, Ohio, "I have 318 stations on the regular b. c. band with every state in the union except Delaware. My best are HJN, LR5, KVOA, KMPC, KTM, KFSG, KFVD, KGEK, KPOF, KGCX, KOH, KEX, KJR, KOMO and KGA. On the s. w. I have VK2-3ME, GSD-B-F, GCB, GBS, DENNE, EAQ, VE9GW, HJB, CGA, ZFB, LSN and LSX. I have a Philco 16-B 11-tube, all-wave. Would like to hear from other owners of that model."

"I have been DXing but a few months but my scrapbook of verifications is growing," writes George Butts, 2 Beach Drive, Medina, N. Y. "I have received every station of 5000 watts and over in the U. S., except KOB. I have veries from HJN and VE9EK. My log stands at 342. My best catch in the U. S. is that 25-watter in Los Angeles, KFVD. I use a Sonora, Model A31. Would like to hear from others using this set."

"I have been DXing since 1931 and now have logged 443 stations," summarizes John L. Taggart, Jr., 19 Robie Street, Bath, N. Y. "My best are YV1BC, LR5, HJN, KGIR, WKAQ, FQN, KALE, KVOA, KGHL and several other 100-watters. I have a Majestic, Model 92, and it sure has a good wallop for an old-timer." John is a member of the National Radio Club and would like to hear

from DXers anywhere.

"After six months, my log shows 226 stations," says Grant Ricksecker, 1318 West 111th St., Cleveland. "I lack six states; Kentucky is the only complete state but have had four out of five in West Virginia and 17 of 20 in Ohio. I have 10 in California, 3 in Oregon and 3 in Washington, making 16 on the west coast. In Chicago I have 12 out of 14 and in New York City 11 out of 15."

"I have a 5-tube, 75 to 550 meter Simplex Model P," contributes Stanley Mattheson, R. 1, Box 14, Stafford Springs, Conn. "I have received 176 stations between 540 and 1500 kcs. About the first night I had the set, I tuned in KFI. On the s. w. I have 30 police stations. I have listened to airport stations hours on end but have never heard one of them announce his call letters."

"The only book worth having on the radio" is the compliment of Marvin D. Dixon, Ora Mill R. 74, Shelby, N. C., who now has around 600 stations on his log. He is proud of 10-AK, BI, BQ and BP, CKIC, KFPM, HJN, CX18, CX26, LR5, 2CO, 2B1, 2YA and KGU. His set is a Philco 11-tube Model 15-X and his aerial 350 feet long and 40 feet high. He would like to correspond with DXers.

"Have logged about 225 stations on the b. c. band and about 30 on s. w.," adds up C. Ray Trask, 3475 West 22nd Ave., Vancouver, B. C. "I hear EAQ quite regularly. My best catches are 2YA, VK2ME, GSD-E, DJD, RV15, YV3BC, VE9HX and six Japs. I use an RCA Radiola 60 with a Sparton s. w. converter. Glad to hear from any DXers and will answer all letters."

"Look at this record," proclaims Harold J. Curran, Box 75, Wappinger's Falls, N. Y. "A grand total of 616 stations, 212 of them being 100-watt or less. Every station in the Union verified. Among them HIX, RUS, LR5, FQN and my best of all, 2YA. All these stations were heard on an Atwater Kent Model 55. Would like to hear from others using this model."

"In one month, with my 8-tube Radiola 60 superheterodyne, I have logged 150 stations," reports "A New DXer," F. Britton Buser, Cambridge City, Ind. "I find I have been missing a lot in not verifying my catches. I intend to start right away. Among my best are WENC, WGNY, KMO, WSPA, KFVD, KGHL, WNBO, KGFG and KARK."

"I received an Emerson 4-tube radio one year ago today," recalls S. W. Sullivan, 114 So. Kenilworth, Oak Park, Ill. "In that time I have logged 419 stations on the b. c. band—20 Californians, 15 Canadians, 6 Mexicans and two Cubans. I consider CMCW, KXA, and 10-BP my best. Would like to hear from other owners of Emersons."

"I have increased my log to 287 stations," says Foster Allen, 115 N. College St., Martinsburg, W. Va. "I have just started sending for veries in the last two weeks. Fourteen of my stations are on the Pacific Coast. I have trouble receiving any Cubans. I have a Model 801 Stewart-Warner receiver."

"I have received about 20 Japanese stations already this winter although radio reception is said to be poor in Victoria because of the large amount of cloudiness and rain we have here," reports W. Pollard, 60 San Juan Ave., Victoria, B. C. "I have also received KZRM, 2CO, 3AR, 3LO, 5CK, 2FC, 2BI, 2GB, 2UE, 4RK, 4BC and 4QG."

Donald W. Reynolds, 34 Chambers St., Newburgh, N. Y., submits this report: "My log is now 497. This morning, Dec. 28, four T-Ps rolled in -2YA, 5CL, 4GQ and JOIK. I have all the states but Wyoming and at least one station on every continent except Africa. I heard LR5 with good volume."

"My DX record is nothing to brag about," thinks Anthony Misunas, 319 Grand Ave., Rockford, Ill. "Last year and this, I have compiled a list of 410 stations with my best: CMCY, KGU, 10-AB and BQ, CKOV, XEFV, KGBU, CMDE and XEJ. Am still hoping for T-Ps. I have a Stewart-Warner, 9-tube set."

Writes Adam Gretchen, 1593 East 45th St., Cleveland: "My log totals 576 including 20 police. Have any readers received T-Ps on Atwater Kent receivers? My best catch was Poste-Parisian which I heard on three successive mornings last winter but have not heard them since."

From Manchester, England, W. H. Turner writes: "I am listening to your stations nightly. I have had WEAF, WCAU, WTAM, WTIC, WPG, WBZ, WABC, WIOD, KMOX, WRVA and my best, I think was today, Dec. 15, WOAI San Antonio. My best program, I think, is Friday night with Pond's Drama."

"My set is a Philco bought about six weeks ago," says Wilbur Cadmus, R. D. 1, Millville, N. J. "I already have 250 stations including LR5 in Buenos Aires."

"I have a 5-tube Cosmopolitan and would like to hear from others with the same set." Guilford W. Hamilton, 112 Orchard Ave., Punxsutawney, Pa.

"Since last April I have logged 323 stations. My best: CMQ, XEN, KGKO, KFJB, KMLB and WIBG." H. Searles, 349 Broadway, Rochester, N. Y.

"Here are five I value a good deal," submits Harry M. Gordon, 317 East 10th St., Erie, Pa. "They are 5CK, Crystal Brook, Australia, KGW, Honolulu, 2CO, Corowa, Australia, 4QG, Brisbane, Australia, and 2BL, Sydney. I had 4QG five straight mornings before I found out who they were, so when I wrote to them I gave the five days' log. I think that is as nice a catch as a person can get."

"I, too, hear the outlaw, WWSP," remarks Bernard E. Lorch, 8360 Ohio Ave., Glassport, Pa. "They seem to have no definite time on the air but when they announce it is 'WWSP, South Hills, Pittsburgh.' I get them at 820 kcs."

The LONG WAVE STATIONS

The Channels from 18 kcs. to 536 kcs.

Freque waveler fourth as follo	column re	e show) neters. epresent	n in The the	Kilocycles and symbols in the type of service,	266.00	1,127.14	KCAI KCX WHZ WSX WWAB	AW. AW. AW. AW. AW.	Waynoka, Okła. Medford, Ore. Atlanta, Ga. Boston, Mass. Buffalo, N. Y.
	A , AE,	Airway airway		imental	269.00	1,114.57	RW58	B.	Moscow (Popoff), USSR.
	AW, B,	airway Breadca		her reports	271.50	1,104.29	RV10	В.	Minsk Kolodistchi, USSR.
	Ëxp, HP, IP, P, tAt,	Experir Harbor Inter-Is Police	nental polic sland	e	272.00 277.00 278.00	1,102.28 1,082.38 1,078.48	WWX W2XAH W3XR W3XY W8XAA	AW. B. Exp. Exp. AE.	Washington, D. C. Oslo, Norway S. Plainfield, N. J. Mendham, N. J. Mendham, N. J. Cleveland, Ohio
Kcs. 18.00	Meters 16,656.67	Call KIE	Type	Location Kahuku, Hawaii	280.00	1,070.78		в.	Scheveningen, Hol- land
18.22 18.60 45 to 75	16,455.54 16,118.27 6,662.67 to 3,997.60	WQK KGI	Exp. Exp.	Rocky Point, N. Y. Kahuku, Hawaii Rocky Point, N. Y.	284.00	1,055.70	KĊAĊ KCT KCY	B AW AW AW.	Titlis, USSR. Butte, Mont. Los Angeles, Calif. Portland, Ore.
50 to 70	5,996.40 to 4,283.14		Exp. t				KVM WWQ	AW. AW.	North Platte, Neb. Bellefonte, Pa.
50 to	4,283.14 5,996.40 to		Exp. (Houlton, Me.	290.00	1,033.86	KCQ KGD	AW. AW.	St. Louis, Mo. Salt Lake City,
30 to 75	3,997.60	W1XQ	Exp. t	At Bradley. Me.			RV9	В.	Utah Kiev, USSR. Tulsa, Okla.
66.5 to 69.5	4,508.57 to 4,313.95	WOH	tAt	Bradley, Me.	296.00	1,012.90	KCAA KCAF	AW. AW.	Albuquerque, N. M
155.00 160.00	1,934.32 1,873.87		В. В.	Kaunas, Lithuania Huizen, Holland	$300.00 \\ 302.00$	999.40 992.78	RW53 KCAH	B. AW.	Leningrad, USSR. Kingman, Ariz.
100.00	1,010.01		B.	Radio-Kootwijk, Holland	308.00 309.00	973.44 970.29	KCR	AW. B.	Boise, Idaho Soro, Denmark
167.00	$1,795.32 \\ 1,763.64$	WQM	В.	Lahti, Finland Rocky Point, N. Y. Radio-Paris, France	310.00 314.00	967.16 954.84	RW60 KJF	B. AW.	Alma Ata, USSR. Omaha, Neb.
170.00 174.00	1,723.10		B.	Radio-Paris, France Deutschlandsender,	320.00	936.93	KOJ KCS	AW. AW.	Elko, Nev. Pasco, Wash
183.50	1,633.89	 DW44	B.	Germany	320.00	930.95	WRW WWAH	AW. AW.	Greensboro, N. C. Albany, N. Y.
188.00 190.00	$1,594.78 \\ 1,578.00$	RW14 WBA	В. Р.	Irkutsk, USSR. Harrisburg, Pa.	004.00	084.01	WWAR	AW.	Jackson, Mich.
		WBR WDX WJL WMB	Р. Р. Р. Р.	Butler, Pa. Wyoming, Pa. Greensburg, Pa. W. Reading, Pa.	$321.00 \\ 326.00$	934.01 919.69	RW4 KIS KSG WWAU	B. AW. AW. AW.	Kharkov, USSR. Iowa City, Iowa Cheyenne, Wyo. Memphis, Tenn.
193.00	1,553.47		В.	Daventry National, England	332.00	903.07	KCV WEK	AW. AW.	Oakland, Calif. Wichita, Kans.
$195.00 \\ 202.50$	1,537.53 1,480.59	RW1	В. В.	Ankara, Turkey Moscow (Komin-	333.00	900.36	WWAS WKDL	AW. A.	Cincinnati, Ohio Miami, Fla.
207.50	1,444.91		В.	tern), USSR. Eiffel Tower, Paris,	334.00 338.00	897.66 887.04	RW19 KCAD	B. AW.	Achkhabad, USSR Idaho Falls, Idaho
212.50	1,410.91		в.	France Warsaw No. 1,	000100		WBP WWAC	AW. AW.	Kcy West, Fla. Nashville, Tenn.
217.50	1,378.48	RW76	B.	Poland Novosibirsk, USSR			WWU	AW.	New Brunswick, N J
222.50 230.00	$1,347.50 \\ 1,303.56$		В. В.	Motola Sweden	344.00	871.56	KCU KCZ	AW. AW.	Fresno, Calif. Seattle, Wash. Kansas City, Mo.
235.00	1,275.83	RW8	В.	Moscow (Trades Union), USSR. Kasbah, Tunis Baku, USSR. Baku, USSR. Vienna Exp.,			KRC WWO	AW. AW.	Cleveland, Ohio
238.00	1,259.75	RW43	B. B.	Baku, USSR. Baku, USSR.	350.00	856.62	KCAE KDA	AW. AW.	Winslow, Ariz. Maywood, Ill. Back Society With
240.00	1,249.25		B.	Austria		054.10	KDN KKJ	AW. AW.	Rock Springs, Wyo. Fort Worth, Texas
242.00 248.00	$1,238.92 \\ 1,209.35$	WFT	B. AW.	Boden, Sweden Spartanburg, S. C.	$351.00 \\ 355.00$	$854.19 \\ 844.56$	RW70	В. В.	Leningrad, USSR. Budapest No. 2,
250.00	1,199.28		В. В.	Istanbul, Turkey Reykjavik, Iceland	364.00	823.68	RV5	В.	Hungary Sverdlovsk, USSR
252.00 254.00	1,189.76 1,180.39	KLK WSG WWAP	B. AW. AW. AW.	Luxembourg Reno, Nevada La Crosse, Wis. Pittsburg, Pa.	368.00 393.00	814.73 762.90	RW9 WAEF WHG WQDQ	В. А. А. А.	Kiev, USSR. Newark, N. J. Columbus, Ohio Dearborn, Mich.
260.00	1,153.15	WNR	AW. B.	Richmond, Va. Kalundborg,	400.00	749.55	RA8 WAEF	В. А.	Bogorodsk, USSR. Newark, N. J.
265.00	1,131.39		В.	Denmark Monte Ceneri, Switzerland			WHM	А. В.	Indianapolis, Ind. Geneva, Switzerland

402.00	745.82		В.	Ostersund, Sweden
406.00	738.47	KOG	_	Honolulu, Hawaii
414.00	724.20	WAEF	A.	Newark, N. J.
		WCQ	А.	Lansing, Ill.
		WKDL	Α.	Miami, Fla.
416.60	719.70		Exp.	Moscow, USSR.
420.00	713.85	WAEF	A.	Newark, N. J.
434.70	689.71		B.	Oulu, Uleaborg,
101.10	000.71		D.	Finland
435.00	689.24	RW35	В.	Astrakhan, USSR.
438.00	684.52	WPY	HP.	New York, N. Y.
442.00	678.32	ŘĤĹ	ĪP.	Wailuku, Hawaii
112.00	070.02	KHM	ÎP.	Libno Hawaii
		KHN	IP.	Lihue, Hawaii
				Lanai, Hawaii
		KHO	IP.	Kaunakaki, Hawaii
		KLN	1 P .	Hilo, Hawaii
500.00	599.64	WKDL	A.	Miami, Fla.
		WPY	HP.	New York, N. Y.
511.00	586.73	RW30	В.	Dneipropetrovsk,
				USSR.
515.00	582.17		В.	Tartu, Estonia
521.00	575.47	RA34	B.	Koursk, USSR.
522.00	574.36		B.	Hamar, Norway
022.00	011.00		B.	Ljubljana,
			р.	Yugoslavia
FOC 00	F70.00		В.	
526.00	570 .00		В.	Grenoble (PTT),
			-	France
527.00	568.91		В.	Freiburg-im-Breis-
				gau, Germany
530.00	565. 6 9		В.	Wilno, Poland
536.00	559.36		В.	Augsburg,
				Germany
			В.	Kaiserlautern.
			D.	Germany
			B.	
		*****	D.	Tampere, Finland

The Verification PROBLEM

BVIOUSLY if reports coming in to the radio stations from listeners, are to do the stations any good they should contain some information of value to the station. While some stations might desire different information from others, it would seem that it would be of mutual benefit to the broadcasters and to the listeners-in if some uniform form of report were devised and published in your magazine either regularly or on frequent occasions. Then novices in DX work might get started without delay and with the greatest efficiency. I have just received a new Atwater Kent with short wave stage and was so interested in the possibilities of DX after reading your magazine that I have decided to see what I can do in that line during the coming winter. You folks who publish the magazine have been working so long that you are away down in its intricacies by this time but you should not lose sight of the fact that there

are beginners starting in after you all the time and you could materially assist them." This pertinent letter comes from Chester E. Ross, Hollister, California.

The points Mr. Ross makes seem to be very well taken. Surely a uniform report of reception would make it easier for the stations and save them from wading through long and rambling letters. Secondly, if stations are to continue to verify they must receive as well as give and listeners must learn how to give intelligible and helpful reports of the quality of reception. It seems to us. therefore, that it might be better-instead of publishing a model form of report-for us to provide a supply of printed forms which our readers could secure at a reasonable price. On these forms we might print a personal word from this magazine to the broadcasters urging them to make prompt verification if justified. We might point out the fact that many of the reports made are in competition and hence a matter of the utmost importance to the listener.

Defends Stations

George W. Haskell, Box 58, South Paris, Maine, points out: "We often hear complaints in regard to radio stations not answering requests for verification. Considering the amount of correspondence which reaches a station, it doesn't surprise me that some letters get laid by and remain unanswered for some time. In praise of the stations, I wish to say that I have sent for verifications to 235 stations in a little over one year and have received replies from 233. The other two were written but a few days ago and it is hardly time for a reply. I think a respectfully worded letter, with a little patience if it is not answered at once, with a second letter after a reasonable time just as respectfully worded, will bring results every time provided due care has been exercised to give a complete report of the program heard. This has been my experience and I

would recommend this course to others."

Another point is stressed by Francis Eugene Andrew, 104 North 19th Street, Wheeling, W. Va. "The 24hour mailing rule enforced by many stations should be impressed upon the minds of new (and some old) Radexers. Failure to obey this rule is one of the chief reasons why many reports reach 'ye old ash-can.' The readibility code, etc., should be given on every message sent to a station. Local conditions, interference and any other information one might think the station engineer would appreciate, should be included in reports. If this is done, I feel certain that he will look upon DX letters as more of a necessity than as a bother. Merely giving selections or announcements does not help a station nearly so much as stating under what conditions those selections or announcements were heard."

Too Much Dedication?

Still another phase of the problem is discussed by Abe Cohen, of the Library Department of the Seattle Post-Intelligencer. "I was on the Courtesy Programs Committee of the Transcontinental DX Club and it has puzzled me from time to time how the stations were able to comply with these incessant requests from radio clubs and still maintain as decent a front to DXers as they do. The selfishness of these DXers (and I have been just as bad as anyone else). 'We just have to have a program dedicated to our club.' No matter that the club has only twelve members-two of whom will stay up to listen to the broadcast-we must have the program dedicated to us. Personally I think all soliciting of The stations by clubs should stop. DX programs ought to be available to all and not just to our members. The suggestion may be a trifle radical but I feel that it is the only way DXing can be saved for the future."

The injustice of blacklisting or even condemning stations for a failure to

verify based upon individual experiences, is pointed out by W. T. R. Morris, Jr., 3219 Garland Ave., Richmond, Va. "In your December issue Harry McPoyle of West Philadelphia, complained about WTFI of Athens. Ga., saying that it was the worst offender in the matter of failure to On the other hand, I reverify. ceived one of my very best verifications from this station. They sent me not only a verification card and a souvenir card but wrote me a personal letter in which they said: 'We are always extremely glad to hear from our friends regardless of where they are located but this letter of yours meant quite a great deal to us, especially the information you gave as to the clarity and quality of our station. Keep in touch with us; we will always be glad to hear from you; it takes just such letters as yours to help us make a success of our station.' I am afraid Mr. McPoyle did not give them the valuable information which all stations desire. Clarity. Quality, Fading and Volume are the main things to check on any station that the listener expects to receive a verification from."

Station WBTM, too, objects to being included in Mr. McPoyle's com-A good letter from W. P. plaint. Program Director of Heffernan. WBTM, states: "It is not true that this station ignores DX mail. During the first few months of this station's operation, more than three and onehalf years ago, much fan mail was not answered, due to the press of business and the fact that the station was understaffed. However, when the undersigned took this desk over, he personally saw to it that all back mail, which was carefully filed, by the way, was answered.

"This station has never sold ekko stamps—has never asked for dimes and has certainly never 'collected dimes.'

"May I state here that station WBTM is glad to hear from its listeners always, particularly on DX broadcasts, of which we have very few and on our regular frequency check programs. I am sure that I echo the sentiments of the broadcasting industry, when I call attention of your readers to the fact that postage, particularly to a small station, is a very heavy burden and it is greatly appreciated whenever a return stamp or self addressed stamped envelope is included in the report of reception.

"It might be well to state here, that many so-called reports of reception do not give sufficient information to justify the station's verifying same. And a great many letters come in so many weeks behind the date of broadcast that we cannot help thinking, at least, that the writer obtained his 'dope' from some friend with whom he is swapping stations for their logs. If this is the case, the practice should be discouraged."

Radio vs Fishing

RADIO never fails to surprise and delight me. When younger, I fished a great deal. DXing supplies thrills fully equal to the older sport. When a distant station or a lowpowered one first begins to come in, the sensation is as pleasurable as the first tug at the line. Then, manipulating the controls, power, volume, etc., until the call letters come in clearly and distinctly, is equal to the landing process and requires just as much skill and often more patience.

Before I new about DX, I often sat up nights and cruised about the radio dial. I carefully logged the stations heard until I had 207. With a new receiver. I raised my log to 300 but this seemed to be about the limit at the time. Then I heard of the DX clubs and decided to devote still more effort. I purchased a Philco, 111, 11tubes, and settled down to DXing in earnest. That was more than two years ago. My log now stands at 709. Everyone of these stations has been heard on the loudspeaker and on the regular b. c. band. I have not verified but I have never logged a station until I had heard the call letters, the location and often the frequency distinctly. When all this checks with the latest copy of RADEX, I need no verification. Of course I heard many stations that I was not able to identify. The only duplications are those stations which materially changed their location, their frequency or decreased their power.

Chas. C. Mann, Science Teacher, David Worth Dennis Junior High School, Richmond, Ind.

EUROPEAN Reallocation

(Continued from page 39)

Frankfurt (Germany), 17 k.w., 1195

Supplies many concerts and programme items to the more powerful German stations. The Frankfurt Symphony Orchestra is one of the best in Europe.

Trieste (Italy), 10 k.w., 1222

Received at tremendous strength at times. Transmits its own programmes from early morning until early evening, afterwards relaying those of Turin and Milan.

Fecamp (France). 10 k.w., 1456-1393

A French station with a great following in this country. Special daily transmissions from 11 p. m. to 3 a. m. with announcements in English and French.

Note: Slight errors may be found as the frequencies given above were converted from meters. For the correct frequencies see the new issue of the DK Log of the World.

On KNOWING HOW

I HAD a very interesting experience this morning," narrates Richard M. Carter, 820 McKinley Ave., Ann Arbor, Mich. "A friend of mine purchased an Airline receiver with Stewart-Warner converter a few weeks ago. He hadn't been able to pull in VK2ME or 3ME or any foreigners on the regular b. c. band. Knowing of my success, he asked me to come over and give his dials a few twirls. I made no promises especially since it was raining here and seemed like a poor morning for reception. I arrived at his house at 1:30 this morning and immediately proceeded to pull in VK2ME—not loud but perfectly clear. I then pulled in two 100watters in California — KDB and KERN, and one in Rhode Island, WPRO, all with plenty of volume.

"A few minutes before two I turned to 830 and waited for KOA to sign off. Before the announcer finished speaking, we heard a voice in the background say 'Buenos Aires.' And then for an hour we listened to LR5. It came in QSA 4 to 5, R6 to 7. Not bad. I then picked up CJCA and CHGS and several faint signals which I insisted were 2CO, 5CK, KGU, 4QG, and 2BL. My friend didn't take much stock in my theories about these and was on his way to bed when I called him back to hear 2BL come in with room-filling volume. And they announced plainly right at that time. I wouldn't be that lucky again in a hundred years."

Last-Minute NOTES

(Continued from page 14)

way between Moose Jaw and Regina and scrapped our old 500-watt CJRM machine. VE9JR is still operating on 25.6 meters but only in the evenings. VE9CL on 48.58 is not in operation at present but we expect to have it going simultaneously with VE9JR in the near future. We shall shortly open a new 100-watt transmitter in Winnipeg and this will operate on a frequency of 1390 kcs."

B. C. Band Widened

Widening of the broadcast band to embrace three new channels in the 1500-1600 kc. band was announced by the Radio Commission Dec. 19, with an indication that a dozen stations of not more than 1000 watts will be licensed for operation on these waves under rigid limitations but with full authority to broadcast commercial programs. The channels designatedare 1530, 1550 and 1570 kc., each 20 kc. wide instead of ten. This is about the only tangible result coming out of the late-lamented Mexico City conference. Further details regarding this new move will appear in later issues of this magazine.

A DX Calendar for 1500 Channel

"Am sending you a copy of the 1500 kc. schedule for the month of February that we have arranged," writes Fred W. Janssen, of the CPC of the NNRC, 220 South Santa Cruz St., Venura, Calif. "Would appreciate it very much if you would cooperate with us for February and not ask any of the 1500-kc. stations to come on so that they might conflict with this schedule. It would be mighty nice for everyone if we could get the cooperation of all the clubs in putting this schedule over." We think this an excellent idea and hope that the stations invited to participate will do so. In view of the fact that they have not as yet accepted as we go to press, we deem it best to publish this calendar separately. Time is in EST.

Thursday Morning, Feb. 8 3:00-4:00 WSYB, Ruthand, Vt. Friday Morning, Feb. 9 3:00-4:00 CRCS, Chicoutimi, Que. Saturday Morning, Feb. 10 3:00-4:00 WKEU, La Grange, Ga. Sunday Morning, Feb. 11 3:00-4:00 WKBV, Richmond, Ind. Tuesday Morning, Feb. 13 3:00-4:00 WKBV, Richmond, Ind. Tuesday Morning, Feb. 13 3:00-4:00 WKBB, East Dubuque, Ili. Wednesday Morning, Feb. 14 3:00-4:00 WKBB, East Dubuque, Ili. Wednesday Morning, Feb. 15 3:00-4:00 WKBF, Binghamton, N. Y. Friday Morning, Feb. 16 3:00-4:00 WWBF, Binghamton, N. Y. Saturday Morning, Feb. 16 3:00-4:00 WWBC, Lapeer, Mich. Sunday Morning, Feb. 18 3:00-4:00 KFDV, Rome, Ga. Tuesday Morning, Feb. 20 3:00-4:00 WRDV, Rugusta, Ga. Wednesday Morning, Feb. 21 3:00-7:00 WOP1, Bristol, Tenn. Thursday Morning, Feb. 22 3:00-4:00 KGKB, Tyler, Tex. Friday Morning, Feb. 23 3:00-4:00 KDB, Santa Barbara, Calif. Saturday Morning, Feb. 24 3:00-4:00 WKDB, Brooklyn, N. Y. Sunday Morning, Feb. 25 3:00-4:00 WKDZ, Ludington, Mich. Monday Morning, Feb. 26 3:00-4:00 WKDZ, Ludington, Mich. Monday Morning, Feb. 26 3:00-4:00 WKDZ, Parking, Pa. Wednesday Morning, Feb. 27 3:00-4:00 WKDZ, Parking, Pa.

> "Help Yourself to Better Reception" is the title of an article which will appear in the March issue. It covers the subject of street noises and how to erect an aerial that will block them out.

What's Wrong with Set

(Continued from page 36)

tached, and connected together to a common terminal which, in turn, is connected to the plate of the 56 a.v.c. tube just placed within the set.

The cathode terminal, on the socket, of this tube, is connected, through a 25,000 to 50,000 ohms resistor (selected by experimentation) to the tap on the first filter choke that connects to the speaker field coil. This resistor in the cathode is shunted with a 0.1 mfd. fixed by-pass condenser. The grid of the a.v.c. tube is then connected to the plate of the second intermediate-frequency tube through a .00025 mfd. condenser inserted in series. The grid of the a.v.c. tube (56) also is returned to the cathode circuit of the same tube through a 2 megohm resistor placed in series. The plate of the a.v.c. tube, which is also connected to the lower ends of the three stages above mentioned through the 250,000 ohms resistors, is by-passed to the cathode through a 0.5 by-pass condenser.

The heater of the a.v.c. tube is connected to the common heater winding of the power unit furnishing any of the 2.5-volt tubes. The plate of the a.v.c. tube, also is grounded through a resistor that is variable between 10,-000 and 150,000 ohms.

After this work has been done the entire set may require readjusting for proper r.f. and i.f. alignment. We do not advise the use of new tubes of the 50 series in this circuit.

BETTY'S Gossip Page

(Continued from page 10)

teners. Finally she went to a psychoanalyst with her trouble and received this opinion from him; Her melancholy tones are of a type that make the men want to comfort her and at the same time woman listeners feel sorry for her!

George Hall's father, a classical musician who used to play with Victor Herbert, won't listen to his son broadcast . . . can't get over George turning to dance music when he might have been a classical artist himself.

Albert Spalding, America's foremost violinist, knocks on the rare wood of his \$35,000 Guarnerius fiddle for luck before he starts his broadcast over Columbia every Wednesday at 8:30 p.m., EST.

Isham Jones is the only one to hold cards in both the musicians' and coal miners' unions. He himself once labored in Ohio mines and each year renews his affiliation. Incidentally, Isham has a one-year-old adopted son named David, and the boys in the band have taught this small youngster to deliver a Bronx cheer upon request.

* * *

Rudy Vallee, still in a predicting mood, picks Gertrude Niesen, Barbara Blair (Snoony), Joe Penner and Alice Faye as the most promising prospects in radio.

* * *

Jane Froman, who's as good looking as she sings, will leave the air in April after two years of continuous broadcasting. She'll be off till September for a well-earned rest.

Joe Morrison, who started "The Last Round Up" on its dizzy radio ride, is leaving George Olsen's Orchestra to enter the movies. Lanny Ross is also another radio star to break into the movies.

Tea Little—that's really her name —is Jack Little's wife and manager, and she's just as Little as he is.

*

DX Notes and Tips

(Continued from page 32)

were on 720. None of the T-Ps except 2BL have been good here this winter."

"Thanks for the tip on HIX," postcards Guy R. Bigbee, Hq. Co., 66th Inf., Fort Benning, Ga. "I was not able to turn on the radio at the beginning of the program but heard it from about 8:30 to 10 p.m. CST. Program was excellent although the static kept me from hearing all that was said. I did hear the call and that part of the announcement dedicating the program to RADEX."

"Is there anyone more lonesome than a DX fan without a radio," queries Robert R. Rawstron, 296 Main St., Claremont, N. H. "Have now sold my Eveready after four years service bringing in some 770 veries in 23 countries. Its last was LR5 in Argentine. Now I have a

new B-16 Midwest somewhere on the rails between here and Cincinnati. I would like to hear from other Midwest owners in the East and will acknowledge all letters."

"Years ago, I used to be a DX fan but not until last month did I again become interested," observes Madison Letts, 1515 R st., Lincoln, Nebr. "Last night I sat down at the radio and in five minutes pulled in my 300th catch—XEW of Mexico City. I am using a 29 model Victor-RCA, model RE-45. I have just installed the Ollie Ross ground—it makes a definite improvement in reception."

With the Clubs

From Warren E. Winkley, Box 12, Hughson, Calif., comes the information that the late Transcontinental Radio DX Club has been reorganized and renamed the Universal Radio DX Club with Charles C. Norton, 2559 Polk St., San Francisco, as president. Station KPCB, two of whose officers are directors of the Club, is putting on a DX program for the new club "every other first Monday of each month from midnight to 2 a.m., PST. My log is now at 428," says Mr. Winkley, "with one Chinese, five Aussies, one Zedder, 29 Japs and F31CD. On the night of Oct. 21 I nicked up 22 Japs-the best night I ever experienced. I can start listening to them as early as 10:30 p.m., PST."

The Universal Radio DX Club, said to be the only club of its kind in the West, is putting out a news sheet every ten days. They hope to put on many special programs by stations that are rarely heard in the East. The membership fee is 35 cents and the dues 95 cents a year. Club news and tips will be given out over station KPCB on the first Monday morning of each month from midnight to 2 a.m., PST.

"KDKA has a DX club now," postcards Joe Stokes, 7318 Woodlawn Ave., Swissvale, Pa. "They are broadcasting tips and news every Sunday night at 12:30 a.m., EST."

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.

COLUMBI	A(C)
Call	Dial

L, Red (R)
Dial

<u>a</u> .u	
Call	Dial

TIME: E Eastern; C Central; M Mountain; P Pacific. RADEX is the only publication listing stations in alphabetical order for your convenience. While these programs are correct at the time of going to press changes are made from time to time.

MONDAY

E-8:00 p.m., C-5:00, M-4:00, P-8:00 C - Buck Rogers in 25th Century CKLW WAAB WABC WADC WBT WCAO WCAU WDRC WEAN WHK WJSV WKBW WOKO

 $\label{eq:resonance} \begin{array}{l} \textbf{R} & - \textbf{Weldorf Astoria Orchesita} \\ \textbf{KDYL KFYR KOA KPO KPRC KSD \\ \textbf{KDYL KFYR KOA KPO KPRC KSD \\ \textbf{KSTP KTBS KTHS KVOO WAAPI \\ WBEA WEBC WFAA WPLA WHOA WDAF WJAX WIOD WIS WJAR WJAX WIOD WIS WJAR WJAX WJDX WK' WMAA WMC WOAI$ WOC WRC WRVA WSAI WSB WSM $WJDX WK' WMAA WMA WJZ WMAK WSAL WSA WSAY WEAR WKAL WREN WSYR \\ \textbf{WJZ WMAL WREN WSYR } \end{array}$ Waldorf Astoria Orchestra

E-6:15 p.m., C-5:15, M-4:15, P-3:16 C -- Bobby Benson; Sunny Jim WAAB WABC WCAU WDRC WEAN WFBL WGR WHEC WHK WLBZ WMAS WOKO WORC

E-6:30 p.m., C-5:30, M-4:30, P-3:30 C — Enoch Light and Orchestra C — Enoch Light and Orchestra CKLW KLRA WAAB WADC WBIG WBRC WCAO WCAU WDAE WDBO WDOD WDRC WDSU WFBL WFEA WGLC WGST WHEC WHP WICC WKBIN WKBW WLBZ WMAS WMBG WOKO WORC WQAM WSJS WSPD WTAR WTOC

R - Irene Beasley, Songs KGO KOA WAPI WBEN WCKY WEAF WFBR WGY WHO WJDX WMC WOC WSAI WSB WSM WSMB WSOC WTAG WWJ

E-6:45 p.m., C-5:45, M-4:45, P-3:46 R - Horsesense Philosophy: Andrew

R – HULLEN Kelly WEEN WCAE WCKY WEAF WFAA WFBR WGY WHO WJDX WMAQ WMC WOC WSAI WSB WSM_WSMB WTAG WWJ B- Lowell Thomas CRCT KDKA WBAL WBZ WRZA WFLA WGAR WHAM WIOD WJAX WJR WJZ WLW WSYR

WJR WJZ WLW WSYR C — Mildred Bailey, Songs CFRB CKLW KLRA KLZ KMBC KOMA KRLD KSCJ KTRH WAAB WABC WBIG WBRC WCAH WCAO WCAU WDAE WDBJ WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGST WHAS WHEC WHP WIBW WICC WISN WJSV WKBN WKBW WLCZ WMAS WMBG WMT WOKO WORC WQAM WSJS WSPD WTAR WTOC WWVA

E-7:00 p.m., C-6:00, M-5:00, P-4:00 E-r:00 p.m., G-8:00, M-8:00, P-4:00 C-Myrt and Marge CKLW KRLD WABC WADC WBT WCAO WCAU WDAE WDBO WDRC WFAN WFBL WGR WHK WJAS WJSV WKRC WNAC WOKO WQAM WSPD WTOC WWVA

R — Molle Show KSD WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WLIT WMAQ WOC WOW WRC WTAG WTAM WTIC WWJ B — Ames 'n' Andy

B — AMOS IN ANDY CRCT KDKA WBAL WBZ WBZA WCKY WFLA WGAR WHAM WIOD WJR WJZ WLW WMAL WPTF WRVA

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

CFRB CKLW WABC WCAO WCAU WGR WHK WJSV WKRC WNAC

WEAF WGY WJAR WRC WTAG WTAM WWJ

B — Baby Rose Marie, Songs KDKA WBAL WBZ WBZA WHAM WJZ WMAL WSYR

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C - Music in the Air

WABC WCAO WCAU WDRC WEAN WFBL WFEA WGR WHEC WICC WJAS WJSV WLBZ WNAC WOKO WORC

R — Lum and Abner KSD WBEN WCAE WCSH WDAF WEAF WEEL WFBR WGY WJAR WLW WRC WTAG

B — Potash and Perimutter KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WENR WHAM WJR WJZ WMAL WREN WSYR

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C – Boake Carter; Philco CKLW KMBC KMOX WABC WBBM WBT WCAO WCAU WCCO WGR WHAS WHK WJAS WJSV WNAC R - The Goldbergs

WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WGY WJAR WLIT WOW WRC WSAI WTAG WTAM WWJ

WIAM WWJ B – Mme, Frances Alda KDKA KDYL KFI, KFYR, KGO KGW KHQ KOA KOIL KOMO KPRC KTBS KTHS KWCR KWK KYW WBAL WBA WBA WBZ WBZ WHAM WIBA WJA WJZ WKY WMAL WOAI WSMB WSYR

F501

E-8:00 p.m., C-7:00, M-8:00, P-5:00 C — Happy Bakers CKLW WABC WADC WCAH WDRC WFBM WGN WGR WHEC WHK WICC WJSY WMAS WMBG WMT WNAC WORC WSPD WWVA

R - Soconyland Sketches-Drama WBEN WCSH WEAF WEEI WGY WJAR WTAG WTIC

WJAR WIAG WILC B — Scaled Power Side Show KDKA KFYR KOLL KPRC KSO KSTP KTBS KTHS KVOO KWCR KWK WBAL WBZ WBZA WDAY WEBC WFAA WGAR WHAM WIBA WJDX WJR WJZ WKY WLS WMAL WMC WOAI WSB WSM WSMB WSVR WTMJ WSYR WTMJ

E-8:15 p.m., C-7:15, M-6:15, P-5:16 C — Edwin C, Hill CKLW KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WHK WFBL WFBM WCO WAGR WOKO WFBL WFBM WGN WGR WHK WJAS WJSV WKRC WNAC WOKO

WSPD E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Bing Crosby CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KVI KWG WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WOWO WSPD B — Vaice of Firsting Voice of Firestone CFCF CRCT KFYR KPRC KSD KTBS KTHS KVOO WBEN WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO

WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WLIT WLW WMAQ WMC WOAI WOC WOW WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTIC WTMJ WWJ WWNC B — Djer Kiss Recital

WBAL WBZ WBZA WCKY WGAR WJZ WLS WMAL WREN WSYR

E-8:45 p.m., C-7:45, M-6:45, P-5:45 B — Red Davis — Dramatic Sketch KDKA WBAL WBZ WBZA WHAM WJR WJZ WLS WSYR

E-9:00 p.m., C-8:00, M-7:00, P-6:03 C — Philadelphia Symphony Orchestra CKLW KDB KERN KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KSL KTRH KTSA KVI KWG WABC WADC WBBM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDRC

MONDAY—(Continued)

WDSU WEAN WFBL WFBM WGR WGST WHAS WHEC WHK WICC WGST WHAS WHEC WHR WICG WISN WJAS WJSV WKRC WLAC WLBZ WMBG WMT WNAC WOKO WOWO WPG WQAM WREC WRR WSPD WTAR WTOC

WOLD WIAK WIOC R - A. & P. Synsies KSD WBEN WCAE WCSH WDAF WEAF WEEI WGY WHO WJAR WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ B - Sinclair Minstrels

B — Sinclair MINSURES KDKA KFYR KOA KOIL KPRC KSO KSTP KTBS KTHS KVOO KWCR KWK WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WIGA WIGA WIOD WIS WJAX WDAT WEDD WTAA WELA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WLS WLW WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC

E-9:15 p.m., C-8:15, M-7:15, P-6:15 E-9:15 p.m., C-8:15, M-7:15, P-6:15 C — Buick; Andre Köstelanotz CKLW KDB KERN KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KSCJ KSL KTAT KTSA KVI KWG WABC WADC WBBM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDRC WDSU WEAN WFBL WFBM WGST WHAS WHEC WHK WHEW WICC WISN WJAS WJSV WKBW WKRC WLAC WMBD WMT WNAC WOKO WOWO WQAM WTEC WORK WFD WTAR WREC WRR WSPD WTAR WTOC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C-- isham Jones; Gertrude Niesen CFRB CKLW KDB KERN KFBK KMJ KMOX KOIN KOL KRID KSL KVI KWG WABC WADC WBBM WBT WCAH WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WHAS WHAK WICC WJAS WJSV WKBW WKRC WLAC WJAC WOKO WOWO WHEC WSPD WTAR R - Dei Monte Ship of Jov

Del Monte Ship of Joy YL KOA KPRC KSD KDYL KOA KPRC KSD KSTF KTBS KVOO WBEN WCAE WCSH WEAF WEBC WEEL WFAA WFBR WFLA WGY WHO WIOD WIS WFLA WGY WHO WIOD WIS WJAR WJAX WKBF WKY WLIT WMAQ WOAI WOC WOW WRC WRVA WSAI WTAG WTAM WTMJ WWJ WWNC

B — Jack Frost's Melody Moments KDKA WBAL WENR WGAR WHAM WJR WJZ WLW

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Wayne King and Orchestra CKLW KALE KDB KERN KFRC KGB KHJ KLZ KMBC KMOX CKLW KALE KDB KERN KPRU KGB KHJ KLZ KMBC KMOX KOIN KOL KSL KWG WAAB WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WOKO WOWO_WSPD

R - Contented Program KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSTP WCSH WEAF WEBC WEEI WFBR WJAR WLIT WMC WOAI WSP WSM WTAG WRC

B — Marcel Rodrigo, Baritone KDKA KOLL KSO KWCR KWK WBAL WBZ WBZA WHAM WJZ WMAL WSYR

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C -- Columbia News Service CKAC CKLW KLRA KRLD KTRH

KTSA KVOR WAAB WABC WACO WBIG WBT WCAH WCAO WCAU WDAE WDBJ WDBO WDOD WDRC WEAN WEBL WEBA WGR WGST WHAS WHEC WHP WISN WJAS WJSV WKBN WLAC WLBW WLBS WMAS WMT WODZ WOKO WORC WQAM WREC WSJS WSPD WTOC

We will write with the set of th

WILC WWIT Beering, Concert Pianist KFYR KOLL KPRC KSO KSTP WBZA WCKY WEBC WFAA WIAM WIBA WJDX WJZ WKY WMAL WCAI WREN WSB WSM WSMB WSYR

E-10:45 p.m., U-3-93, ... C — Myrt and Marge KDB KERN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KOIN KOL KOMA KSL E-10:45 p.m., C-9:45, M-8:45, P-7:45 KMOX KOIN KOL KOMA KSL KVI KWG WBBM WBRC WCCO WDSU WFBM WGST WHAS WLAC WODX WREC

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

C --- Evan Evans, Baritone CKLW KFH KLRA KLZ KMBC KSC3 KTH WAAB WABC WADC WBRC WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDBU WEAN WFEA WGLC WGST WHAS WHEC WHK WHP WIBW WICC WIP WISN WJAS WJSV WKBN WKBW WLBZ WMAS WABN WKBW WLBZ WMAS WMBD WMBG WMT WODX WOKO WORC WQAM WSJS WSPD WTAR WTOC

What where $B \rightarrow Amos' n' Andy$ KDYL KFI KGO KGW KHQ KOAKOIL KOMO KPRC KSTP KTHSKWK WBAP WDAF WENR WKYWMAQ WMC WOAI WREN WSBWSM WSMB WTNJ

E-11:15 p.m., C-10:15, M-9:15, P-8:16 C — Boswell Sisters CFRB CKLW KFAB KFH KLRA KLZ KMBC KTRH KTSA KVOR WAAB WABC WACO WADC WBT WCAH WCAO WCCO WDAE WDBJ

WCAH WCAO WCCO WDAE WDBJ WDBO WDDD WDRC WEAN WFIM WFEA WGST WHP WIBW WIP WISN WJAS WJSV WKBN WKBW WLAC WLHW WLBZ WMAS WMBD WMT WODX WORC WPG WQAM WREC WSBT WJSI WSPD WTOC

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Abe Lyman and Orchestra CFRB CKLW KFH KLRA KLZ KMBC KOMA KTRH KTSA KVOR WABC WADC WBRC WCAU WDBJ WDRC WDSU WEAN WFBL WFBM WCST WHAS WHK WHP WIBW WICC WISS WHA WFBM WGST WHAS WHAK WHP WFBM WGCST WHAS WHK WHP WIBW WICC WISN WJSV WKBW WLAC WLEW WMBD WMBG WMT WNAC WOKO WORC WPG WQAM WREC WSBT WSJS WTAR WTOC

R — Voice of Firestone KDYL KFI KFSD KGHL KGIR KGO KGU KGW KHQ KOA KOMO KTAR

E-12:00 p.m., C-11:00, M-10:00, P-9:00 B - Sealed Power Side Show KDYL KFI KGHL KGIR KGO KGW KHQ KOA KOMO KTAR

[51]

TUESDAY

E-6:00 p.m., C-5:00, M-4:00, P-8:00 C - Buck Rogers, See Monday

R - Waldorf Astoria, See Monday

B. Richard Himber and Orchestra

KOIL KSO KWCR WBAL WCKY WENR WHAM WJR WJZ WMAL WREN

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C - Bobby Benson, See Monday

E-6:30 p.m., C-5:30 M-4:30, P-3:30 R — Mid-Week Hynn Sing KDYL KFYR KGIR KPO KPRC KTBS KTHS KVOO WDAY WEAF WFAA WFI WGY WHO WIBA WIS WJAX WJDX WMAQ WOA WRC WSAI WTAG WWNC WOAL WOO

B — Mary Small, Juvenile Singer KSO KWCR WBAL WCKY W. WHAM WJZ WREN WSYR WENR

WHAM WJZ WREN WSER C-Betty Barthell, Songs CKLW KLRA WAAB WABC WADC WBRC WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBL WFEA WGLC WGR WGST WHEC WHP WICC WARN WLBZ WMAS WMBG WOKO WORC WQAM WSJS WSPD WTAR

E-6:45 p.m., C-5:45, M-4:45, P-3:45 C - Little Italy C - Little Italy WAAB WABC WCAO WCAU WDRC WEAN WHEC WHP WKBW WOKO R - Cheerio Musical Mosaics KDYL KOA KPO KSD WCKY WEAF WEEI WPBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WMAQ WOC WOW WRVA WSAI WSM WSOC WTAG WWJ WWNC

B — Lowell Thomas, See Monday

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

E-7:15 p.m., C-6:15, M-5:15, P-4:16 C — Just Plain Bill, See Monday R — Billy Bachelor, See Monday B — Radio in Education KDKA KECA KEX KFSD KFYR KGA KGHL KGIR KJR KOA KOIL KGA KGHL KGH KJA KOA KOL KPRC KTAR KTBS KTHS KVOO KWCR KWK KYA WAPI WBAP WBZA WCKY WFLA WHAM WIBA WIS WJDX WJZ WMAL WOAI WPTF WREN WSMB WWNC

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Silver Dust Serenaders WABC WCAU WDRC WFBL WGR WHEC WJAS WMAS WOKO WORC WWVA

E-7:45 p.m., C-6:45, M-5:45, P-4:45 B — Phil Harris and Orchestra KDKA KFYR KOIL KI'RC KSTP KTBS KWCR KWK WBAP WBZ WBZA WENR WFLA WGAR WHAM WIBA WIS WJZ WKY WMAL WRVA WSYR WWNC

C - Boake Carter, See Monday R - Goldbergs, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C — Columbians; Freddie Rich CKLW KFH KLRA KMBC KOMA KSCJ KTRH WABC WADC WBBM WBIQ WBRC WCAH WCAQ WCAU WEIG WERC WCAH WCAO WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WGST WHAS

TUESDAY-(Continued) WHEC WHP WIBW WICC WISN WJAS WKEN WLBZ WMAS WMBG WMT WNAC WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WWVA

R - Leo Reisman and Orchestra WBEN WCAE WCSH WEAF WEEI WFI WGY WJAR WRC WTAQ WTAM WWJ

8 - Eno Crime Clues

WDKA KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW WMAL WMAQ WREN

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Edwin C. Hill, See Monday

E-8:30 p.m., C-7:30, M-8:30, P-5:30 C - Voice of Experience CKLW KMBC KMOX WABC WBBM WBT WCAO WCAU WDRC WEAN WGR WHAS WHK WJAS WJSV WKRC WNAC

R — Wayne King and Orchestra KPRC KSD KSTP WBEN WCAE WCSH WDAF WEAF WEEI WFAA WFI WGY WKY W WJAR WKBF WCSH WDAF WEAF WEEI WFAA WFI WGY WHO WJAR WKBF WKY WMAQ WMC WOAI WOC WOW WRC WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ

8 — Horick's Adventures in Health CRCT KDKA KOIL KSO KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WREN

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C — Fray and Braggiotti CKLW KFH KLRA KOMA WABC WADC WBIG WBRC WCAH WCAO WCAU WCCO WDAE WDBJ WDOD WDSU WEAN WFBL WFEA WGLC WGR WCST WHEC WHK WIBW WISN WJSY WHSN WLFZ WMAS WMBG WMT WOKO WQAM WSJS WSPD

8 — Nat Shilkret and Orchestra KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WMAL WREN WSYR

E-9:00 p.m., C-8:00, M-7:00, P-8:00 R — Ben Bernie and Orchestra KFYR KOA KPRC KSD KSTF WBAP WBEN WCAE WCSH WDAY WEAF WEEI WFBR WFI WGY KSTP WEAF WEEI WFBR WFI WGAY WHO WJAR WKY WLW WMAQ WMC WOAI WOC WOW WRČ WRVA WSB WSM WSMB WTAG WTAM WTMJ WWJ

8 --- Household Musical Memories KDKA KSO KWK WBAL WBZ WBZA WHAM WJR WJZ WKBF WLS WREN WSYR WLS

C - Phila. Symphony, See Monday

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C -- Alexander Woolcott CKLW KFH KLRA KLZ KMBC KOMA KSCJ KTRH WABC WBIG WBRC WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDDO WDCC WDSU WEAN WFBL WFEA WGLC WGR WGST WHAS WHEC WHP WIBW WICC WJAS WKBN WLBZ WMAS WMBG WMT WNAC WODX WOKO WORC WPG WQAM WSBT WSIS WYAR C. - Alexander Woollcott WSJS WTAR

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — George Jessel CFRB CKLW KFH KLRA KLZ

KMBC KOMA KRLD KSCJ WABC WADC WBIG WBRC WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC DNSU WEAN WFBL WFEA WGLC WGST WHAS WHEO WHP WIBW WICC WJAS WJSV WKBN WKBW WLBZ WMAS WMBD WMT WNAC WODX WORC WPG WQAM WSJS WSPD WTAR WPG WQAM WSJS WSPD WTAK $\mathbf{R} \rightarrow Tezaco Fire Chief Program$ KDYL KFI KFSD KFYR KGHLKGIR KGO KGW KHQ KOA KOMOKPRC KSD KSTP KTAR KTBSKVOO WBAP WBEN WCAE WCSHWDAF WDAY WEAF WEBC WEEIWFBR WFI WFLA WGY WHO WIBAWIOD WIS WJAR WJAX WJDXWIDD WIJ WELA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

WING WHY WINC E-10:00 p.m., C-9:00, M-8:00, P-7:00 E-0:01, Glon Gray's Orchestra CKLW KDB KERN KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KVI KWG WAAB WABC WACO WADC WBBM WBIG WBRC WACW WDJ WDBD WDDD WDRC WDAE WDBJ WDBD WDDD WDRC WDAE WDBJ WDBD WDDD WDRC WDAE WDBJ WDBD WDDD WDRC WDAE WBJW WFBL WFFA WGST WHAS WHEC WHK WHP WIBW WICC WJAS WJSV WKBH WKBN WKBW WJRC WLAC WLBZ WMAS WMBD WMBG WMT WNAX WODX WOKO WORC WOWO WPG WQAM WREC WSJS WSPD WTAR WTOC **R** - **Cruise of Seth Parter**

R - Cruise of Seth Parker R — Cruise of Seth Parker KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS WAPI WBAP WBAP WBAP WCSH WDAF WDAY WEAF WEBC WEEL WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOC WOW WRC WRVA WSB WSM WSMB WYAG WTAG WTAM WWI WWNC WSMB WTAG WTAM WWJ WWNC

E-10:30 p.m., C-3:30, M-3:30, P-7:30 R — Madamo Sylvia-Beauty Talk KDYL KFI KGO KGW KHQ KOA KOMO KSD KSTP WBEN WEAF WEBC WEEI WGY WHO WIBA WMAQ WOC WRC WTAG WWJ C - Naw Garvia Say Manday C - News Service. See Monday

E-10:45 p.m., C-9:45, M-8:46, P-7:46 C -- Myrt and Marge, See Monday

E-11:00 p.m., C-10:00, M-9:00, P-8:00 B — Amos 'n' Andy, See Monday C — Harlem Serenade C — Harlem Serenáde CKLW KPH KLRA KLZ KMBC KSCJ KTRH WAAB WABC WADC WBRC WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WFEA WGLC WGST WHAS WHEC WHP WIBW WICC WISN WJAS WKBN WKBW WLBZ WMAS WMBD WMBG WMT WODX WOKO WORC WQAM WSBT WSJS WSPD WTAR WWVA

E-11:15 p.m., C-10:15, M-9:15, P-8:16 C — Dell Campo, Songs CFRB CKLW KFH KLRA KLZ C — Dell Campo, Songs CFRB CKLW KFH KLRA KLZ KMBC KSCJ WAAB WABC WADC WBRC WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WGLC WGST WHAS WHEC WHK WHP WIBW WISN WJAS WKBN WKBW WLBZ WMBD WMT WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Ozzie Nelson and Orchestra CFRB CKLW KFH KLRA KLZ KMBC KOMA KSL KTRH KTSA WABC WADC WBRC WCAO WDBJ WDRC WDSU WEAN WFBL WFBM WGST WHK WHP WIBW WISN WJSV WKBW WLAC WLBW WMBD WMBG WMT WNAC WOKO WORC WQAM WREC WSBT WSJS WTAR WTOC WWVA WTOC WWVA

B – Meyer Davis and Orchestra CFCF KDYL KFYR KOIL KPO KSO KSTP KWCR KWK WAPI WBAL WBZ WBZA WCKY WDAY WEBC WENR WFLA WHAM WIBA WIOD WIS WJDX WJZ WMAL WMC WREN WRVA WSB WSM WSMB WSYR WWNC

E-11:45 p.m., C-10:45, M-8:45, P-8:46 C - Voice of Experience KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

E-12:00 mld., C-11:00, M-10:00 P-9:00 R - Ben Bernie and Orchestra KFI KGO KGW KHQ KOMO

WEDNESDAY

E-8:00 p.m., C-5:00, M-4:00, P-3:00 C - Buck Rogers. See Monday

R - Waldorf Astoria. See Monday

B --- Westminster Choir

WOLL KSO KWCR KWK WBAL WCKY WGAR WHAM WJZ WMAL WREN WSYR

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C - Bobby Benson, See Monday

E-8:30 p.m., C-5:30, M-4:30, P-3:30 R — Back of News KFYR WEAF WFBR WGY WIBA WIS WJAR WJDX WRC WSAI WSB WSM WWJ WWNC

B — Irene Beasiey, Contraits KGO KOA KPRC KSO KTBS KVOO KWCR WBAL WBAP WCKY WENR WGAR WJZ WOA I WREN C - Enoch Light, See Monday

E-8:45 p.m., C-5:45, M-4:45, P-3:45 B - Lewell Thomas, See Monday

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

E-7:15 p.m., C-8:15, M-5:15, P-4:16 C - Just Plain Bill. See Monday Just Frain Bill. See Monday
 B — Billy Bachelor, See Monday
 B — John Herrick, Baritene
 KDKA KOIL KSO KWCR KWK
 WBAL WBZ WBZA WCKY WENR
 WHAM WJZ WMAL WSYR

E-7:30 p.m., C-8:30, M-5:30, P-4:30 C — Music in Air, See Monday B — Potash and Perimutter, See Mon.

E-7:45 p.m., C-8:45, M-5:45, P-4:45 C — Boake Carter, See Monday R — Goldbergs. See Monday

WEDNESDAY—(Cont'd)

B — Irene Rich in Hollywood KDKA WBAL WBZ WBZA WCKY WENR WJZ WMAL WMC WSB WSM WSMB WSYR

E-8:00 p.m., C-7:00, MI-6:00, P-5:00 C — Happy Bakers. See Monday R — Jack Pearl

CFCF CRCT KSD WBEN WCAE WCKY WCSH WDAF WEAF WEEL WFBR WGY WHO WJAR WLIT WLS WOC WOW WRC WSAI WTAG WTAM WTIC WWJ B - Eno Crime. See Tuesday

E-8:15 p.m., C-7:15, M-8:15, P-5:15 C - Edwin C. Hill. See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Albert Spalding; Corrad Thibault CFRB CKAC CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX VOIN VOI VOIN VII VII VII KOIN KOL KOMA KSL KTAT KTRH KTSA KVI KWG WABC WBRC WCAO WCAU WCCO WDOD WDRC WDSU WEAN WFBL WFBM WGN WGR WGST WHAS WHK WJAS WJSV WKRC WLAC WMT WNAC WOKO WORC WOWO WREC WRR

B— Dangerous Paradise, Drama CFCF KDKA KOLL KSO KWCR KWK WBAL WSZ WSZA WGAR WHAM WIR WJZ WLS WMAL WHAM WJR WREN WSYR

R — Wayne King and Orchestra KSD WBEN WCAE WCSH WEAF WFBR WGY WJAR WKBF WLIT WMAQ WOW WRC WSAI WTAG WTAM WWJ

E-8:45 p.m., C-7:45, M-6:45, P-5:45 B — Red Davis, See Monday E-9:00 p.m., C-8:00. M-7:00, P-6:00 R — Ipana Troubadours KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KTHS KVOO WAPI WBAP WBEN WCAE WCSH WDAF WEAF WFAA WFBR WGY WHO WIOD WIS WIAP WHAY WHY WINT WJAR WJAX WKY WLIT WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ B — Warden Lawes; Sing Sing Drama KDKA, KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WLS WMAL WHAM WJR WREN WSYR C - Philadelphia Symphony. See Mon.

E-9:15 p.m., C-8:15, M-7:15, P-6:15 Col. Stoopnagle and Budd C — Col. Stoppnagle and Budd CKLW KDB KERN KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KVI KWG WABC WABC WBBM WBC WBC WBAW WCAO WCAN WCCO WDAE WDAC WDSU WEAN WFBL WFBM WGST WHAS WHEC WIK WIBW WICC WIAN WHEC WHE WIEW WICC WISN WJAS WJSV WKBW WKRC WLAC WMBD WMT WNAC WOKO WOWO WQAM WREC WSPD WTAR WTOC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — Guy Lombardo—Burns and Allen CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD

KSL KTRH KTSA KVI KWG WABC WADC WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WHK WJAS WJSV WKBW WKRC WNAC WOKO WORC WOWO WSPD R - Fred Allen's Revue

KSD KSTP WBEN WCAE WCSH WDAF WEAF WFBR WGY WJAR WLIT WMAQ W0W WRC WSAI WTAG WTAM WTMJ WWJ

B — John McCormack, Tenor B — John WcCormack, Jenor KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WBAL WBZ WBZA WCKY WENR WJAR WHAM WJR WJZ WMAL WREN WSYR

E-10:00 p.m., C-9:00. M-8:00, P-7:00 C — Old Gold — Ted Fiorite and Orch. CKLW KDB KERN KFBK KFOR KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KVI KVOR KWG WABC WACO WADC WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAU WEAN WFBL WFEM WFEA WGN WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBH WKBW WKRC WLAC E-10:00 p.m., C-9:00, M-8:00, P-7:00 WJSV WKBH WKBW WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMT WNAC WNAX WOKO WORC WOWO WPG WQAM WREC WSPD WTAR WTOC

WIAR WIOC R — Corn Cob Pipe Club KDYL KFI KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KSD KSTP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WENR WFBR WGY WHO WIBA WJAR WLIT WLW WOC WOW WRC WDAL WFAC WTMU WTMU WRVA WTAG WTAM WTIC WTMJ WWJ

W WJ B — Benny Meroff Revue KDKA KOIL KPRC KSO KTHS KWCR KWK WAPI WAVE WBAL WBZ WBZA WFAA WFLA WGAR WHAM WIOD WIS WJAX WJDX WJZ WKY WMAL WMC WOAI WREN WSB WSM WSMB WSOC WWNC

E-10:30 p.m., C-9:30, M-8:30, P-7:30 R - National Radio Forum KFYR KPRC KSD KSTP KTHS KVOO WBEN WCAE WCSH WDAY WEAF WEEI WFAA WFBR WFLA WEAF WEEI WFAA WFBR WFLA WGY WHO WIBA WIS WJAR WJAX WJDX WKY WMAQ WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WWJ WWNC

C - News Service, See Monday

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Myrt and Marge, See Monday E-11:00 p.m., C-10:00, M-9:00, P-8:00 B — Amos 'n' Andy, See Monday C — Andre Kostelantez G — Andre Kostelantez CKLW KFH KLRA KLZ KMBC KSCJ KTRH KTSA WAAB WABC WACO WADC WBRC WCAH WCAO WDAE WDBJ WDBO WDDOD WDRC WDSU WEAN WFBM WFEA WGLC WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WKBW WIAC WLBW WLBZ WMAS WMBD WMBG WMT WNAX WODX WOKO WORC WPG WQAM WREC WSBT WSJS WSPD WTAR WTOC E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Isham Jones and Orchestra

C — ISHAM JORES AND OTCHESTA CFRB CKLW KFH KLRA KLZ KMBC KSCJ KTRH KTSA WAAB WABC WACO WADC WBRC WCAH WCAO WCCO WADE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFDM WCLC WCST WHAS WHEC WTDD WIDW WIAS WIAS WHP WIBW WIP WISN WJAS WKBW WLAC WLBW WLBZ WMAS WMBD WMBG WMT WNAX WODX WOKO WORC WPG WQAM WREC WSBT WSJS WSPD WTAR WTOC

B – Warden Lawes, Sing Sing Drama KDYL KFI KGO KGW KHQ KOA KOMO KPRC KTBS KTHS KVOO WAPI WBAP WJDX WKY WMC WOAI WSB WSM WSMB

B — Poet Prince, Songs KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KSO KSTP KTBS KTHS KWCR KWK WAPI WBAL WCKY WDAY WEBC WFAA WIBA WJDX WJR WJZ WKY WMAL WMAQ WMC WREN WSB WSYR

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Edwin C. Hill KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

E-12:30 a.m., C-11:30, M-10:30, P-9:30 R — Fred Allen's Revue KDYL KFI KGO KGW KHQ KOA KOMO

THURSDAY

E - 6:00 p.m., C-5:00, M-4:00, P-8:00

C - Buck Rogers, See Monday R - Waldort Astoria. See Monday B — Henry King and Orchestra KOIL KSO KWCR WBAL WBZ WBZA WCKY WENR WHAM WJR WJZ WMAL WREN WSYR

E-6:15 p.m., C-5:15, M-4:15, P-3:16 C - Bobby Benson, See Monday

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

E-6:30 p.m., C-5:30, M-4:30, P-3:30 R — John B. Kennedy KDYL KFYR KOA KYO KPRC KSD KTBS KTHS KVOO WAPI WDAY WEAF WFBR WFI WGY WHO WIBA WIS WJAX WJDX WMAQ WMC WOR WRC WSAI WSB WSMB WTAG WWJ WWNC

WWJ WWAC WARC WBR C - Edith Murray, Songs WAAB WABC WBRG WBRC WBT WCAO WDAE WDBJ WDSU WFEA WCST WHEC WHP WJSV WKBN WLBZ WMAS WMBG WORC WQAM WREC WSFA WJS WTOC

E-6:45 p.m.: C-5:45, M-4:45, P-3:46 B — Lowell Thomas, See Monday

C - Little Italy, See Tuesday

R — Southernaires; Negro Quartet KDYL KOA KPO KSD WEAF WFBR WFI WGY WHO WIS WJAX WMAQ WOC WRC WSAI WTAG WWJ WOC WRC WSAI WTAG WWJ WWNC

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

E-7:15 p.m., C-6:15, M-5:15, P-4:16 C — Just Plain 3ill, See Monday R - Billy Bachelor . See Monday

THURSDAY-(Cont'd)

B — Robin Hood, Drama CRCT WBAL WBZ WBZA WHAM WJZ WMAL WSYR

E-7:30 p.m., C-6:30, M-5:30, P-4:30 B — Eddie Duchin and Orchestra KDKA WBAL WBZ WBZA WJZ WSYR C --- Silver Dust, See Tuesday

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

E-8:00 p.m., C-7:00, M-6:00, P-5:00 **R** — Rudy Vallee and Orchestra CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTIIS WAPI WBAP WEEN WCAE WCSH WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIOD WJAR WJAX WJDX WKY WLAW WMAQ WMC WOAI WOC WOW WPTP WRC WRVA WSB WSM WSMB WTAC WRVA WSB WSM WSMB WTAG

WTAM WTMJ WWJ - Morton Downey, Tenor C — Morton Downey, Tenor CKLW KFH KLIAK KMBC KOMA KSCJ KSL KTRH KTSA WABC WACO WADC WBIG WBRC WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFFA WGLC WGR WGST WHAS WHEC WHP WIBW WICC WISN WIAS WKBN WLAC WGST WHAS WHEC WHP WIBW WGST WHAS WHEC WHP WIBW WICC WISN WJAS WKEN WLAC WLBW WLBZ WMAS WMBG WMT WNAC WOKO WORC WQAM WHEC WSJS WSPD WTAR WTOC WWA

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Edwin C. Hill, See Monday

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

B - Horlick's, See Tuesday

WSPD

E-9:00 p.m., C-8:00, M-7:00, P-6:00 R -- Maxwell House Showboat R — Maxwell House Showboat
 KDYL KFI KFSD KGO KGW KHQ
 KOA KOMO KPRC KSD KSTP KTAR
 KTBS WAPI WBAP WBEN WCAE
 WCSY WCSH WDAF WEAF WEEI
 WFBR WFI WFLA WGY WHO WIOD
 WIS WJAR WJAX WJDX WKY
 WMAQ WMC WOAI WOC WOW
 WRC WRA WSAI WSB WSM WSMB
 WTAG WAA WTNJ WWJ WWNC
 B → Death Valley Days → Drama
 KDKA KOIL KSO KWCR KWK
 WBAL WBZ WBZA WGAR WHAM
 WJSYR WJZ WLS WLW WMAL WREN **W**SYR

C — Philadelphia Symphony, See Mon.

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C — Buick Program, See Monday

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

C — Calitornia Metodies CKLW KFH KLRA KLZ KMBC KOMA KRLD KSCJ KTSA WABC WACO WADC WBIG WBRC WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFEA WGLC WGST WHEC WHK WHP WIBW WICC WIP WJAS WKBN

WKBW WLAC WLBW WLBZ WMAS WMBD WMBG WMT WNAC WNAX WODX WOKO WORC WQAM WREC WSBT WSJS WSPD WTAR WTOC B - Richard Himber and Orchestra KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WENR WGAR WHAM WJR WJZ WREN

E-10:00 p.m., C-9:00, M-8:00, P-7:00 E-10:00 p.m., C-9:00, M-8:00, P-7:00 R — Paul Whitema and Orchestra KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD NSTP KTBS KTHS KVOO WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOC WOW WRC WRYA WSB WSM WSM WTAG WTAM WSM WSMB WTAG WTAM WTMJ WWJ WWNC

- Hands Across the Border R B — Hands Across the Border CFAC CFBO CFCF CFCH CFCN CFCO CFCY CFJC CFNB CFPL CFUC CHAB CHGS CHNS CHRC CHWC CHWK CJCA CJCB CJCJ CJGX CJOC CJRM CJRW CKCH CKCK CKNC CKOC CKOV CKPC CKPR CKUA CKX CKY CJCO CRCS CRCT CRCV CFCF KDKA KOIL KSO CWCR WBAL WSZ WEZA WCKY WGAR WHAM WJR WJZ WMAQ WEEN WSYR WREN WSYR

C -- Camel Program, See Tuesday

E-10:30 p.m., C-9:30, M-8:30, P-7:30 B -- Archer Gibson, Organist KDKA KSO KWCR KYW WBAL WBZ WBZA WCKY WGAR WHAM WJZ WMAL WREN

C - News Service, See Monday

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C - Myrt and Marge, See Monday

E-11:00 p.m., C:10:00, M-9:00, P-8:00 B — Amos 'n' Andy, See Monday **B** — Wiola Philo, Soprana WCAE WCSH WEAF WFI WFLA WGY WIOD WIS WOW WRVA WTAM WWNC C — Presenting Mark Warnow

C — Presenting Mark Warnow CNLW KPH KLNA KLZ KMBC KSCJ KTSA WAAB WABC WACO WADC WCAH WCAO WDAE WDBJ WDBO WDDD WDDC WDDC WDBW WHBO WDDD WDDC WDSW WHE WHP WIBW WICC WISN WJAS WKBN WKBW WLAC WLBW WLBZ WMAS WMBD WMBG WMT WNAX WDX WOKO WORC WQAM WREC WSJS WSPD WTAR WTOC

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Charles Carlile, Tenor CFRB CKLW KFH KLRA KLR KMBC KSCJ KSL KTSA WAAB WABC WACO WADC WBRC WCAH WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WGLC WGST WHAS WHEO WHP WIBW WISN WJAS WKBN WKBW WLAC WLBW WLBZ WMAS WMBD WMBG WMT WNAX WODX WOKO WORC WPG WQAM WREC WSJS WSPD WTAR WTOC B — Poet Prince. See Wedneday B — Poet Prince, See Wednesday

E-11:30 p. m., C-10:30, M-9:30, P:8-30 R – Enris Madriguera and Orchestra KSD WBEN WCAE WCSH WDAF WEAF WEEL WFBR WFI WGY WHO WJAR WOC WOW WSAI WTAG WTAM C -- Edwin C. Hill, See Wednesday C - Isham Jones and Orchestra CKLW KLRA WABC WBRC WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WGST WICC WIP WDSU WEAN WGST WICC WIP WLAC WLBZ WMAS WMBG WNAC WORC WQAM WREC WSJS WSPD WTAR WTOC

FRIDAY

CFRB CKLW KLRA WAAB WABC WADC WBIG WBT WCAO WCAU WDAE WDBJ WDBO WDDO WDRC WFEA WGST WHEC WHK WICC WJSV WLAC WLBW WLBZ WMBG WOKO WORC WOAM WEEC WSFA WOKO WORC WQAM WREC WSFA WSJS WSPD WTOC

R - Waldorf Astoria, See Monday

E-6:15 p.m., C-5:15, M-4:15, P-3:16 C — Bobby Benson, See Monday

E-6:30 p. m., C-5:30, M-4:30, P-3:30 B — Three X Sisters

B – Infee **A** Sisters KDKA KOIL, KWCR KWK WBAL WBZ WBZA WCKY WENR WHAM WJZ WMAL WREN WSYR R - Irene Beasley, See Monday

C - Tito Guitar, Tenor CFRB CKLW WAAB WABC WBIG WBRC WBT WCAO WDAE WDBJ WDRC WDSU WFEA WGST WHEC WKBN WKBW WLBZ WMAS WMBG WOKO WORC WQAM WREC WSFA WSJS WTOC

E-6:45 p.m., C-5:45, M-4:45, P-3:45 C - Zoel Parenteau's Orchestra CKLW WAAB WABC WBT WCAU WDRC WEAN WFBL WFEA WHEC WJSV WKBW WLBZ WOKO

B --- Lowell Tho mas, See Monday R — Mountain Music KDYL KOA KSD WCAE WCKY WEAF WEEI WJDX WMAQ WOW WSB WTAG WWJ

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

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C — Just Plain Bill, See Monday R - Billy Bachelor, See Monday B - Dramatic Sketch, See Thursday

E-7:30 p.m., C-6:30, M-5:30, P-4:30 R — Scott's Circus Day KSD WCSH WDAF WEAF WEEI WGY WJAR WKBF WLW WMAQ WOW WRC WTAG WTAM WTIC B Potote and Parlments S. Mc. B - Potash and Perlmutter, See Mon. C - Music in Air, See Monday.

E-7:45 p. m., C-6:45, M-5:45, P-4:45 C — Boake Carter, See Monday R - Goldbergs, See Monday B -- Morton Bowe, Tenor KDKA WBAL WBZ WBZA WCKY WENR WJZ WMC WSB WSM WSMB WSYR E-8:00 p.m., C-7:00, M-6:00, P-5:00

C - Happy Bakers, See Monday R — Cities Service Concert R — Cities Service Concert CRCT KDYL KOA KPRC KSD KTBS KTHS KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WJAR WKY WLIT WOAI WOC WOW WRC WRVA WSAI WTAG WTAM WTIC WTMJ WWJ

FRIDAY-(Continued)

B — Nestle's with Ethel Shutta KDKA KWK WBAL WBZ WBZA WCKY WGAR WJR WJZ WLS WMAL WSYR

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C --- Edwin C. Hill, See Monday

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

- March of Time C — March of lime CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KTRH KVI KWG WABC WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGN WGR WGST WHAS WILK WJAS WJSV WKRC WNAC WOKO WSPD B - Dangerous Paradise, See Wed.

E-8:45 p.m., C-7:45, M-6:45, P-5:45 B - Red Davis, Sec Monday

E-9:00 p. m., C-8:00, M-7:00, P-6:00 B - Phil Harris and Orchestra B — Phil Harris and Urchestra CFCF KDKA KDYL KFI KGHL KGIR KGO KGW KIIQ KOA KOIL KOMO KSO KWCR KWK WAPI WBAL WBZ WBZA WCKY WFAA WGAR WIZ WKY WIS WMAL WGAR WJZ WKY WLS WMAD WOAI WREN WSB WSM WSMB

- Philadelphia Symphony, See Mon. C R — Frank Munn; Abe Lyman KSD WBEN WCSH WEAF WEEI WFBR WGY WJAR WLIT WMAQ WOW WRC WSAI WTAG WTAM WWI

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C - Alexander Woollcott, See Tuesday

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — Melodic Strings CFRB CKLW KFH KLRA KLZ KMBC KOMA KRLD KSCJ KSL C→ Mecical Strings CFRB CKLW KFH KLRA KLZ KMBC KOMA KRLD KSCJ KSL KTRH KTSA KVOR WABC WACO WADC WBIG WBRC WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDAU WEBJ WFBM WFEA WGLC WGST WHAS WHEC WHF WIBW WICC WJAS WJSV WKBW WLAC WJBW WLBY WMAS WHED WMAC WJSV WMAS WMBD WMBG WMT WNAC WMAX WODX WOKO WORC WQAM WREC WSBT WSJS WSPD WTAR WTOC

R -- Pond's Program; Lee Wiley KSD WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WJAR WLAF WYBR WGI WHO WJAR WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ

WIAG WIAM WIC WWJ B – Ar mour Program; Phil Baker KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTAR KWK WAPI WBAL WBZ WBZA WEBC WENR WFAA WGAR WBAM WJOD WIAY WIGH WYG WBZA WEBC WENR WFAA WGAR WHAM WIOD WJAX WJR WJZ WKY WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Swift Revue—Olsen and Johnson CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSCJ KSL KTRH KVI KWG WABC WADC WBBM WBRC WBT WCAO WCAU WCCO WDRC WEAN WFBL WGST WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WREC

R — First Nighter—Drama CRCT KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP WAPI WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WGY WHO WJAR WKY WLIT WMAQ WOAI WOC WOW WRC WSAI WSB WEM WYAC WTAC WTAM WSM WSMB WTAG WTAM WTIC WTMJ WWJ

B - Armco Ironmaster Program

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

E-10:30 p.m., C-9:30, M-8:30, P-7:30 B - Mario Cozzi, Baritone B — Mario Coll, Barlone KDKA KFYR KOIL KSO WAPI WBAL WBZ WBZA WCKY WDAY WEBC WFLA WHAM WIBA WICD WIS WJAX WJR WJZ WREN WSE WSM WSYR WWNC

C - News Service, See Monday

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Myrt and Marge, See Monday

E-11:00 p. m., C-10:00, M-9:00, P-8:00 B — Amos 'n' Andy, See Monday

B — Amos 'n' Andy, See Monday C — Mary Eastman, Soprano CKLW KFH KLZ KMBC KSCJ KTRH KTSA KVOR WAAB WABC WADC WBRC WBT WCAH WCAO WDAE WDBJ WDRC WDSU WEAN WFEA WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSY WIBW WICC WISS WJAS WJSV WKBW WLBW WLBZ WMAS WMBD WMBG WMT WODX WOKO WORC WOWO WPG WQAM WREC WSJS WSPD WTOC

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Boswell Sisters, See Monday

E-11:30 p. m., C-10:30, M-9:30, P-8:30 C — Isham Jones, See Thursday C — Edwin C. Hill, See Wednesday

SATURDAY

E-6:00 p.m., C-5:00, M-4:00, P-8:00 C — Meet the Artist U -- Meet ine arusi CFRB CKLW KFH KLRA KMBC KOMA KSL KTRII KTSA KVOR WAAB WABC WACO WADC WBBM WBIG WBRC WCAO WCCO WDBJ WDSU WFBL WFEA WGR WGST WHAS WHEC WHK WHP WIBW WICC WIP WISN WJAS WJSV WLAC WIP W WRZ WMRG WMT WOKO WLBW WLBZ WMBG WMT WOKO WQAM WREC WSBT WSFA WSJS WTAQ WTAR WTOC WWVA

R - Waldort Astoria, See Monday

R . Trio Romantique

KOIL KSO KWCR KYW WBAL WBZ WBZA WCKY WHAM WJR WJZ WMAL WREN WSYR

E-S:15 p.m., C-5:15, M-4:15, P-3:15 C — Mildred Bailey, Songs CKAC CKLW KFAB KFH KLRA KLZ KMBC KRLD KSL KTRH KTSA KVOR WAAB WABC WACO WBIG WBT WCAH WCAO WCCO WDAE WDBJ WDBO WDDD WDRC WEAN WFCA WCR WCST WHEC WHA WHP WIBW WICC WIP WISN WJAS WJSV WLAC WLBW WLBY WMBG WMT WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTAO WTOC WVA WTAQ WTOC WWVA B — O'Leary's Irish Minstrels KOIL KSO KWCR KYW WBAL WBZ

WBZA WCKY WHAM WJR WJZ WMAL WREN WSYR

E-6:30 p.m., C-5:30, M-4:30, P-3:30 B — Mary Small, See Tuesday - Frederic William Wile C — Frederic William Wile CKLW KLRA WAAB WABC WBIG WBRC WCAO WCAU WDAE WDBJ WDBO WDOD WDICC WDSU WFBL WFEA WGLC WGST WHEC WIP WJSV WKBW WLAC WLBW WLBZ WMAS WMBG WOKO WORC WQAM WREC WSJS WSPD WTAR WTOC R — Bichard Himber and Orchestra UNIT KEVEN WCO KCW KHO

KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KTHS KVOO WCAE WDAF WDAY WEAF WEBC WFLA WHO WIBA WEBC WFLA WHO WIBA WIS WJAR WJAX WJDX WMAQ WMC WOAI WOC WSB WSM WTAG WTAM WIOD WKY WRC WWJ WWNC

E-6:45 p.m., C-5:45, M-4:45, P-3:46 B — Flying with Capt. Al Williams WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WSYR B — J. C. Nugent-Male Quartet

WCSH WEAF WEEI WGY WJAR WTAG.

E-7:00 p.m., C-6:00 M-5:00, P-4:00 B — John Herrick, Baritone KDKA KOIL KSO KWCR KWK WBAL WKCY WGAR WJZ WKBF WMAL WMAQ

WMAL WMAQ C — Elder Michaux Congregation CFRB CKLW KFH KLRA KLZ KSCJ KSL KTRH KTSA KVOR WABC WACO WADC WBIG WBRC WCAO WCAU WDAE WDBJ WDBO WDOD WDRC WDSU WFBL WFEA WGLC WGR WGST WHEC WHP WIBW WICC WJAS WJSY WLBW WLBZ WMAS WMBG WMT WOKO WORC WQAM WREC WSJS WSPD WTAR WTOC WWVA

E-7:15 p.m., C-6:15, M-5:15, P-4:15 B - Dramatic Sketch, See Thursday

R — Religion in the News KFI KFYR KGO KGW KHQ KOA KOMO KSD KTBS WAPI WBEN WCAE WDAF WEAF WEEI WFAA WCAE WDAF WEAF WEEI WFAA WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WLW WMC WOAI WOC WRC WSM WSMB WTAG WTAM

E-7:30 p.m., C-6:30, M-5:30, P-4:30 R - Circus Days, S e Friday C - Silver Dust, See Tuesday B - Eddie Duchin, See Thursday

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Tio Guitar, Tenor CKLW KFH KLRA KLZ KSCJ KSL KTRH KTSA KVOR WABC WACO WCAU WCCO WDAE WDBJ WDBO WCOU WCCO WDAE WDBJ WDBO WDOD WDCC WDSU WEAN WFBL WFBM WFEA WGLC WGR WGST WIAS WFEC WHK WHP WIBW WICC WISN WJAS WJSV WLAC WLBW WLBZ WMAS WMBG WMT WNAC WOKO WORC WQAM WREC WSDT WSJS WSPD WTAR WTOC WWYA WWVA

E-8:00 p.m., C-7:00, M-6:00, P-5:00 C - 45 Minutes in Hollywood CKLW KLZ KMBC KMOX KSL KTAT KTRH KTSA WABC WACO WBBM WCAH WCAO WCAU WCCO

SATURDAY—(Cont'd)

WDRC WEAN WFBL WGR WHEC WHK WJAS WJSV WKRC WNAC WOKO WRR WSPD

R — George Olsen and Orchestra KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KVOO KYW WBEN WCSH WDAF WEAF WEBC WEEI WFBR WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WOAI WOW WRC WSB WSM WSMB WTAG WTAM WWJ WWNC 8 — Economics in the New Deal

KOIL KSO KWCR WBAL WCKY WENR WHAM WJR WJZ WMAL WREN WSYR

E-8:30 p.m., C-7:30, M-6:30, P-5:30 B — Boston Symphony Orchestra CFCF CRCT KDYL KFI KFYR CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSO KSTP KTBS KWK WAPI WBAL WDAY WEBC WFLA WGAR WHAM WIBA WIDD WID WIA WIDX WJR WJZ WKY WMAL WMC WREN WRVA WSB WSM WSMB WSYR WWNC

R - Sous Les Ponts de Paris

KSD KYW WBEN WCSH WDAF WEAF WEEI WFBR WGY WJAR WOW WRC WTAG WTAM WWJ

E-8:45 p.m., C-7:45, M-6:45, P-5:45 - Trade and Mark c C- ITAGE AND MARK CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KJZ KMBC KMJ KMOX KOIN KOL KSI. KVI KWG WAAB WABC WABC WBAD WCAO WCAU WCCO WDRC WEAN WHAS WHK WJAS WJSV WKBW WKRC

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

KDYL KFSD KFYR KGO KGU KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS WAPI WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WELA WESC WESC WIDA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WRC WRVA WSB WSMB WTAG WTAM WTMJ WWJ WWNC

C - Philadelphia Symphony, See Mon.

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C - Stoopnagle-Budd, See Wednesday

E-9:30 p.m., C-8:30, M-7:30, P-6:80 - Carborundum Band

CKLW KMBC KMOX WAAB WABC WBBM WBT WCAO WCAU WCCO WHAS WHK WJAS WKBW WKRC

E-10:00 p.m., C-9:00, M-8:00, P-7:00 R — B. A. Rolfe and Orchestra CRCT KDYL KFI KGO KGW KOA KOMO KSD KSTP WBAP WBEN WCAE WCSH WDAF WEAF WEFI WFBR WFI WGY WHO WJAR WJAX WLW WMAQ WOAI WOC WOW WRC WRVA WSB WSMB WTAG WTAM WWI WMU WWAG WTAM WTMJ WWJ C - Byrd Expedition

C — Byrd Expedition CKLW KDB KERN KFBK KFH KFPY KFRC KGB KHJ KLRA KMBC KMJ KMON KOIN KOL KOMA KRLD KTRH KTSA KVI KWG WAAB WABC WACO WADC WBBM WBRC WBT WCAO WCAO WCCO WDAE WEAN WGST WHAS WHEC WHK WHP WIBW WJSW WHEC WHK WHP WIBW WJSV WKBW WKRC WLAC WLBZ WMBG WMT WOKO WORC WQAM WREC

E-10:15 p.m., C-9:15, M-8:15, P-7:15 C - Choristers; 16 Male Voices

KDKA KOIL KWCR KWK KYW WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WMAL WREN WGAR WSYR

E-10:30 p.m., C-9:30, M-8:30, P-7:30 B – F. O. B. Detroit KDKA KOIL KWCR KWK KYW WBAL WBZ WBZA WCKY WGAR WHAM WJAR WJR WJZ WMAL WREN WSYR

C - News Service. See Monday

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — H. V. Kaltenborn CFRB CKLW KLZ KMBC KOMA KRLD KSCJ KSL KTRH KTSA KRLD KSCJ KSL KTRH KTSA KVOR WAAB WABC WADC WBIG WBRC WBT WCAH WCAO WDBJ WDRC WBSU WEAN WFBM WFEA WGST WHEC WHP WIBW WIP WISN WIAS WISV WKBW WIP WISN WJAS WJSV WKBW WLBW WIDZ WMAS WMBD WMBG WMT WODX WORC WPG WQAM WREC WSBT WSJS WSPD WTAQ WTOC WWVA

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

E-11:00 p.m.. C-10:00. M-9:00, P-8:00 C -- Guy Lombarda and Orchestra CFRB CKLW KLRA KLZ KMBC KMOX KOMA KTRH KTSA KVOR WAAB WABC WAAC WBIG WBRC WCAO WCAU WCCO WDBJ WDSU WEAN WFBL WFBM WGST WHAS WHP WIBW WICC WISN WJAS WJSV WKBW WLAC WLBW WLBZ WMBD WMBG WMT WOKO WPG WQAM WREC WSBT WSJS WTAR WTOC WTOC

R — One Man's Family—Sketch CFCF KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KTHS KUGORC KSD KSTP KTBS KTHS KVOO WBEN WCAE WDAF WDAY WEAF WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSMB WTAG WTAM WWJ WWNC

B --- WLS Barn Dance KDKA KOIL KSO KWCR KWK WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WMAL WREN WSYR

E-11:30 p.m., C-10:30, M-9:30, P-8:38 C Ted Fiorito and Orchestra

C -- Ied Florido and Orchestra CFRB CKLW KLRA KLZ KMBC KOMA KSL KTRH KTSA KVOR WABC WADC WBRC WCAO WDBJ WDSU WEAN WFBL WFBM WGST WHEC WHP WIBW WIP WISN WIEV WIEW WIEW WIEW WIESN WSV WKBW WLAC WLBW WLBZ WMBD WMBG WMT WNAC WOKO WPG WQAM WREC WSBT WSJS WTOC

R — Hollywood on the Air CFCF KDYL KFYR KOA KPO KPRC KSD KSTP KTBS KTHS KVOO KSD KSTP KTBS KTHS KVOO WBEN WCAE WDAF WDAY WEAF WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSMB WTAG WTAM WWJ WWNC

E-12:00 p.m., C-11:00, M-10:00, P-9:00 C – Gien Gray and Orchestra CKLW KFH KLZ KMBC KMOX KOMA KRLD KSCJ KTRH LTSA WABC WCAU WEAN WFBL WHAS WHP WIBW WICC WISN WJSV

F561

WKBW WLBW WMAS WMBD WNAC WOKO WSBT WSPD

B - Freddie Martin and Orchestra WBZ WBZA WCKY WGAR WHAM WJZ WLW WMAL WREN WSYR

E-12:30 a.m., C-11:30, M-10:30, P-9:30 B -- William Scotti and Orchestra KDKA KOIL KSO KWCR KWK KYW WBAL WBZ WBZA WCKY WGAR WJR WJZ WLW WMAL WREN WSYR

SUNDAY

E-11:15 a.m., C-10:15, M-9:15, P-8:16 E-11:15 a.m., C-10:15, M-9:15, P-9:16 R — Major Bowes' Capitol Family KDYL KFYR KOA KPRC KSTP KTBS KVOO WAPI WCAE WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WJAR WJAX WKY WMAQ WMC WOAI WOC WRXA WSAI WSMB WTAG WTAM WWNC

E-11:30 a.m., C-10:30, M-9:30, P-8:30 C — Salt Lake Tabernacle Choir C — Sait Lake Tabernacle Choir CKLW KLRA KLZ KMBC KOMA KSL KTRH KTSA KVOR WABC WACO WADC WBIG WBRC WCAO WCCO WDBJ WDRC WDSU WEAN WFBL WFEA WGN WGR WGST WHAS WHEC WHP WIBW WICC WISN WJAS WJSV WLAC WLBW WMBD WMT WNAC WOKO WORC WPG WQAM WSBT WSFA WSJS WTAQ WTAR WWVA

E-12:15 p.m., C-11:15, M-10:15, P-9:18 R = Morning Home CircleWCSH WEAF WEEI WFBR WFI WJAR WRC WTAG

E-12:30 p.m., C-11:30, M-10:30, P-9:30 B — Radio City Concert

B - Radio GIV Concert CFCF CHCT KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KVOO WAPI WBAL WBZ WBZA WCKY WDAY WEBC WGAR WHAM WIS WJDX WJR WJZ WKY WMAA WOAI WREN WSMB WSYR WWNC

WIND WITH WWNC R — Chicago Round Table WBEN WCSH WDAF WEAF WEEL WFBR WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WWJ

C — Madison Ensemble

C — Madison Ensemble CFRB CKLW KLRA KLZ KMBC KOMA KSL KTRH KVOR WACO WADC WBIG WCAO WCAU WDBJ WDRC WDSU WEAN WFBL WFEA WGR WGST WHAS WHEC WIBW WISN WJAS WJAS WLAC WMOAM WREC WSBT WSJS WTAQ WTAR WTOC WWVA

E-1:00 p.m., C-12:00, M-11:00, P-10:00 C - Church of the Air

C- CHURCH OF THE AIR CFRB CKLW KLEA KLZ KOMA KTRH KTSA KVOR WAAB WABC WACO WAD WCCO WDBJ WDRC WDSU WFBL WGR WCST WHAS WHEC WIP WIBW WJAS WJSW WLAC WLBW WMT WOKO WPG WQAM WKEC WSBT WSJS WTAQ WTAR WTOC WWVA

R — Russian Symphonic Choir

WBEN WCAE WDAF WEAF WEEI WFI WGY WHO WJAR WLW WMAQ wôc WRC WSAI WTAG WTAM WWI

SUNDAY—(Continued)

E-1:30 p.m., C-12:30, M-11:30, P-10:30 R - Little Known Facts

WBEN WCSH WEAF WEEI WFI WGY WJAR WTAG WTAM WWJ B — National Youth Conference KDKA KFI KFSD KFYR KGHL

KORA KAT KASD KATA KOIL KOMO KPRC KSO KTAR KTBS KVOO KWCR KWK WAPI WBAL WBZ WBZA WDAY WEBC WFAA WGAR WIBA WIOD WIS WJAX WJDX WJR WJZ WMAL WOAI WREN WRVA WSB WSM WSMB WSYR WWNC

C-Lazy Dan, Minstrel Man C-Lazy Dan, Minstrel Man CKLW KMBC KMOX KRLD WABC WBBM WCAH WCAO WCAU WCCO WHAS WHK WJAS WJSV WKBW WKRC WMBG

E-2:00 p.m., C-1:00, M-12:00, P-11:00 C -- Broadway Melodies; Helen Morgan

CFRB CKLW KDB KFPY KFRC KGB KHJ KLZ KMBC KMOX KOIN KOL KRLD KSL KVI WABC WBBM WJAS WJAU WCCO WDSU WHK WJAS WJSV WKBW WKRC WLAC WNAC

R — Gene Arnold and Commodores KDYL KFI KGO KGW KHQ KOA KOMO KPRC KVOO WBEN WCAE WCSH WEAF WEBC WEEI WFAA WFBR WGY WIBA WJAR WKY WLW WAAQ WOAI WOW WPTF WRC WRVA WTAG WTAM WWJ WWNC

B — Bar X Days and Nights CFCF CRCT KDKA KOIL KSO KWCR KWK KYW WBAL WBZ WBZA WCKY WGAR WJR WJZ WMAL WREN WSYR

E-2:30 p.m., C-1:30, M-12:30, P-11:30 C- Abe Lyman's Orchestra CFRB CKLW KMBC KMOX WABC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WHEC WHK WJSV WKBW WKRC WNAC WOKO B - Grenadier Guards Band

CFCF CRCT KDKA KOIL KSO KWCR KWK WAPI WBAL WBZ WBZA WCKY WFLA WGAR WHAM WIOD WIS WJAX WJDX WJR WJZ WMAL WMC WK WSMB WSYR WWNG WSB WSM

R — Elizabeth Lennox, Contralto WBEN WDAF WEAF WEEI WFBR WGY WJAR WOW WRC WSAI WTAG WTAM WWJ

E-2:45 p.m., C-1:45, M-12:45, P-11:46 R – Gens of Melody; Muriel Wilson WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WMAQ WCC WOW WRC WSAI WTAG WTAM WWJ

E-3:00 p.m., C-4:00, M-1:00, P-12:00 C-New York Philharmonic Orch. CFAC CFBO CFCF CFCH CFCN CFCO CFCY CFJC CFNB CFPL CHWC CHWK CJCA CJCB CJCJ CJGX CJCC CLMM CJRW CKCH CKCK CKNC CKOC CKOY CKPC CKPR CKUA CKX CKY CRCA CRCO CIRCS CRCT CRCY CFRB CKLW KFH KLRA KLZ KMBC KMOX KOMA KSL KTRH KTSA KVOR WABC WADC WBIG WBRC WCAO WCAU WCCO WDBJ WDRC

WDSU WEAN WFBM WFEA WGN WGR WGST WHAS WHEC WHK WHP WIBW WICC WIP WISN WJAS WIF WIEW WICC WIF WISH WAR WISY WLAC WLBW WMBD WMBG WMT WNAC WOKO WORC WQAM WREC WSBT WSJS WTAQ WTAR WTOC WWVA

R — Wayne King and Orchestra KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KVOO WBEN WCAE WCSH WDAF WEAF WEEI WFAA WGY WHO WJAR WKBF WKY WLIT WLS WLW WOAI WOC WOW WRC WTAG WFAA WKY WLA WOW WTAM WTMJ WWJ

8 ---International Tid-bits

■ — international fid-bits CFCF CRCT KDKA KOIL KSO KWCR KWK WAPI WBAL WBZ WBZA WCKY WFLA WGAR WHAM WIOD WIS WJAX WJDX WJA WJZ WMAL WMC WRVA WSB WSM WSMB WSYR WWNC

E-3:15 p.m., C-2:15, M-1:15, P-12:15 B — Irene Rich in Hollywood KDKA WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WMAL WMAQ WMC WSB WSM WSMB WSYR

E-3:30 p.m.. C-2:80. M-1:30, P-12:30

WHAM WIBA WIOD WIA WIDA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJZ WKBF WKY WLW WMAL WMC WPTF WREN WRVA WSB WSM WSMB WSYR WTMJ WWNC

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

R — Fiddlers Three CFCF CRCT KDYL KFI KFSD CFCF CRCT KDYL KFI KFSD KFYR KGO KGW KHQ KOA KOMO KSD KSTP KTAR KTBS KYW WAAF WEEN WCAE WDAF WDAY WEAF WEBC WEEI WFLA WGY WHO WIBA WIOD WIS WJAR WJDX WKY WLIT WOAI WOC WOOD WDA WEAL WEAL WEAU WEA WOW WRC WRVA WSAI WSB WSM WTAG WTAM WWJ WWNC

WIAG WIAM HING HING WALL Rev. Charles E. Coughlin KMOX KSTP KYW WCAO WCAU WDRC WEAN WFBL WFEA WGAR WGR WHB WHO WICC WJAS WJR WLBZ WLW WMAS WNAC WOKO WLBZ WLW WMA WOL WOR WORC WNAC WOC WCKY WOL

B — Dion Kennedy, Organist KDKA KDYL KFI KFYR KGHL KDKA KDYL KFI KFYR KGHL KGIR KGO KGW KIIQ KOA KOIL KOMO KPRC KSO KTBS KTHS KVOO KWCR KWK WAPI WBAL WBAP WBZ WBA WDAY WBAU WFLA WHAM WIBA WIOD WIS WJAX WJDX WJZ WKBF WKY WLS WMAL WMC WOAI WPTF WREN WRVA WSB WSM WSMB WSYR WWNC

E4:15 p.m., C-3:15, M-2:15, P-1:16 R — Wildroot; Vee and Johnny KOYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KTBS KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR

WGY WIBA WJAR WKY WLIT WLS WOAI WOW WRC WSAI WTAG WTAM WTMJ WWJ

WIAM WIANG YWG B - Morin Sisters, Har mony Trio CFCF CRCT KDKA KOIL KSO KWCR KWK KYW WBAL WBZ WBZA WCKY WFLA WGAR WHAM WIOD WJAX WJDX WJZ WLW WIOL WJAX WJDX WJZ WLW WMAL WREN WRVA WSB WSM WSYR WWNC

E-4:30 p.m., C-3:30, M-2:30, P-1:30 R — Hoover Sentinels

R – Hoover Sentinels CFCF CRCT KDYL KFI KGO KGW KHQ KOA KOMO KPRC KVOO WBAP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WFJ WGY WIBA WJAR WKY WMAQ WOAI WOW WRC WTAG WTAM WWJ

- Princess Pat Pageant B -

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

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

C - Roses and Drums, Drama CKLW KFAB KLRA KLZ KMBC KMOX KOMA KRLD KTRH KTSA WAAB WABC WADC WBBM WBRC WCCO WDSU WGST WHAS WHK WJAS WJSV WKRC WREC

R — Big Ben Dream Drama

WBEN WCAE WCSH WDAF WEAP WEEI WFBR WGY WJAR WMAQ WOW WRC WSAI WTAG WTAM ŴŴJ

8 — National Vespers

B — National Vespers KDYL KECA KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KYRC KSO KSTP KTAR KTBS KVOO KWCR KW KAPI WBAL WBZ WBZA WCFL WCKY WDAY WEBC WFLA WGAR WHAN WIBA WIOD WIS WJAX WJDX WJZ WJZ WKY WMAL WMC WOAI WPTF WREN WRVA WSB WSM WSMB WWNC

E-5:15 p.m., C-4:15, M-3:15, P-2:16 R — Achievements in Science, Drama CFCF CRCT WBEN WCAE WCSB WDAF WEAF WENR WFBR WGY WJAR WOW WRC WSAI WTAG WTAM WWJ

E -5:30 p.m., C -4:30, M -3:30, P -2:30 C - Frank Grumit; Julia Sandersop CKLW KFAB KFH KMBC KMOX KOMA WAAB WABC WADC WCAH WCAO WCAU WDRC WDBU WEAN WFBL WFBM WGR WHEC WHK WICC WISY WMAS WOKO WORC WODD WYAAP, WWVA WSPD WTAR WWVA

R — Talkie Picture Time—Sketch WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WJAR WMAQ WMC WOW WRC WSAI WSM WTAG B — Grand Hotel—Drama

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

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

C — Jacques Renard's Orchestra CKLW KMBC KMOX WABC WBBM WCAO WCAU WCCO WFBM WGR WHK WJAS WJSV WKRC

R - Catholic Hour KDYL KECA KFYR KGHL KGIR KGW KOA KOMO KPO KPRC KSTP KTAR KTBS KVOO WAPI WBAP WBEN WCAE WCSH WDAF

SUNDAY—(Continued)

WDAY WEAF WEBC WEEI WENR WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WIS WJAR WJAX WJDA LIT WMC WOAI WOC WOW WKY WLIT WRC WR WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC WSM B -- Cadillac Concert

ADKA KOIL KSO KWCR KWK WBAL WBZ WBZA WENR WGAR WHAM WJR WJZ WLW WMAL WREN WSYR

E-8:30 p.m., C-5:30, M-4:30, P-3:30

C — Smiling Ed McConnell CKLW KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLZ KFFY KFFY KFRC KGB KHJ KLZ KMBC KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WBBM WBT WCAH WCAU WCCO WDSU WEAN WFBL WHAS WHEC WHO WJAS WJSV WKBW WKRC WLAC WMT WOKO WQAM WSPD WTAR WWVA

R — Our American Schools

CFCF CRCT KDYL KECA KF8D KFYR KGW KOMO KPO KPRC KSD KFYR KGW KOMO KPO KPRC KSD KSTP KTAR KTBS KVOO WAPI WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WJAR WJAX WJDX WKY WLIT WMAQ WMC WOAI WOC WRC WRVA WSAI WSB WSM WTAG WTAM WWJ WWNC

E-6:45 p.m., C-5:45, M-4:45, P-3:45 C — Charles Carlile, Tenor CKLW KDB KERN KFBK KFPY ČKLW KDB KEËN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KSL KVI KWG WAAB WABC WADC WBBM WBIG WBRC WCAO WCAU WCCO WDAE WDBO WDRC WDSU WEAN WGST WHAS WHK WIP WJAS WJSV WI.BH WKBW WKRC WPG WSIS WTAR WTGC WSJS WTAR WTOC

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

R - True Story Court WBEN WCAE WCSH WEAF WFBR WGY WJAR WMAQ WOW WRC WSAI WTAG WTAM WWJ

C – Ethel Waters; George Beatty WABC WBT WCAO WCAU WDAE WDBO WDRC WEAN WFEA WGST WHK WJAS WJSV WKBN WLBZ WNAC WPG WQAM WTAR WWVA

B — Realsilk; Ted Weems' Orchestra KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WBAL WBZ WBZA WFLA WGAR WHAM WIS WJR WJZ WLS WLW WMAL WPTF WREN WRVA WSYR

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

B — Ozzie Nelson; Joe Penne: KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTAR KVOO KWCR KWK WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WJAX WJDX WJR WJZ WKY WLS WLW WMAL WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC

WERC WCAH WCAO WCAU WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFEA WGLC WGR WGST WHAS WHEC WHP WIBW WISN WJAS WKBN WLBZ WMAS WOKO WORC WQAM WSBT WSJS WSPD WTAR WTOC WWVA

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

CKLW KMOX WABC WCAU WFBL WFBM WGN WGR WHAS WIIK

WFBM WGN WGR WHAS WIIK WJAS WJSV WKRC WNAC R — Fich Program; Wendeli Hali CFCF KSD WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WJAR WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WWJ

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

E-8:00 p. m., C-7:00, M-6:00, P-5:00 R - C hase and Sanborn Hour CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTHS KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WLIT WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC C - Fvening in Paris

WIAM WIIC WTMJ WWJ WWNC C – $\mathbf{Evening in Paris}$ CKLW KLZ KMBC KMOX KOMA KSL WABC WADC WBBM WCAO WCAU WCCO WDSU WEAN WFAI WFBM WCGR WGST WIIAS WHK WJAS WJSV WKRC WOKO WSPD

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C - Ford; Fred Waring's Orchestra CFRB CKAC CKLW KFAB KFH KLRA KLZ KMBC KMOX KOH KOMA KRLD KSL KTRH KTSA KVOR WAAB WABC WACO WADC WBBM WBIG WBC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WCBU WERM WCFA WIAS WIBO WIDOD WIDIG WIDSO WIDAN WFBL WFBM WFFA WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBN WKBW WKRC WIDAC WIDW WIDZ WHAS WERC WEAC WEBW WEBZ WMAS WMBD WMBG WMT WOKO WORC WOWO WPG WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA

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

C – Erolo J. m., C-0.00, M-7500, F-500 C – Eron Rapee; Nino Martini CKLW KDB KERN KFBK KFPY KFRC KGB KIJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSCJ KSL KTRH KVI KWG

R — Manhattan Merry-Go-Round KDYL KFI KGO KGW KHQ KOA KOMO KSD WDAF WEAF WFBR WFI WGY WHO WJAR WMAQ WOC wow WRC WSAI WTAM WTIC WWJ

B — Gulf Headliners

WAKA KPRC KTBS WBAL WBZ WBZA WFAA WFLA WGAR WHAM WIOD WIS WJAX WJDX WJR WJZ WLW WMAL WMC WOAI WRVA WSB WSM WSMB WSYR WWNC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 R — Album of Familiar Music

CFCF CRCT KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP WAPI WBEN WCAE WCKY WCSH WDAF WEAF WEEI WFAA WFBR WF1 WFLA WGY WHO WIOD WJAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WPTF WRC

WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ B-waiter Winchell KDKA KOIL KSO KWCR KWE WBAL WBZ WBZA WENR WGAR WHAM WJR WJZ WLW WMAL WREN WSYR

E-9:45 p.m., C-8:45, M-7:45, P-6:45 - Gould and Shefter Plano Duo

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

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

E-10:00 p.m., C-9:00, M-8:00, P-7:00 R — Chevrolet; Jack Benny KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSTP KTAR KTBS WAPI WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WDAY WEAF WEBG WEBI WFDR WFI WFLA WGY WIBA WIOD WIS WJAR WJDX WKY WMAQ WMC WOAI WOW WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNG

WWJ WWNC C - Pati's Childhood Dramas CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KVI KWG WAAB WABC WCAO WCAU WCCO WDRC WFBL WGR WHAS WHK WJAS WJSV WKRC WOKO

E-10:30 p.m., C-3:30, M-8:30, P-7:30 R — Hall of Fame KDYL KFI KGO KGW KHQ KOA KOMO KPRC KTBS KTHS WAPI WBAP WBEN WCAE WCSH WDAF WFAP WBEN WCAE WCSH WDAF WEAF WEEI WFRB WFI WGY WJAR WJDX WKY WLW WMAQ WMC WOAI WOW WRC WSM WTAG WTAM WTIC WWJ WEAF

E-11:00 p.m., C-10:00, M-9:00, P-8:00 - Little Jack Little and Orchestra C - Little Jack Little and Urchestra CFRB CKAC CKLW KFH KLRA KLZ KTRH KTSA KVOR WABC WACO WBIG WBRC WCAN WABO WDAE WDBJ WDBO WDDOD WDRC WDSU WEAN WGST WHAS WHEC WIP WICC WIP WISN WJAS WJSY WKBN WLAC WLBW WMAS WMBD WNAC WODX WOKO WPG WQAM WREC WSFA WSJS WSPD WTAR WTOC

B .-. John Fogarty Tenor

E-11:15	p.m., C	-10:15.	M-9:15	. P-8:15
WGAR	WJR	W.IZ	WLW	WREN
KWK			WBZA	WCKY
KDKA	KGHL	- КОП	KSO	KWCR

- Walter Winchell

B — Walter Winchell KDYL KFI KFSD KGHL KGIR KDYL KFI KFSD KGHL KGIK KGO KGW KHQ KOA KOMO KPRC KTAR KTBS KTHS WAPI WBAP WJDX WKY WMC WOAI WSB WSM WSMB

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Leon Belasco and Orchestra C — Leon Belasco and Orchestra CFRB CKLW KFH KLZ KSCJ KTRH KTSA KVOR WABC WADC WBRC WBT WCAH WCAO WCAU WDAE WDBJ WDRC WDSU WEAN WFBL WFBM WCR WGST WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBN WLBZ WMAS WMBD WMT WNAC WOKO WCAM WREC WSBT WSJS WSPD WTOC

B — Paul Whiteman and Orchestra

KDKA KFYR KOIL KSO KSTP KWCR KWK WBAL WBZ WBZA WCKY WDAY WEBC WGAR WIBA WJR WJZ WLW WREN

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

CONCERTS

- Armeo Ironmaster Program, 10:00 p.m., Fiday, B. Boston Symphony, 8:30 p.m., Saturday, B Cadillae Concert, 6:00 p.m., Sanday, B. Hoover Sontials, 4:30 p.m., Sunday, R. Matereolitikal Concert, 6:00 p.m., Sunday, R.

- Metropolitan Opera, 9:00 p.m., Saturday, R. New York Philharmonic Symphony, 3:00 p.m., Sunday, C. Philadelphia Symphony, 9:00 p.m., daily, eccept Sunday, C.
- Rosy Concert. 12:30 p.m., Sunday, B. Russian Symphonic Choir, 1:00 p.m., Sunday, R. Sous Les Ponts de Paris, 8:30 p.m., Saturday, R.

- Albert Spalding, 8:30 p.m., Wednesday, C Trio Romantique, 6:00 p.m., Saturday, B
- Waldorf-Astoria 6:00 p.m., daily, except Sunday, R.

DANCE BANDS

- DANCE BANDS Leon Belasco, 11:30 p.m., Sunday, C. Ben Bernie, 9:00 p.m., and 12 Mid., Tuesday, R. Don Bestor, 8:00 p.m., Friday, B. Jack Denny, 7:00 p.m., Sunday, C. Eddie Duchin, 7:30 p.m., Thurs. and Sat. B. Ted Fjorito, 11:00 p.m., Wed.; 11:30 p.m., Sat., C. Jan Garber, 3:30 p.m., Sunday, B. Glen Gray, 10:00 p.m., Tues. and Thurs., C; 11:30 p.m., Wed.; 12 mid., Sat., C. Phil Harris, 7:45 p.m., Tues.; 9:30 p.m., Fri., B. Richard Himber, 6:00 p.m., Tues.; 9:30 p.m., Thurs., B; 6:30 p.m., Saturday, R. Isham Jones, 9:30 p.m., Mon.; 11:15 p.m., Wed.; 11:30 p.m., Tues and Fri., C.

- Baham Jones, 9:30 p.m., Mon.; 11:15 p.m., Wed.; 11:30 p.m., Tues. and Fri., C.
 Henry King, 6:00 p.m., Thursday, B.
 Wayne King, 3:00 p.m., Sun.; 8:30 p.m., Tues and Wed., R; 10:00 p.m., Monday, C.
 Enoch Light, 6:30 p.m., Mon. and Wed., C.
 Guy Lombardo, 9:30 p.m., Wed.: 11:30 p.m., Sat., C.
 Abe Lyman, 2:30 p.m., Sun.; 11:30 p.m., Mon., c; 9:00 p.m., Fridie Martin, 12:00 mid., Saturday, B.
 Benny Meroff, 10:00 p.m., Suen, 11:30 p.m., Tues., C.
 Gozzie Nelson, 7:30 p.m., Sun., St. 1:30 p.m., Tues., C.
 George Olsen, 8:00 p.m., Suturday, R.
 Raymond Paige, 9:30 p.m., Tuursday, C.
 Leo Reisman, 8:00 p.m., Sunday, C.
 B. A. Rolfe, 10:00 p.m., Sunday, R.
 Nat Shilkret, 8:45 p.m., Tuesday, B.
 Rudy Vallee, 8:00 p.m., Thursday, C.
 Mark Warnow, 10:45 p.m., Thursday, C.
 Mark Warnow, 10:45 p.m., Thursday, C.
- Mark Warnow, 10:45 p.m., Thursday, C. Ted Weems, 7:00 p.m., Sunday, B. Paul Whiteman, 10:00 p.m., Thursday, R.

DIALOG

- Fred Allen, 9:30 p.m. and 12:30 a.m., Wednesday, R. Amos 'n' Andy, 7:00 and 11:00 p.m., daily, except Sat. and Sun., B.

- Sun, B. Phil Baker, 9:30 p.m., Friday, B. Jack Benny, 10:00 p.m., Sunday, R. Burns and Allen, 9:30 p.m., Veinesday, C. Olsen and Johnson, 10:00 p.m., Friday, C. Jack Pearl, 8:00 p.m., Wednesday, R. Joe Penner, 7:30 p.m., Sunday, B. Potash and Perlmutter, 7:30 p.m., Mon., Wed., Fri., B. Stoopnagle and Budd, 9:15 p.m., Wed. and Sat., C. Ed Wynn, 9:30 p.m., Tuesday, R.

Bar X Days, 2:00 p.m., Sunday, B. Billy Batchelor, 7:15 p.m., daily, ex. Sat and Sun., R. Bobby Benson, 6:15 p.m., daily, except Sat. and Sun., C. Big Ben, 5:00 p.m., Sunday, R., Tuerchy, P. Big Ben, 5:00 p.m., Sunday, R. Cruise of Seth Parker, 10:00 p.m., Tueschay, R. Dangerous Paradise, 8:30 p.m., Wed. and Fri., B. Death Valley Days, 9:00 p.m., Thursday, B. Dramatie Sketch, 7:15 p.m., Thurs. and Fri., B. Eno Crime Clues, 8:00 p.m., Tues. and Wed., B. First Nighter, 10:00 p.m., Friday, R. Goldbergs, 7:45 p.m., daily, ex. Sat. and Sun., R. Grand Hotel, 5:30 p.m., Sunday, B. Just Plain Bill, 7:15 p.m., daily, ex. Sat. and Sun., C.

- Kay Seven, 10:30 p.m., Monday, R. Warden Lawes, 9:00 and 11:15 p.m., Wednesday, B. Little Italy, 6:45 p.m., Tues. and Thurs., C. March of Time, 8:30 p.m., Friday, C. Myrt and Marge, 7:00 and 10:45 p.m., daily, ex. Sat. and Sun., C

- Suni, C. Suni, C. Saturday, R. Princess Pat Pageant, 4:30 p.m., Sunday, B. Red Davis, 8:45 p.m., Mon., Wed., Fri., B. Irene Rich, 3:15 p.m., Sun; 7:45 p.m., Sunday, C. Ruch Parene 4:00 p.m. Mon, Mon, Chart, in Chart, in C. Parene 4:00 p.m. Mon to Chart, in C.
- Buck Rogers, 6:00 p.m., Mon. to Thurs., inc., C. Romances of Science, 5:15 p.m., Sunday, R.
- Roses and Drums, 5:00 p.m., Sunday,
- Scott's Circus Days, 7:30 p.m., Fri. and Sat., R.
- Soconyland Sketches, 8:00 p.m., Monday, R. Talkie Picture Time, 5:30 p.m., Sunday, R. True Story Court, 7:00 p.m., Sunday, R.

PIANO AND ORGAN

Fray and Braggiotti, 8:45 p.m., Tuesday, C. Archer Gibson, 10:30 p.m., Thursday, B. Gould and Shefter, 9:45 p.m., Sunday, B. Dion Kennedy, 4:00 p.m., Sunday, B Ohman and Arden, 9:30 p.m., Sunday, R.

POPULAR PROGRAMS

A. & P. Gypsies, 9:00 p.m., Monday, R. Album of Familiar Music, 9:30 p.m., Sunday, R. American Revue, 7:00 p.m., Sunday, C. A. & P. Gypsies, 9:00 p.m., Monday, R.
Album of Familiar Music, 9:30 p.m., Sunday, R.
Armour Program, 9:30 p.m., Friday, B.
Major Bowes, 11:15 a.m., Sunday, R.
Broadway Melodies, 2:00 p.m., Sunday, C.
Broadway Melodies, 2:00 p.m., Sunday, C.
Broadway Melodies, 2:00 p.m., Sunday, C.
Broadway Melodies, 2:00 p.m., Sturday, C.
California Melodies, 9:30 p.m., Thursday, C.
Caneel Program, 10:00 p.m., Sturday, C.
Carborundum Band, 9:30 p.m., Thursday, C.
Carborundum Band, 9:30 p.m., Thursday, C.
Carborundum Band, 9:30 p.m., Sturday, C.
Chase and Sanborn, 8:00 p.m., Sunday, R.
Cheroic Program, 10:00 p.m., Sunday, R.
Contented Program, 10:00 p.m., Monday, R.
Pideles Three, 4:00 p.m., Stunday, R.
Fiddles Three, 4:00 p.m., Stunday, R.
Fiddles Three, 4:00 p.m., Stunday, R.
Fitch Program, 7:45 p.m., Sunday, R.
Forty-Five Minutes in Hollywood, 8:00 p.m., Saturday, C.
Jaek Frost Melody, 9:30 p.m., Monday, R.
Hall of Fame, 10:30 p.m., Sunday, B.
Hall of Fame, 10:30 p.m., Sunday, B.
Hall Headiners, 9:00 p.m., Sunday, R.
Household Musical, 9:00 p.m., Sunday, B.
Hama Troubadours, 9:00 p.m., Monday, R.
Mawell House Showboat, 9:00 p.m., Sturday, R.
Manatian Merry-Go-Round, 9:00 p.m., Sturday, R.
Mawell House Showboat, 9:00 p.m., Wednesday, R.
Manatian Merry-Go-Round, 9:00 p.m., Sturday, R.
Marwell House Showboat, 9:00 p.m., Meda, M Sealed Power Side Show, 8:00 p.m. and 12 mid., Monday B. Seated Fower Side Show, 8:00 p.m. Junday, C. Sinelair Minstrells 9:00 p.m., Sunday, C. Sinelair Minstrells 9:00 p.m., Monday, B. Sparton Triolians, 3:30 p.m., Sunday R Swift Revue 10:00 p.m., Friday, C. Texaco Fire Chief, 9:30 p.m., Tuesday, R. U. S. Army Band, 6:00 p.m., Monday, B. Voice of America, 8:30 p.m., Thursday, C.

Voice of Firestone, 8:30 and 11:30 p.m., Monday, R.

- Wildroot Institute 4:15 p.m., Sunday, R. WLS Barn Dance, 11:00 p.m., Saturday, B.
- Yeast Foamers, 3:30 p.m., Sunday, B.

RELIGIOUS

- Catholic Hour, 6:00 p.m., Sunday, R. Church of the Air, 1:00 p.m., Sunday, C. Elder Michaux, 7:00 p.m., Sturday, C. Mid-Week Hyron Sing, 6:30 p.m., Tuesday, R. National Vespers, 5:00 p.m., Sunday, B. National Youth Conference, 1:30 p.m., Sunday, B. Religion in News, 7:15 p.m., Sturday, R. Salt Lake Choir, 11:30 a.m., Sunday, C.

SINGERS

- Frances Alda, 7:45 p.m., Monday, B; 6:00 p.m., Tuesday, R. Baby Rose Marie, 7:15 p.m., Monday, B. Mildred Bailey, 6:45 p.m., Mon.; 6:15 p.m., Saturday, C. Betty Barthell, 6:30 p.m., Tuesday, C. Irene Beasley, 6:30 p.m., Monday and Friday, R; 6:30 p.m., Wednesday, B.

- Medne Detaley, 0. 30 p.m., Monday and Friday, R. 5:30 p.m., Wedneaday, B. Boswell Sisters, 11:15 p.m., Monday and Friday, C. Morton Bowe, 7:45 p.m., Friday, B. Dell Campo, 11:15 p.m., Tuesday, C. Eddie Cantor, 8:00 p.m., Sunday, R. Charles Carlisle, 6:45 p.m., Sunday, 11:15 p.m., Thurs., C. Golumbians, 8:00 p.m., Tuesday, C. Bichard Crooks, 8:30 and 11:30 p.m., every other Mon., R. Bing Crooky, 8:30 p.m., Monday, C. Jessica Dragonette, 8:00 p.m., Friday, R. Morton Downey, 8:00 p.m., Thursday, C. Evan Evans, 11:00 p.m., Friday, C. John Fogurty, 11:00 p.m., Sunday, B. Four Ekon Boys, 9:30 p.m., Tuesday, C. Jane Froman, 9:00 p.m., Sunday, C. Jane Froman, 9:00 p.m., Sunday, C. Jane Froman, 9:00 p.m., Sunday, C. Jane Froman, 9:00 p.m., Thursday, C. Alex Gray, 8:30 p.m., Thursday, C. Tito Guizar, 12:30 p.m., Sunday, 6:30 p.m., Friday; 7:45 p.m., Suturday, C. Tito Guizar, 12:30 p.m., Sunday; 6:30 p.m., Friday; 7:45 p.m., Saturday, C.
 Wendell Hall, 7:45 p.m., Sunday, R.
 Annette Hanshaw, 9:00 p.m., Thursday, R.,
 Happy Bakers, 8:00 p.m., Monday, Wednesday, Friday, C.
 John Herrick, 7:15 p.m., Wednesday, 7:00 p.m., Sat., B.
 George Jessel, 9:30 p.m., Tuesday, C.
 Theo. Karle, 6:45 p.m., Wednesday, C.
 Frances Langford, 3:30 p.m., Sunday, R.
 Lazy Dan, 1:30 p.m., Sunday, C.
 Elizabeth Lennox, 2:30 p.m., Sunday, R.
 Little Jack Little, 11:00 p.m., Sunday, C.
 Howard Marsh, 9:15 p.m., Monday and Thursday, C.

- Howard Marsh, 9:15 p.m., Monday and Thursday, C.

KEY TO SYMBOLS

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

- b
- Does not verify. с
- Verification 10c; letter 25c. h
- Sends Ekko stamp for 10c. Sends Ekko stamp for 5c. f
- Sends Ekko stamp for postage
- g h
- Sends own station stamp for 10c. Sends own station stamp for 5c.
- Sends own station stamp for postage.
- k Has no stamps.
- z No information available.

Fourth Column Symbols

- National "Blue" network ...
- C Columbia network.
- D Daytime only.

B

- D Daytime only. Dn Daytime with occasional evening hours. E Trans-Canada network.
- Canadian Radio Brdcstg. Commission.
- All Canadian networks

- John McCormack, 9:30 p.m., Wednesday, B. Helen Morgan, 2:00 p.m., Sunday, C. Morin Sisters, 4:15 p.m., Sunday, 9:00 p.m., Friday, R. Edith Murray, 6:30 p.m., Monday, C. Gertrude Niesen, 9:30 p.m., Monday, C. Viola Philo, 11:00 p.m., Thursday, R. Vivien Ruth, 8:00 p.m., Monday, R. Vivien Ruth, 8:00 p.m., Monday, R. Vivien Ruth, 8:00 p.m., Monday, C. Ethel Shutta, 8:00 p.m., Jungay, C. Silver Duet Sernaders, 7:30 p.m., Junes, Thurs., Sat., C. Silver Duet Sernaders, 7:30 p.m., Sunday, C. Sonderson-Crumit, 5:30 p.m., Sunday, C. Silver Duet Sernaders, 7:30 p.m., Sunday, C. Songa Mother Used to Sing, 6:00 p.m., Sunday, C. Southerenares, 6:45 p.m., Thursday, R. Irene Taylor, 10:00 p.m., Tuesday and Thursday, C. Comrad Thibault, 8:30 p.m., Wed, C; 9:00 p.m., R. Tade and Mark, 8:45 p.m., Saturday, B. Trade and Mark, 8:45 p.m., Saturday, C. Cyrena Van Gordon, 8:30 p.m., Wonday, B. Yee and Johnny, 4:15 p.m., Sunday, R.

- Vee and Johnny, 4:15 p.m., Sunday, R. Ethel Waters, 7:00 p.m., Sunday, C. Lee Wiley, 9:30 p.m., Friday, R. Muriel Wilson, 2:45 p.m., Sunday, R.

TALKS

TALKS TALKS Back of the News. 6:30 p.m., Wednesday, R. Dale Carnegie, 1:30 p.m., Sunday, R. Boake Carter, 7:45 p.m., daily, ex. Sut. and Sun., C. Chicago Round Table, 12:30 p.m., Sunday, R. Columbia News Service, 10:30 p.m., Sunday, C. Father Coughlin, 4:00 p.m., Sunday, C. Flying Capt. Williams, 6:45 p.m., Saturday, B. Flying Capt. Williams, 6:45 p.m., Suturday, B. Flying Capt. Williams, 6:45 p.m., Sunday; 6:00 p.m., Friday; 10:45 p.m., Saturday, C. Andrew Kelly, 6:45 p.m., Monday, R. John B. Kennedy, 6:30 p.m., Thursday, R. Mational Radio Forum, 10:30 p.m., Sunday, C. Mational Radio Forum, 10:30 p.m., Sunday, R. Our American Schools, 6:30 p.m., Sunday, R. Our American Schools, 6:30 p.m., Sunday, R. Our American Schools, 6:30 p.m., Sunday, C. Radio in Education, 7:15 p.m., Tuesday, B. Lowell Thomas, 6:45 p.m., daily, except Sat. and Sun., B. Voice of Experience, S:0 and 11:45 p.m., Sunday, C. Frederic William Wile, 6:30 p.m., Sunday, C. Walter Winchell, 9:30 and 11:15 p.m., Sunday, C. Fat. Schwar, In the Index be

As Shown in the index by Frequencies and Dial Numbers

н

K

Μ

N

P

R

Ŝу Т

Ū

W

W

X Y

Z

[60]

Yankee network.

Orange network

Sunday only. Synchronized. Don Lee System.

All-Florida network.

No information.

Curtis-Indiana network. Has permit to increase power. Has permit to change location.

Divie network.

Michigan network

Canadian Pacific Ry. network. Central Canada network. National "Red" and "Blue" networks.

Has construction permit only. National "Red" network.

Maritime Broadcasting network.

Has permit to change frequency.

1-2-3. Figures denote stations sharing time.

a-b-c. Small letters show stations using same transmitter

- Second Column Symbols
- Verifies reception for return postage. Verifies only occasionally.

INDEX BY FREQUENCIES AND DIAL NUMBERS KCYS. With Tuesday's Time on the Air 600 555.2 meters 540 kilocycles DIAL Moose Jaw, Sask. M 1000 F CJRM CJRW C-8:00-9:00: 10:00-10:45; 1:00-1:15; 2:15-2:30; z Fleming, Sask. 5:30-7:30 Ê 500 ak Merida, Yuc XEY 105 546.8 7. 545.1 meters 550 kilocycles Brookings, S. D. C-12:30-2:00 St. Louis, Mo. C-7-8; 9:25-9:45; 12:15-12:45; 3-3:45; 10-11 Bismarck, N. D. C-7:00-12:30; 2:00-11:30 1 (1) 2 (1) 1N (2.5) 500 KFDY 80 500 KFUO KFYR яе 1000 Corvallis, Ore. P-6:30-4:00; 6:30-9:00 ah Corvallis, Ore. P=6:30-4:00; 6:30-9:00St. Louis, Mo. C=8-9:25; 9:45-12:15; 12:45-3; 3:45-10; 11-mid. San Jose, C. R. C=10:00-1:00; 4:00-11:00Waterbury, Vt. E=-7:30-10:00; 11:30-2:00; 3:00-7:00Buffalo, N. Y. E=-7:30-mid. Cincinnati, Ohio. E=-7:00-1:001000 KOAC ak 2R KSD ak 500 TISO 250 ak . . . D WDEV 500 ве č 1000 WGR яe WKRC 1000 ak 535.4 meters 560 kilocycles Beaumont, Texas. C-7:00-10:00 KFDM ak 500 (1 Denver, Colo. M-6:45-11:30 San Francisco, Calif. P-7:00-1:00 C KLZ ak 1000 Springfield, Mo. C—7:00-7:00 Philadelphia, Pa. E—6:45-9; 9:45-11; 1-2; 3-4:30; 6-mid. Gary, Ind. C—5:30-3:30 KTAB 1000 ak KTWO WFI WIND D ak 500 500 IR (1) ae 1000 C ak Philadelphia, Pa. E-9-9:45; 11-1; 2-3; 4:30-6 1R (1) C (2) CW 500 WLIT ak Knoxville, Tenn. C Miami, Fla. E-7:15-mid. Mexicali, B. C. P-8:00-10:00 WNOX 1000 ak WQAM XEAO 1000 ae ak 100 (.15)570 kilocycles 526.0 meters St. Pierre, Miquelon, Isl. A Wichita Falls, Texas. C-7:00-10:00Hollywood, Calif. P-6:00-12:15Tacoma, Wash. P-6:00-mid. Youngstown, Ohio. E-7:30-9:00; 11:00-1:00; 3:00-mid. New York, N. Y. E-8:00-1:00Yankton, S. D. C-6:00-mid. Columbus, Ohio. E-9:11:1-3Syracuse, N. Y. E-7:30-1. (WSYU) Asheville, N. C. E-8:00-1:00250 250 572 FQN z CUT OUT ON (.5) ĸĞĸo ak KMTR KVI яk 500 ak 500 iĊ WKBN WMCA 500 ae 500 ak WNAX 1000 C (2.5) 1 (1) ak ae ak 750 250 Ê WSYR DOTTED 1000 N WWNC ae 516.9 meters 580 kilocycles Toronto, Ont. E-8:00-11:30 (CFCL) 100 M CKCL Edmonton, Alta. M Havana, Cuba. E aj 500 LINES CKUA аk 150 588 CMDD z Santo Domingo, D. R. E-8:10-10:30 Fresno, Calif. P-7:00-mid. 1500 HIX ak CT Fresno, Calif. P-7:00-mid. Manhattan, Kans. C-8:00-9:00; 10:00-10:30; 12:30-1:30; 4:30-KMI ak 500 2 (1) KSAC 500 ak o:50 Orlando, Fla. E—7:00-mid. Topeka, Kans. C—6:00-mid. Charleston, W. Va. E—8-mid. Worcester, Mass. E—8-mid. Piedras Negras, Coah. C—6:00-8:00; 11:00-1:00; 7:00-11:00 5:30 CW 250 WDBO 88 WIBW 1000 C2 ae 750 750 WOBU ak Ŕ WTAG ae 585 75000 XEPN яk 590 kilocycles 508.2 meters Havana, Cuba. E-11:00-10:00 1400 595 rayana, Cuba. E = 1100-10:00Spokane, Wash. P = 7 -mid. Boston, Mass. E = 0:45-1. (WIXAL) Kalamazoo, Mich. E = 7:00-7:00Omaha, Neb. C = 7:00-10:00; 10:45-3:15; 4:00-mid. CMW ae N (2.5) KHQ WEEI ak 1000 R ak 1000 WKZO 1000 ae wow R 1000 ae 499.7 meters 600 kilocycles Montreal, Que. E-7:30-mid. (VE9DR) Chatham, Ont. E-7:15-10 Vancouver, B. C. P-7:30-10:30 F CFCF 500 ae FL **ČFCO** ak 50 CJOR KFQD KFSD WCAC ak 500 Anchorage, Alaska. L-6:00-mid. San Diego, Calif. P-7:30-mid. Storrs, Conn. E-12:30-1; 7-8 . . N San Diego, Calif. r—, 2 Storrs, Conn. E—12:30-1; 7-8 C Baltimore, Md. E—7:00-mid. 2 CH(.5) Bridgeport, Conn. E—7:45-1:00 C Waterloo, Iowa. C—6:00-mid. 250 ck ah 1000 250 ae 250 WCAO ае 250 WICC ae 500 WMT af WREC ak 500

610 kilocycles 491.5 meters
$\begin{array}{llllllllllllllllllllllllllllllllllll$
620 kilocycles 483.6 meters
$\begin{array}{llllllllllllllllllllllllllllllllllll$
630 kilocycles 475.9 meters
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
640 kilocycles 468.5 meters
KFI ak 50000 1N Los Angeles, Calif. P-0:30-mid. WAIU ae 500 1 Columbus, Ohio. E-6:15-5:45 WOI ae 5000 D Ames, Iowa. C-6:30-11:30; noon-1:45; 3:30-5:00
650 kilocycles 461.3 meters
KPCB ae 100 Seattle, Wash. P-5:30-sunset; 10-4 WSM aej 50000 N Nashville, Tenn. C-6:30-mid.
660 kilocycles 454.3 meters
RUS z 500 664 San Salvador, E. S. WΛAW af 500 D Omaha, Neb. C—6:00-sunset WEAF ak 50000 R New York, N. Y. E—8:00-1:00
670 kilocycles 447.5 meters
WMAQ ck 5000 N Chicago, III. C-7:30-1:00
680 kilocycles 440.9 meters
$\begin{array}{llllllllllllllllllllllllllllllllllll$
690 kilocycles 434.5 meters
CFRB ak 10000 C Toronto, Ont. E8:00-mid. CJCJ ak 100 Calgary, Alta. M NAA ak 1000 Arlington, Va. E11:55-noon; 9:55-10:00 XET ck 500 Monterrey, N. L. CNoon-2:00; 4:00-10:00
700 kilocycles 428.3 meters
WLW ak 50000 NX Cincinnati, Ohio. E6:30-Z. (W8XO; W8XAL)
710 kilocycles 422.3 meters
KMPC ae 500 Dn Beverly Hills. Calif. P-6:45-12:30
[62]

TIFB WOR XEN	z ak ak	30 5000 1000	714 711	San Jose, C. R. C-6:00-10:00 Newark, N. J. E-6:45-12:30 Mexico City, D. F. C-9:00-noon; 1:00-4:00; 5:00-mid.	
720 k	iloc	cvcle	s 4	16.4 meters	
WGN		50000		Chicago, Ill. C-7:00-1:30	
730 k	iloc	eycle		10.7 meters	KCYS.
CFPL CJCA CKAC CMK XEF- XER	z ah ak ae	100 1000 5000 3150 50000	F F C 	London, Ont. E Edmonton, Alta. M Montreal, Que. E—7:30-11.30 Havana, Cuba. E—11:00-1:00; 7:00-mid. Villa Acuna, Coah. C—7:15-5:00	820 DIAL
_				05.2 meters	
740 k	ae ak	1000 250	D D NX	Clay Center, Neb. $C-5:00$ -sunset Portsmouth, N. H. E8:30-1:30; 3:30-7:45 Atlanta, Ga. $C-6:55$ -mid.	[
WSB		50000		399.8 meters	
750 k			-	Honolulu, T. H. L6:30-10:30	1
KGU WJR XEOK	aj ak ak	2500 10000 5000	N B 757	Detroit, Mich. E-7:00-1:00 Tijuana, B. C. P-7:00-mid.	
760 k	cilo	cycle	es 3	394.5 meters	Ť.
CMBS KXA WBAL WEW WJZ XEYZ	ak ae ae ae ck z	200 250 10000 1000 50000 10000	765 (.5) BSy D BSy	Havana, Cuba. E-10-noon; 3:30-6 Seattle, Wash. P-5:30-mid. Baltimore, Md. (See 1060 Kcys.) St. Louis, Mo. C-8-sunset New York, N. Y. E-8-1. (W3XL; W3XAL) Mexico City, D. F. C	
770 k	cilo	cycle	es 3	389.4 meters	ļ.
CMCQ KFAB WBBM	z ae ae	1000 5000 25000	775 CSy CSy	Havana, Cuba. E Lincoln, Neb. C-5:00-6:45; 9:00-mid. Chicago, Ill. C	CUT OUT ON
780 l	cilo	cycle	es 3	384.4 meters	ICI
CHWK CJCS CKPR KELW KTM WEAN WMC WTAR XEP	ak ae ae ae ae ak ae z	100 500 500 500 500 500 500 500 1000	F FE 2 (1) CH N (1) C	Fort William, Ont. E= $10-2$; 5-11 Burbank, Calif. P= $10:00-1:00; 5:00-8:00; 4:00-6:00$ Los Angeles, Calif. P= $6:00-10:00; 1:00-5:00; 8:00-4:00$ Providence, R. I. E= $7:30-1:00$	ON DOTTED LINES
790 l	kilo	cycl	es (379.5 meters	NE
CMJK KGO WGY	ak ak	500 7500 50000	N R	Camaguey, Cuba. E-11:30-12:30; 5:00-11:00 San Francisco, Calif. P-7:00-mid Schenectady, N. Y. E-6:45-1, (W2XAD; W2XAF)	
800 1	kilo	cycl	es ä	374.8 meters	1
TIGP VOAC WBAP WFAA XFC	z z	75 40 50000		 San Jose, C. R. St. John's, Newfoundland, L Fort Worth, Tex. C=6:30-7; 8:30-10:30; 12:30-3; 5:30-6:30; 7-10 Dallas, Tex. C=7-8:30; 10:30-12:30; 3-5:30; 6:30-7; 10-mid. Aguascalientes, Ags. 	
810 1	kilo	cyc1	es	370.2 meters	
VOAS WCCO WNYC	ak ae	100 50000	Ċ N	 St. John's, Nfld. L-11:00-12:30; 4:00-5:30 Minneapolis, Minn. C-7:00-mid. New York, N. Y. E-10:00-7:30 	
820	kilo	ocycl	es	365.6 meters	1 j
CMGC WHAS		30 50000	c	Matanzas, Cuba. E Louisville, Ky. C—7:00-mid.	1

020.1	• 1				and on the mit		
830 1	X1lC	ocycl	es 3	61.2 meters			
CMC CMGA	ae z		835	Havana, Cuba. I	E-10:30-11:30; 7:0	00-11:00	
KOA	z ak	100 12500	834 N	Colon, Cuba. E	—7:00 -mid .		
LR5	z	20000		Buenos Aires Ara			
TIEA WEEU	z ak	7.5	833 D	San Jose, C. R. I Reading, Pa. E- Boston, Mass. E-	8.00 6.15		
WHDM	ae	1000	Dn	Boston, Mass. E	-0.00-0:15 	Denver	
WRUF XETW	ae dk	5000 500	Dn	Gainesville, Fla. Mexico City, D. F	E-0:00-7:00		
				Mexico City, D. F	. C—Noon-11:00)	
840 1	cilc	cycl	es 3	56.9 meters	1		
CJOC CKLW	ak	100	F	Lethbridge, Alta.	M-7:30-8:00		
CKLW XFX	ae ak	5000 500	С	Windsor, Ont. E	7:00-1:00		
			1011	Mexico City, D. F.	. C7-12:30; 6:3	0-10:00	
8501	cilo	cvcl	es 3	52.7 meters			1
KIEV	ak	1 00	D	Glendale, Calif.	P 6.00 mmmm		
KWKH	ae	10000	1	Shreveport, La. (-		
WWL	ae	10000	1Dn	New Orleans, La.	C-8:00-8:30		
8 60 k	cilo	cvcl	es 3	48.6 meters			
TIVL	z	30	869				
WABC	ae	50000	С	San Jose, C. R. (New York, N. Y.	E-7:30-1:00; 7:00	0-10:00	
WHB XETH	ae ak	500 100	D				
ALIII	ак	100		Puebla, Pue. C-	8:30-11:00; 1:00-3	:00; 6:30-11:00	
870 k	tilo	cvcle	-s 3	44.6 meters	L		
CMCF	O	250					
CMX	ae	1000	873 875	Havana, Cuba. E Havana, Cuba. E Chicago, Ill. C-(-5:00-8:00; 9:00- $-Noon-2:00 \cdot 8:00$	·11:00 0_9:00	
WENR WLS	ak ae	50000 50000	Na Na	Chicago, Ill. C-((W9XF)	0-9.00	
1123	ae	30000	Na	Chicago, Ill. C	5:30-9:15; 10:45-2:	30;6:00-7:30	
880 k	ilo	cvcle	es 3	40.7 meters	1		
CJCB	ak	50	F	Sydney N.S. A_	-10:00 11:00; noor	2.00. 5.00.10	
CRCO	ak	1000	F	Ottawa, Ont. E- Greeley, Colo. M- Oakland, Calif. P	Noon-1:30; 5:30-	11:30	0
KFKA KLX	ak ae	500 1000	2 (1)	Greeley, Colo. M-	6:00-7:30; 9:00-2	:30; 4:30-6; 8-n	nid.
KPOF WCOC	ae	500	2	Denver, Colo. M- Meridian Miss (-7:30-9:00; 2:30-4	:00: 6:00-8:00	
WGBI	ae ae	500 250	(1)	Meridian Miss. C	C-7:30-2:00 5:00	-10:30	
WQAN WSUI	ae	250	ĩ	Meridian .Miss. C Scranton, Pa. E Scranton, Pa. E Iowa City. Iowa.	-9:00-9:30: 12:30-1	1:30; 5:30-8:00 1:30: 4:30-5:30	8-11:00
YV2BC	ae z	500 100	882	Iowa City, Iowa. (Caracas, Venz. L	C—9.00-10:00; 11.0	0-12:30; 2:00-4	:00; 6:00-10:00
	-			Caracas, venz.			
890 k	ilo	cycle	es 30	36.9 meters		1	
KARK	ak	250		Little Rock, Ark.	$C = 7.00 - 2.30 \cdot 4.3$	0.9.00	
KFNF KSEI	ak ck	500 250	2(1)	Shenandoah, lowa	• C-5:00-10:00	11:00-5:00; 6:00	-10:00
KUSD	ае	500	(.5) 2	Vermillion & D	M-7:50-11:00		
WGST WILL	aeh	250	C (I)	Atlanta, Ga. C-7 Urbana, Ill. C-10	:00-mid		
WJAR	ak ae	250 500	2 (.1) R	Urbana, III. C1(00-12:15; 5:00-6:	:00	
WMMN	ae	250	(.5)	Providence, R. I. Fairmont, W. Va.	$E = 7:00 - m_{10}$		
XETU	z	100	· • • · ·	Pachuca, Hdo.			
900 k	iloo	cvcle	s 33	3.1 meters		· · · · · · · · · · · · · · · · · · ·	
KGBU	ak	500		Ketchikan, Alaska.	<u> </u>		
KHJ VOWR	ae	1000	CT	Los Angeles Calif	D 7.00 1.00		
WBEN	ak ae	500 1000	S R	St. John's, Nfld. L	-Silent		
WJAX WKY	aeh	1000	N	St. John's, Nfld. L Buffalo, N. Y. E– Jacksonville, Fla.	E = 7:00-12:30		
WLBL	ak ae	1000 2500	N D	Oklahoma City, Ok Stevens Point, Wis.	la. C-6:45-mid	•	
			-		C−0.00-sunset		
910 ki	loc	ycle	s 32	9.6 meters			
СКҮ	ak	5000	F	Winnipeg, Man. C	-8:30-1:30: 4:00-	11:00	
					, 1.00		
				[64]			

with Tuesday's Time on the Att	
CMCDah500915Havana, Cuba.E-Noon-9:00CMJFz200Camaguey, Cuba ECRCMck5000FMontreal, Que.ETICRz75911San Jose, C. R.C-6:30-10:00XEWak5000Mexico City, D. F.C	
920 kilocycles 325.9 meters	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
930 kilocycles 322.4 meters	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	кс үз. 990 DIAL
940 kilocycles 319.0 meters	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
950 kilocycles 315.6 meters	1
KFWB ak 1000 Hollywood, Calif. P7:30-12:30 KGHL ak 1000 NJ (2.5) Billings, Mont. M8:00-11:00 KMBC ak 1000 C Kansas City, Mo. C6:00-mid. VOGY ak 75 St. John's, Nfld. L10:30-11:30; 1:00-2:00; 6:15-8:00 WRC ae 500 R Washington, D. C. E6:30-1:00	CUT O
960 kilocycles 312.3 meters	
CMBD z 250 965 Havana, Cuba. E6:00-11:00 CMCW ak 150 965 Havana, Cuba. E1:00-3:00, noon-6:00 CMJL z 50 Camaguey, Cuba. E1:00-3:00, noon-6:00 CRCT ak 5000 NF Toronto, Ont. E6:45-mid. (VE9GW) XEAW ak 10000 965 Reynosa, Tams. C5:00-1:00 YV1BC ak 5000 Caracas, Venz. L-11:00-1:30; 5:30-10:15	OUT ON DOTTED LINES
970 kilocycles 309.1 meters	
$\begin{array}{llllllllllllllllllllllllllllllllllll$	VES
980 kilocycles 303.9 meters	1
KDKAak50000BPittsburgh, Pa.E-7:00-1:00(W8XK)XEABak800Tijuana, B. C.P-9:00-mid.XEFEz100985Nuevo Laredo, Tams.C	
990 kilocycles 302.8 meters	i
TITV z 7.5 999 San Jose, C. R. C3:00-5:00; 7:00-11:00 WBZ ak 50000 BSy Boston, Mass. E7:00-100. (W1XAZ) WBZA ak 1000 BSy Springfield, Mass. E7:00-1:00 WJBM z 500 D Tupelo, Miss. C	
[65]	

XEAF XEK	z ak	750 100	¥	Nogales, Son. Mexico City, D. F. C-11:00-4:00; 6:00-2:00
1000	kil	ocyc	les	299.8 meters
CMBZ KFVD WHO-	ak ae	150 250	1005 Dn	Havana, Cuba. E-11-1; 4-6; 8:30-11 Los Angeles, Calif. P-6:30-sunset; 10:00-mid.
₩OC WORK XEA	ak ak ak	1000 250	R D	Des Moines, Iowa. C—7:00-mid. York, Pa. E—8:00-6:45 Guadalajara, Jal. C—8:30-9:00; 6:00-11:00
XEC XEFJ XEFS XEL	z ak ak ak	50 100 40 40		Toluca, D. F., C Monterrey, N. L. C—11:00-2:00; 7:00-10:00 Queretaro, Qro. C—8:00-10:00 Saltillo, Coah. C—10:30-1:00; 6:00-9:00
1010	kil	ocyc	les	296.9 meters
CHML	aei	50	м	
CHWC CKCD	ae ak	500 100	3F	Hamilton, Ont. E-8:00-11:00 Regina, Sask. M-7-9:10-11: noon-1: 3:30-6:30 Vancouver, B. C. P-7:30-11:30
CKCK CKCO	ak z	$\frac{500}{100}$	3F	Regina, Sask. M—9-10; 11-noon; 1-3:30; 5:30-11 Ottawa, Ont. E
CKIC CKWX	ak ael	50	L	Wolfville, N. S. ANoon-1:00; 6:00-7:00 Vancouver, B. C. P7-7:30
СМЈО	ak	50	· · · · · ·	Ciego de Avila, Cuba, E-9:00-1:00; 6:00-10:00
KGGF KQW	ak ae	500 500	2 (1)	Ciego de Avila, Cuba, $E = 9:00-1:00; 6:00-10:00$ Coffeyville, Kans, $C = 7:30-2; 3:45-7:15$ San Jose, Calif. $P = 7:00-8:00; 9:00-3:00; 4:30-10:00$ Cartago, C. R.
TIĞA WHN	z ac	30 250	1014 1	Cartago, C. R. New York, N. Y. $E-1:30-5:30$
WIS WNAD	ae ae	500 500	N (1)	Columbia, S. C. E-8 (III-mid.
WPAP	ae	250	ĩ	Norman, Okla, C — 7:15-9:15 New York, N. Y. B—11-1 New York, N. Y. B—Silent
WQAO WRNY	ae ae	250 250	1 1	New York, N. Y. E —Silent New York, N. Y. E —9:30-1:30; 5:30-11
XEJ XEU	ak ak	$ 500 \\ 100 $	1015	Juarez, Chih. C Veracruz, Ver. C—7:00-9:00; 10:00-2:00; 5:00-11:00
	kil	ocyc	les	293.9 meters
KYW WRAX XES	ae ak dk	10000 250 2 50	NY DZ	Chicago, Ill. C-8:00-1:00 Philadelphia, Pa. E-7:00-7:00 Tampico, Tams. E-10:00-2:30; 5:00-10:00
1030	kil	ocyc	les	291.1 meters
CFCN CFNB	ak ae	10000 500	F FE	Calgary, Alta. M-7:30-1:30; 5:00-11:00 Fredericton, N. B. A-8:30-9:30: 12:30-2:00; 7:30-10:00
CKNC	ak	100	F 1037	Ioronto, Ont. E-8-11. (VE9CB)
CMHI CMKC	ak z	250 150	1037	Santa Clara, Cuba. E—11:00-noon; 8:00-9:00 Santiago, Cuba. E
XEB	ak	10000		Mexico City, D. F. C-9:30-10:00
1040			es	288.3 meters
CMGH KRLD	ak ae	$15 \\ 10000$	ic	Matanzas, Cuba. E-2:00-3:00; 5:00-6:00; 7:30-8:30 Dallas, Texas. C
KTHS WESG	ae ak	10000 1000	DN D	Hot Springs, Ark. C Elmira, N. Y. E—8:00-6:00
WKAR	ak	1000	Ď	East Lansing, Mich. E
1050	kil	ocycl	es	285.5 meters
CHNS CMBG	ae z	500 225	FL 1052a	Halifax, N. S. A-8:00-1:30; 6:00-mid. Havana, Cuba. E
CMCB CMJG	ak	150	1052a	navana. Cuba. E
KFBI	z ak	50 5000	Dn	Camaguey, Cuba E Abilene, Kans. C—6:00-sunset Hollywood, Calif. P6:45-11:00
KNX XEFC	aķ ak	25000 100		Hollywood, Calif. P6:45-11:00 Merida, Yuc. C7-10
1060	kile	ocycl	es	282.8 meters
KWJJ WBAL	ak	500		Portland, Ore. P-6:00-8:00: 9:00-2:00
WJAG	ae ak	$10000 \\ 1000$	1B D	Baltimore, Md. E-3-mid. Norfolk, Neb. C-6:45-sunset
WTIC	ak	50000	1R	Hartford, Conn. E-7:30-3

	With Tuesday's Time on the Air	
1070 kilocycles	280.2 meters	I
KJBS ac 100 D WCAZ ac 50 D WDZ ak 100 D WTAM ck 50000 R	San Francisco, Calif. P—12:01-sunset Carthage, III. C Tuscoola, III. C—8:00-4:00 Cleveland, Ohio. E—6:30-1:00	
1080 kilocycles	277.6 meters]
VOKW z 30 1085 WBT ac 50000 CU WCBD ac 5000 1Dn WMBI ac 5000 1Dn XEFG ak 500 1085	St. John's, Nfid. L—Noon-2:00 Charlottë, N. C. E→7:00-mid. Zion, III. C→7:30-10:30; 1:30-sunset Chicago, III. C→7:00-7:30; 10:30-1:30; 3:00-4:00 Mexico City, D. F. C→10:30-4:00; 7:00-mid.	
1090 kilocycles	275.1 meters]
KMOX ak 50000 C XEAI z 100	St. Louis, Mo. C—6:30-12:30 Mexico City, D. F. (Ail mail returned)	
1100 kilocycles	272.6 meters]
CMCU ak 500 CRCV ak 1000 F KGDM ak 250 D IIRCA ak 500 WLWL ac 5000 1 WPG ak 5000 1C XEWW z 250	Havana, Cuba. E-Noon-6 Vancouver, B. C. P-Noon-1; 5:30-11 Stockton, Calif. P-6-sunset	-
1110 kilocycles	270.1 meters	1
KSOO ae 1000 Dn (WRVA ae 5000 N XENT ak 150000 1115	 2.5) Sioux Falls, S. D. C—6:00-6:30 Richmond, Va. E—7:00-mid. Nuevo Laredo, Tams. C—6:00-8:00; 10:00-2:00; 5:00-10:00 	² ксуз. 1160
1120 kilocycles	267.7 meters] DIAL
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Montreal, Que. $E=9:00$ -mid. Hamilton, Ont. $E=7:45-11:30$	
1130 kilocycles	265.3 meters] g
KSL ac 50000 C WJJD ac 20000 Dn WOV ag 1000 D XEH ak 250 1132	Salt Lake City, Utah. M-6:45-mid. Chicago, Ill. C-6:30-10:00 New York, N. Y. E-8:00-6:00 Monterrey, N. L. C-8:00-1:30; 5:00-10:00	0Z
1140 kilocycles	263.0 meters	
CMBJ z 500 CMBW ak 600 KVOO ae 25000 1N WAPI ae 5000 1N	Havana, Cuba. E-8-11;7-11 Havana, Cuba. E-6-11 Tulsa, Okla. C-6:30.9 Birmingham, Ala. C-6:00-sunset; 9:00-mid.	DOTTED LINES
1150 kilocycles	260.7 meters	
СМЈН ak 50 WHAM ae 50000 В XED ак 500 1155	Ciego de Avila, Cuba. E—8:00-8:30; 10:00-3:00; 5:30-10:30 Rochester, N. Y. E—8:00-mid. Guadalajara, Jal. C—Noon-3:30; 7:00-mid.	
1160 kilocycles	258.5 meters]
WOWO at 10000 1C WWVA at 5000 1C	Fort Wayne, Ind. C—8:30-5:15; 7:30-10 Wheeling, W. Va. E—6:30-8:30; 10-mid.	
	[67]	

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Tuesday's Time on the Air

				with ruceau s rune on the run
1170	kil	ocvel	les	256.3 meters
-				
CMJE WCAU	z ae	50 50000	с	Camaguey, Cuba. E Philadelphia, Pa. E-8:00-1:00 (W3XAU)
	40			
1180	1-11	oovol	00	254.1 meters
CMBN CMCJ	ak ak	150 500	1185	Havana, Cuba. E Havana, Cuba. E-Noon-2: 4-6: 7-10
KEX	ak	5000	2N	Portland, Ore. $P-7-5:30$; 8-mid.
KOB	ae	10000	2	Albuquerque, N. M. M-Noon-1:00; 5:00-9:00
WDGY	ak	1000	Dn	Minneapolis, Minn C-6:30-8:15
WINS WMAZ	ae ak	500 500		Havana, Cuba. E Havana, Cuba. E—Noon-2; 4–6; 7-10 Portland, Ore. P—7-5:30; 8-mid. Albuquerque, N. M. M—Noon-1:00; 5:00-9:00 Minneapolis, Minn. C— $0:30-8:15$ New York, N. Y. E— $0:00-7:00$ Macon, Ga. E—7:30-3:00; 5:00-8:15
		••••		
1190	kild	ocvel	les	252.0 meters
HIJ	z	15	1195	Santo Domingo, D. R. E-12:30-2:30; 6:30-8:30
VE9EK	ãk	10	1195	Montmagny, Que. E
VONF	ak	400	1195	Montmagny, Que. E St. John's, Nfd. L-Noon-2:00; 6:00-9:00
WOAI	ae	50000	N	San Antonio, Texas. C—6:30-11:30 Huntington, W. Va. E—8:00-8:00
WSAZ	ak	1000		Huntington, w. va. $E = 8:00-8:00$
1200	1.11	oovol	00	249.9 meters
CHAB CJAT	ak ak	100 50	F	Moose Jaw, Sask. M—5:30-7 Trail, B. C. P—9:30-9
CKTB	ак ас	100	G	St. Catharines, Ont. E
CMGB	z	30	1205	Matanzas, Cuba. E
CMHW	z.	100		Cienfuegas, Cube E
KBTM	ak	100	DY CT	Jonesboro, Ark. C—7:30-1:30; 2:30-5:30 Bakersfield, Calif. P—7:00-mid.
KERN KFJB	ak ak	100 100	(.25)	Marshalltown, Iowa. $C = 6:00-9:00;$ noon-3:00; 6:00-9:00
KFXD	ae	100		Nampa Idaho $M_{-7,00,9,00}$
KFXJ	ak	100		Grand Junction, Colo. M
KGDE	ak ak	100 100	(.25)	Grand Junction, Colo. M Grand Junction, Colo. M Fergus Falls, Minn. C-7:00-9:00 Yuma, Colo. M-11:30-1:30; 7:15-8:45 Los Angeles, Calif. P-24 hours Little Rock, Ark. C-7:00-1:00; 4:00-10:00 Missoula, Mont. M8:00-8:30
KGEK KGFJ	ак	100		Los Angeles, Calif. $P-24$ hours
KGHI	ak	100	(.25)	Little Rock, Ark. C-7:00-1:00; 4:00-10:00
KGVO	ak	100	$\mathbf{x} \cdots \mathbf{x}$	Missoula, Mont. M-8:00-8:30
KMLB KSUN	ak se	100 100	D	
KVOS	ak	100		Lowell, Ariz. M—Sunrise-sunset Bellingham, Wash. P—7:00-10:00 Stockton Calli. P—7:00-mid
KWG	ae	100	CT	
WABI	ak	100		Bangor, Maine. E-9:00-2:00; 6:00-10:00
WBBX WBBZ	ak ak	$100 \\ 100$	1	New Orleans, La. C-Noon-5:00; $8:00-11:00$ Ponca City, Okla. C-6:30-9
WBHS	z	100	4	Hunteville Ale C
WCAT	ak	100	D	Rapid City, S. D. C-12:30-1:30
WCAX	ak	100		Burlington, Vt. E-Noon-1
WCLO WFAM	ak ak	100 100	80	South Bend. Ind. $C = -6.30$ -mid.
WFBC	ak	100	8C 4 (.25	Rapid City, S. D. C12:30-1:30 Burlington, Vt. ENoon-1 Janesville, Wis. C7:30-2:00; 5:00-8:30 South Bend, Ind. C6:30-mid. Greenville, S. C. E7:30-2:30; 5:30-10:30 Cincinnati, Ohio. E7:00-11:30 Contron Ohio E7:00:000
WFBE	ak	100	(.25)	Cincinnati, Ohio. E-7:00-11:30
WHBC	ak	100	2	Canton, One. D=7.00-7.00, noon-3.00, 0.00-7.00
WHBY WIBX	ak ae	100 100	(.3)	Utice N.Y. E-8:00-11:00
WIL	ak	100	5 (.25) St. Louis, Mo. C—7:00-mid.
W JBC W JBL	ae	100	6) St. Louis, Mo. C7:00-mid. LaSalle, III. C-8-9; 10-12:30, 3-6:30 Decatur, III. C-6:30-8; 9:10; 12:30-3; 6:30-10
WJBL	ae	100	6	Decatur, III. C $-6:30-8; 9-10; 12:30-3; 6:30-10$
W JBW WKBO	ak ak	$100 \\ 100$	1 3	Harrisburg, Pa. $E = 7:00-10:00: 2:00-5:00: 7:00-11:00$
WKJC	ae	100	3	Lancaster, Pa. E-11:00-3:00; 6:00-9:00
WLAP	ae	100	(.25)	New Orleans, La. $C = 8:00-ncon; 5:00-8:00$ Harrisburg, Pa. $E = 7:00-10:00; 2:00-5:00; 7:00-11:00$ Lancaster, Pa. $E = 1:00-3:00; 6:00-9:00$ Louisville, Ky. $C = 7:30-11:30$ Silvarshavan, Pa. $E = 0:00, 9:00-9:00$
WNBO WNBW	ae z	100 10	2 (.1)	
WPHR	z ak	100	(.1)	Carbondale, Pa. E Petersburg, Va. E- $8:00-5:00; 6:00-9:00$ Columbus, Ga. C- $7:00-11:00$
WRBL	z	100		Petersburg, Va. $E = 8:00-5:00; 6:00-9:00$ Columbus, Ga. $C = 7:00-11:00$
WWAE	ae	100	8	Hammond, Ind. $U = 7-830$; 11-1; 4-5; 6-mid.
YV3BC 10-AK	ak ak	1000 15		Caracas, Venz. L11:00-2:00; 5:00-10:30 Stratford, Ont. E-Noon-1:00; 5:30-7:00
10-BP	ak	15		Wingham, Ont. E-Noon-1
10-BQ	ak	15		Brantford, Ont. E-11-8 Canora, Sask. C
10-BU	z	15	• • • • •	Canora, Sask. C
1010	4 + 4			

1210 kilocycles 247.8 meters

CFBO	z	100	F	St. Joł
CHNC	ak	100	PF	New C
CKBI	ak	100		Prince

2

сксн	z	100		Hull, Que. E Cobalt, Ont. E	
CKMC	ak	50	F		
CKOV KASA	ak ak	50 100	F	Kelowna, B. C. P Elk City, Okla. $C = -6:30-1:30; 5:00-7:00$ Elk City, Okla. $C = -8:00-2:15:6:00-8:00$	
KDLR	ak	100		Elk City, Okla. $C = 0.00130$, 2.15 ; $6:00-8:00$ Devils Lake, N. D. $C = 8:00-2:15$; $6:00-8:00$	
KFJI	ak	100		Klamath Falls, Ore. P-8:30-9:00	
KFOR	ak	100	(.25)	Lincoln, Neb. $C_{7,00-10:00}$	
KFPW	ak	$\begin{array}{c} 100 \\ 100 \end{array}$	6	Devils Lake, N. D. \tilde{C} = 8:00-2:15; 6:00-8:00 Klamath Falls, Ore. P=8:30-9:00 Lincoln, Neb. C=7:00-10:00 Fort Smith, Ark. C=7:00-2:00; 5:00-10:00 Cape Girardeau, Mo. C=9-noon; 4-7:30; 9-mid. San Bernardino, Calif. P=6-mid. Watertown, S. D. C=7:00-3:00; 5:00-9:00 Olympia, Wash. P=7-7 Eureka, Calif. P=7:45-sunset Pasadena, Calif. P=Silent	
KFVS KFXM	ae ak	100	9	San Bernardino, Calif. P-6-mid.	
KGCR	ak	100		Watertown, S. D. C-7:00-3:00; 5:00-9:00	
KGCR KGY	ak	100		Olympia, Wash. P-7-7	
KIEM	ak	100	9	Pasadena, Calif. P-Silent	
KPPC KWEA	ak z	50 100		Shreveport, La. C	
ŔŴĔŶ	z	100	.	Hilo, Hawaii. L	
WALR	ae	100			
WBAX	ae	100	1	Zanesville, Ohio. E Wilkes Barre, Pa. E Richmond Va. E-Silent Springfield, III. C-11:15-3:00; 6:45-9:00 Chicago III. C-11:00-2:00: 5:00-7:00 Harrisburg, III. C-6-9; noon-4; 7:30-9 Chicago, III. C-8:30-10:00: $3:30-5$; 7:-8:; 10:-11:; mid2:00 White Plains N.Y. E-9-11: 9-mid.	
WBBL	ak	$\begin{array}{c}100\\100\end{array}$	7S 2	Springfield, III. C-11:15-3:00; 6:45-9:00	
WCBS WCRW	ak ae	100	Ĩ.	Chicago .III. C-11:00-2:00:5:00-7:00	
WEBQ	ae	100	6	Harrisburg, III. $C = -6-9$; noon-4; 7:30-9	
WEDC	ae	100	4	Chicago, III. C $-8:30-10:001:3:30-3:7:-8:7:10:-11:7,$ mid2:00	
WFAS	ak	100	3 3		
WGBB	ae ae	100 100	(.25)	Freeport, N. Y. $E-7-9$ Mississippi City, Miss. $C-9:00-1:00; 7:00-9:00$ Chester, N. Y. E	
WGCM WGNY	ak	100		Chester, N. Y. E	
WHBF	ak	100			
WHBU	ah	100		Anderson, Ind. C-7-10 Poynette, Wis. C Red Borlt N L E-4-7	
WIBU WJBI	a ak	100 100	3		
WJBY	ak	100		Gadsden, Ala. $C = 9:00-9:00$	
ŴĴBY WJEJ WJW	ah	100	D	Gadsden, Ala. $C = 9.00-9.00$ Hagerstown, Md. $E = 7.00-1.00$; 4:00-7:45 Akron, Ohio, $E = 9.00-11:30$	
WJW	ak	100	Ŷ	Akron, Ohio. $E=9.00-11.50$ Greenville, Miss. $C=7:00-7:00$	
WKFI WKOK	ak ak	$100 \\ 100$	1P	Sunbury, Pa. E	
WMBG	ak	100	7Č	Bishmond Ve E-700-mid.	
WOCL	ak	50		Jamestown, N. Y. E—Noon-mid. Manitowoc Wis. C	
WOMT WPRO	ae ak	$100 \\ 100$		Manitowoc. Wis. C Providence, R. I. E-9:00-2:00; 4:00-11:15	
				Thomasville, Ga. E-0.00-9.00	
WODX WSBC	ae ae	100 100	4	Thomasville, Ga. $E_{6:00-8:30}$; 10:00-11:00; 2:00-3:30; 8:00-10:00; Chicago, Ill. $C_{6:00-8:30}$; 10:00-11:00; 2:00-3:30; 8:00-10:00;	
WQDX WSBC	ae ae	$\begin{array}{c} 100\\ 100 \end{array}$	4	Chicago, Ill. C—6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00;	кс ч я.
WODX WSBC WSEN	ae ae ak	100 100 100	4	Chicago, Ill. C—6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00;	
WODX WSBC WSEN WSIX	ae ae ak ak	100 100 100 100	4	Thomasville, Ga. $E = 3.00-3.00$ Chicago, III. $C = 6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00;$ 11:00-mid. Columbus, Ohio. $E = 8:00-mid.$ Springfield, Tenn. $C = 6:00-4:00; 6:00-9:00$ Charlotte, N. C. E	кс че . 1240
WODX WSBC WSEN WSIX WSOC WTAX	ae ae ak ak ae ae	100 100 100 100 100 100	4	 Thomasville, Ga. E=-5.00-3.00 Chicago, III. C=-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E=-8:00-mid. Springfield, Tenn. C=-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C 	1240
WODX WSBC WSEN WSIX WSOC	ae ae ak ak ae	100 100 100 100 100	4 N	Thomasville, Ga. $E = 3.00-3.00$ Chicago, III. $C = 6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00;$ 11:00-mid. Columbus, Ohio. $E = 8:00-mid.$ Springfield, Tenn. $C = 6:00-4:00; 6:00-9:00$ Charlotte, N. C. E	
W QDX WSBC WSEN WSIX WSOC WTAX XETZ	ae ak ak ae ae z	100 100 100 100 100 100 500	4 N 2	Inomasville, Ga. E=0.00-9.00 Chicago, III. C=6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E=8:00-mid. Springfield, Tenn. C=6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C	1240
WODX WSBC WSEN WSIX WSOC WTAX	ae ak ak ae ae z	100 100 100 100 100 100 500	4 N 2	Thomasville, Ga. E=-0.00-3.00 Chicago, Ill. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. Columbus, Ohio. E=-8:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, Ill. C Mexico City, D. F. C 245.8 meters	1240
wodx wsbc wsen wsix wsoc wtax xetz 1220 cmhk	ae ak ak ae z kilo ak	100 100 100 100 100 500 DCYC 50	4 2 les 1225	Thomasville, Ga. E-200-3:30; 8:00-10:00; Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E-8:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters	1240
wodx wsbc wsen wsix wsoc wtax xetz 1220 CMHK kfku	ae ak ak ae z kilo ak ae	100 100 100 100 100 500 DCYC 50 500	4 N 2 les 1225 a	Thomasville, Ga. E-0.04:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E-8:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, Ill. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E-10:00-11:30 Lawrence, Kans. C-2:30-3:00; 6:00-6:15 Couble, Work, D. S. Stent	1240
wodx wsbc wsex wsix wsoc wtax xetz 1220 CMHK KFKU KTW	ae ak ak ae z kilo ak ae ak	100 100 100 100 100 500 DCYC 50 500 1000	4 N 2 1225 a \$2	Thomasville, Ga. E=0.08/3.05 Chicago, Ill. C=6:00.8(30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E=8:00-mid. Springfield, Tenn. C=6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, Ill. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E=-10:00-11:30 Lawrence, Kans. C=2:30-3:00; 6:00-6:15 Seattle, Wash. P=Silent Pullman, Wash. P=-Silent Pullman, Wash. P=0:4:58: 10:30-9:30	1240
wodx wsbc wsen wsix wsoc wtax xetz 1220 CMHK kfku	ae ak ak ae z kilo ak ae	100 100 100 100 100 500 DCYC 50 500	4 N 2 les 1225 a	Thomasville, Ga. E=0.08/3.05 Chicago, Ill. C=6:00.8(30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E=8:00-mid. Springfield, Tenn. C=6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, Ill. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E=-10:00-11:30 Lawrence, Kans. C=2:30-3:00; 6:00-6:15 Seattle, Wash. P=Silent Pullman, Wash. P=-Silent Pullman, Wash. P=0:4:58: 10:30-9:30	1240
woddx wsbc wsbc wslx wsoc wtax xetz 1220 CMHK KFKU KWSC wcab	ae ak ak ae ae z kilo ak ae ak ae ak ae	100 100 100 100 500 500 500 500 1000 10	4 2 les 1225 a S2 2 (2) D R	Thomasville, Ga. $E = 0.00-3.00$ Chicago, III. C=6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E=8:00-mid. Springfield, Tenn. C=6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E=-10:00-11:30 Lawrence, Kans. C=2:30-3:00; 6:00-6:15 Seattle, Wash. P=Silent Pullman, Wash. P=Silent Pullman, Wash. P=0:45-8; 10:30-9:30 Canton, N. Y. E=-12:30-1:30 Pitrsburgh, Pa. E=-6:45-1:00	1240 DIAL
wodz wsbc wsbc wsbc wsoc wtax xetz 1220 CMHK KFKU KTW KWSC WCAD wCAE WDAE	ae ak ak ae ae z kilc ak ae ak ae ak ae ak ae ak	100 100 100 100 500 500 500 1000 500 1000 500 1000 1000	4 2 les 1225 a S2 2 (2) D R CW	Thomasville, Ga. $E = 0.00-3.00$ Chicago, III. C=6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. $E = 8:00$ -mid. Springfield, Tenn. C=6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. $E = -10:00-11:30$ Lawrence, Kans. C=2:30-3:00; 6:00-6:15 Seattle, Wash. P=0:45-8; 10:30-9:30 Canton, N. Y. $E = -12:30-1:30$ Pittsburgh, Pa. $E = -6:45-1:00$ Tampa, Fla. $E = 8:00$ -mid.	1240 DIAL
woddx wsbc wsbc wslx wsoc wtax xetz 1220 CMHK KFKU KWSC wcab	ae ak ak ae ae z kilo ak ae ak ae ak ae	100 100 100 100 500 500 500 500 1000 10	4 2 les 1225 a S2 2 (2) D R	Thomasville, Ga. $E = 0.00-3.00$ Chicago, III. C=6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E=8:00-mid. Springfield, Tenn. C=6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E=-10:00-11:30 Lawrence, Kans. C=2:30-3:00; 6:00-6:15 Seattle, Wash. P=Silent Pullman, Wash. P=Silent Pullman, Wash. P=0:45-8; 10:30-9:30 Canton, N. Y. E=-12:30-1:30 Pitrsburgh, Pa. E=-6:45-1:00	1240 DIAL
wodz wsbc wsbc wsix wsoc wsoc wtax xetz 1220 CMHK KKFKU KTW KWSC wcab wcab wcab wren	ae ak ak ae z kilo ak ae ak ae ak ae ak ae ak ae ak	100 100 100 100 500 500 1000 1000 1000	4 N 2 les 1225 a S2 2 (2) D R CW Ba	Thomasville, Ga. $E = 0.00-3.00$ Chicago, III. C=6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. $E = 8:00$ -mid. Springfield, Tenn. C=6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. $E = -10:00-11:30$ Lawrence, Kans. C=2:30-3:00; 6:00-6:15 Seattle, Wash. P=0:45-8; 10:30-9:30 Canton, N. Y. $E = -12:30-1:30$ Pittsburgh, Pa. $E = -6:45-1:00$ Tampa, Fla. $E = 8:00$ -mid.	1240 DIAL
wodz wsbc wsbc wsbc wtax xetz 1220 CMHK KKVSC WCAD WCAE WDAE WREN 1230	ae ak ak ae z kilo ak ak ae ak ak ae ak ak ak ak ak ak ak ak ak ak ak ak ak	100 100 100 100 500 500 500 1000 1000 1	4 2 les 1225 a S2 2 (2) R CW Ba	Thomasville, Ga. E=0.00-3.00 Chicago, III. C=6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E=8:00-mid. Springfield, Tenn. C=6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E=-10:00-11:30 Lawrence, Kans. C=2:30-3:00; 6:00-6:15 Seattle, Wash. P=Silent Pullman, Wash. P=0:45-8; 10:30-9:30 Canton, N. Y. E=-12:30-1:30 Pittsburgh, Pa. E=6:45-1:00 Tampa, Fla. E=8:00-mid. Lawrence, Kas. C=7:00-mid. 243.8 meters	1240 DIAL
wodzx wsbc wsbc wsbc wsbc wsbc wsbc wsbc wsbc	ae ak ak ae z kilc ak ae ak ae ak ae ak kilc z	100 100 100 100 100 500 500 1000 1000 1	4 N 2 (es 1225 a 52 2 (2) D R C W Ba F	Thomasville, Ga. Encoders.00 Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E-8:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E-10:00-11:30 Lawrence, Kans. C-2:30-3:00; 6:00-6:15 Seattle, Wash. P-Silent Pullman, Wash. P-6:45-8: 10:30-9:30 Canton, N. Y. E6:45-1:00 Tampa, Fla. E6:45-1:00 Tampa, Fla. E6:45-1:00 Saskatoon, Sask. C Hayana, Cuba. E	1240 DIAL
wodz wsbc wsbc wsbc wsbc wtst wsoc wtax xetz 1220 CMHK KFKU KTW kWsc wcad wcab wcab wcab wcab wcab wcab wcab wcab	ae ak ak ae z kilo ak ak ae ak ak ae ak ak ak ak ak ak ak ak ak ak ak ak ak	100 100 100 100 500 500 500 1000 1000 1	4 N 2 1225 a S2 2 (2) D R CW Ba 1es F 2 2	Thomasville, Ga. Encoder, 300; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters	1240 DIAL
wodzx wsbc wsbc wsbc wsbc wsbc wsbc wsbc wsbc	ae ae ak ae z kilo z z ak	100 100 100 100 500 CVC 500 1000 1000 1000 1000 1000 1000 1000	4 N 2 1225 a S2 2 (2) D R C W Ba 125 (.5)	Thomasville, Ga. Encoder, 300; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E=3:00-mid. Springfield, Tenn. C=6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, Ill. C Mexico City, D. F. C 245.8 meters	1240 DIAL
woddx wsbc wsbc wsbc wtax xetz 1220 CMHK Ktwsc wcad wcad wcad wcad wcad wcad wcad kydae wcad kydae kydae kydae kydae	ae ak ak ae z kilo ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ae ak ae ae ae ae ae ae ae ae ae ae ae ae ae	100 100 100 100 500 DCYC 50 500 1000 1000 1000 1000 1000 1000 1	4 N 2 1225 a S 2 2 2 2 2 2 2 2 2 2 2 2 2	Thomasville, Ga. Encoder, 300; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters	1240 DIAL
wodz wsbc wsbc wsbc wsbc wsbc wsbc wsbc wsbc	ae ak ak ae z z z ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ac ac ac ac ac ac ac ac ac ac ac ac ac	100 100 100 100 500 CYC 500 1000 1000 1000 1000 1000 1000 1000	4 N 2 1225 a S2 2 (2) D R C B a S2 2 (2) D R C W B a (.5) N 1C	Thomasville, Ga. Encoders.00 Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E-8:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E-10:00-11:30 Lawrence, Kans. C-2:30-3:00; 6:00-6:15 Seattle, Wash. P-Silent Pullman, Wash. P-6:45-8; 10:30-9:30 Canton, N. Y. E-12:30-1:30 Pittsburgh, Pa. E-6:45-1:00 Tampa, Fla. E-6:45-1:00 Tampa, Fla. E-6:45-1:00 Saskatoon, Sask. C Havana, Cuba. E Havana, Cuba. E Havana, Cuba. E Albuguerque, N. M. M-6:00-ncon; 4:00-8:00 San Francisco, Calif. P-7:30-mid. Indianapolis, Ind. C-7:30-0:0:15; noon-3:00; 5:30-11:30 Boston, Mass. E-6:01-100	1240 DIAL
woddx wsbc wsbc wsbc wtax xetz 1220 CMHK Ktwsc wcad wcad wcad wcad wcad wcad wcad kydae wcad kydae kydae kydae kydae	ae ak ak ae z kilo ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ak ae ae ak ae ae ae ae ae ae ae ae ae ae ae ae ae	100 100 100 100 500 DCYC 50 500 1000 1000 1000 1000 1000 1000 1	4 N 2 1225 a S 2 2 2 2 2 2 2 2 2 2 2 2 2	Thomasville, Ga. Encoder, 300; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E=3:00-mid. Springfield, Tenn. C=6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, Ill. C Mexico City, D. F. C 245.8 meters	1240 DIAL
wodz wsbc wsbc wsbc wsbc wtst wsbc wtst wsbc wtst kwsc wcat wcat wcat wcat wcat wcat wcat wca	ae ae ak ae ac ak ae ae ak ae ae ak ae ae ak ae ac ac ak ae ac ac ac ac ac ac ac ac ac ac ac ac ac	100 100 100 100 500 CYC 500 1000 1000 1000 1000 1000 1000 1000	4 N 2 1225 a S2 2 2 2 2 2 2 2 2 2 2 2 2 2	Thomasville, Ga. Encoders.00 Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E-8:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters	1240 DIAL
wodz wsbc wsbc wsbc wsbc wtst wsoc wtax xetz 1220 CMHK KFKU KTW kWsc wcad wcad wcad wcad wcad wcad wcad wca	ae ae ak ae ac ak ae ae ak ae ae ak ae ae ak ae ac ac ak ae ac ac ac ac ac ac ac ac ac ac ac ac ac	100 100 100 100 500 CYC 500 1000 1000 1000 1000 1000 1000 1000	4 N 2 1225 a S2 2 2 2 2 2 2 2 2 2 2 2 2 2	Thomasville, Ga. Encoders.00 Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E-8:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E-10:00-11:30 Lawrence, Kans. C-2:30-3:00; 6:00-6:15 Seattle, Wash. P-Silent Pullman, Wash. P-6:45-8; 10:30-9:30 Canton, N. Y. E-12:30-1:30 Pittsburgh, Pa. E-6:45-1:00 Tampa, Fla. E-6:45-1:00 Tampa, Fla. E-6:45-1:00 Saskatoon, Sask. C Havana, Cuba. E Havana, Cuba. E Havana, Cuba. E Albuguerque, N. M. M-6:00-ncon; 4:00-8:00 San Francisco, Calif. P-7:30-mid. Indianapolis, Ind. C-7:30-0:0:15; noon-3:00; 5:30-11:30 Boston, Mass. E-6:01-100	1240 DIAL
wodz wsbc wsbc wsbc wsbc wtst wsbc wtst wsbc wtst kwsc wcat wcat wcat wcat wcat wcat wcat wca	ae ae ak ae ac ak ae ae ak ae ae ak ae ae ak ae ac ac ak ae ac ac ac ac ac ac ac ac ac ac ac ac ac	100 100 100 100 100 500 500 1000 1000 1	4 N 2 1225 a S2 2 2 2 2 2 2 2 2 2 2 2 2 2	Thomasville, Ga. Encoders.00 Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E-8:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E-10:00-11:30 Lawrence, Kans. C-2:30-3:00; 6:00-6:15 Seattle, Wash. P-Silent Pullman, Wash. P-6:45-8; 10:30-9:30 Canton, N. Y. E-12:30-1:30 Pittsburgh, Pa. E-6:45-1:00 Tampa, Fla. E-8:00-mid. Lawrence, Kas. C-7:00-mid. 243.8 meters Saskatoon, Sask. C Havana, Cuba. E Havana, Cuba. E Albuguerque, N. M. M-6:00-ncon; 4:00-8:00 San Francisco, Calif. P-7:30-mid. Indianapolis, Ind. C-7:30-0:10:15; noon-3:00; 5:30-11:30 Boston, Mass. E-6:30-1:00 South Bend, Ind. C-6:30-mid. 241.8 meters	1240 DIAL
wodz wsbc wsbc wsbc wsbc wsbc wsbc wsbc wsbc	ae ae ak ae z kii ae ak ae ak ae ak ae ak kii z z ak ae ak kii z z z ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ae ak ae ae ak ae ae ac ak ae ae ac ac ac ac ac ac ac ac ac ac ac ac ac	100 100 100 100 500 DCYC 500 1000 1000 1000 1000 1000 1000 1000	4 N 2 1225 a S2 2 2 2 2 2 2 2 2 2 2 2 2 2	Thomasville, Ga. Encoders.00 Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E-8:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E-10:00-11:30 Lawrence, Kans. C-2:30-3:00; 6:00-6:15 Seattle, Wash. P-Silent Pullman, Wash. P-6:45-8; 10:30-9:30 Canton, N. Y. E-12:30-1:30 Pittsburgh, Pa. E-6:45-1:00 Tampa, Fla. E-8:00-mid. Lawrence, Kas. C-7:00-mid. 243.8 meters Saskatoon, Sask. C Havana, Cuba. E Havana, Cuba. E Albuguerque, N. M. M-6:00-ncon; 4:00-8:00 San Francisco, Calif. P-7:30-mid. Indianapolis, Ind. C-7:30-0:10:15; noon-3:00; 5:30-11:30 Boston, Mass. E-6:30-1:00 South Bend, Ind. C-6:30-mid. 241.8 meters	1240 DIAL
wodz wsbc wsbc wsbc wsbc wsbc wsbc wsbc wsbc	ae ae ak ae ac ak ae ak ac ak ac ac ak ac a ak ac a ak a a a a	100 100 100 100 500 DCYC 500 1000 1000 1000 1000 1000 1000 1000	4 N N 2 1225 a S2 2 (2) D R C W Ba 1225 (2) D R C W Ba 1225 (2) D R C W Ba 1225 (2) D R (.5) N 1C C H 1C	Thomasville, Ga. Encoders.00 Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E-8:00-mid. Springfield, Tenn. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters Cruces, Cuba. E-10:00-11:30 Lawrence, Kans. C-2:30-3:00; 6:00-6:15 Seattle, Wash. P-Silent Pullman, Wash. P-6:45-8; 10:30-9:30 Canton, N. Y. E-12:30-1:30 Pittsburgh, Pa. E-6:45-1:00 Tampa, Fla. E-8:00-mid. Lawrence, Kas. C-7:00-mid. 243.8 meters Saskatoon, Sask. C Havana, Cuba. E Havana, Cuba. E Albuguerque, N. M. M-6:00-ncon; 4:00-8:00 San Francisco, Calif. P-7:30-mid. Indianapolis, Ind. C-7:30-0:10:15; noon-3:00; 5:30-11:30 Boston, Mass. E-6:30-1:00 South Bend, Ind. C-6:30-mid. 241.8 meters	1240 DIAL
wodz wsbc wsbc wsbc wsbc wsbc wsbc wsbc wsbc	ae ae ak ae z kii ae ak ae ak ae ak ae ak kii z z ak ae ak kii z z z ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ak ae ae ac ac ac ac ac ac ac ac ac ac ac ac ac	100 100 100 100 100 500 500 1000 1000 1	4 N 2 1225 a S2 2 2 2 2 2 2 2 2 2 2 2 2 2	Thomasville, Ga. Enc. 00-3.00 Chicago, III. C-6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid. Columbus, Ohio. E-8:00-mid. Springfield, Term. C-6:00-4:00; 6:00-9:00 Charlotte, N. C. E Springfield, III. C Mexico City, D. F. C 245.8 meters	1240 DIAL

[69]

KTFI WKAQ WXYZ	ae ae ak	1000 1000 1000	ĸ	Twin Falls, Idaho. M—6:00-mid. San Juan, P. R. A—12:15-3:15; 6:30-10:00 Detroit, Mich. E—7:30-mid.
1250	kil	ocyc	les	239.9 meters
KFOX WCAL WDSU WGCP WLB WNEW WRHM XEFA	ae ah ak ak ak ak z	1000 1000 1000 1000 1000 1000 1000 500	2 C 1 (2.5) 2 (2.5) 2	Long Beach. Calif. $P-6:00$ -mid. Northfield, Minn. $C-9:45-10:15, 8:00-10:00$ New Orleans, La. $C-7:00-11:45$ Newark, N. J. $E-2:00-5:00; 8:00-10:00$ Minneapolis, Minn. $C-8-9$ Newark, N. J. $E-7:2; 5-8; 10$ -mid. Minneapolis, Minn. $C-6:15-9:45; 10:35-8; 9$ -mid. Mexico City, D. F. C
1260	kil	ocyc	les	238.0 meters
KOIL KRGV KUOA KVOA KWWG WLBW WNBX WTOC XEFI	ak ae ak ak	1000 500 1000 500 500 500 250 500 250 250	B 1 C(1) D C	Council Bluffs, Iowa. C= $6:00-1:00$ Harlingen, Texas. C= $7:00-9:30$, 12:30-3:30; 6:30-9:30 Fayetteville, Ark. C= $7:00-6:30$ Tucson, Ariz. M= $6:00-9:00$: noon-3:00: 6:00-9:00 Brownsville, Tex. C=Silent till April 1st Erie, Pa. E= $8:00-1:00$ Springfield, Vt. E= $7:30$ -sunset Savannah, Ga. E= $7:00-1:00$ Chihuahua, Chih. C= $1:00-3:00; 8:00-10:30$
1270	kil	ocyc	les 🛛	236.1 meters
CMBC CMCP KGCA KOL KVOR KWLC WASH WFBR WJDX WOOD	ae z ak ae ak ae ak ae ak	$150 \\ 150 \\ 100 \\ 1000 \\ 1000 \\ 100 \\ 500 \\ 500 \\ 1000 \\ 500 \\ 500 \\ 1000 \\ 500 \\ 500 \\ 1000 \\ 500 \\$	1 2D CT C 2D Ka R N Ka	Havana, Cuba. E Havana, Cuba. E Decorah, Iowa. C-8:30-9:45; 10:45-11:30; 12:30-2:30 Seattle, Wash. P-6:45-mid. Colorado Springs, Colo. M-7:00-11:00 Decorah, Iowa. C-7:30-8:30; 9:45-10:45; 11:30-12:30; 2:30-3:30 Grand Rapids, Mich. E-7:00-mid. Baltimore, Md. E-7:10-1:00 Jackson, Miss. C-7:00-11:00 Grand Rapids, Mich. E-7:00-mid.
1280	kilo	ocyc	les 🛛	234.2 meters
KFBB WCAM WDOD WIBA WORC WRR WTNJ XEFW	ae ae ae ae ak ak ak ak	1000 500 500 1000 500 500 500 500 500 70	(2.5) 1 C(2.5) N (1) CH C 1	Great Falls, Mont. M-8:00-3:00; 5:00-10:00 Camden, N. Y. $E-2-5$ Asbury Park, N. J. $E-9-1$; 8-mid. Chattanooga, Tenn. $C-7:00-11:00$ Madison, Wis. $C-7:30$ -mid. Worcester, Mass. $E-8:00$ -mid. Dallas, Texas. $C-7:00-11:00$ Trenton, N. J. $E-1:00-2:00; 5:00-8:00$ Tampico, Tams. $E-8:00-10:00; noon-2:00; 5:00-6:00; 7:00-10$
1290	kilo	ocycl	les 2	232.4 meters
CMHL KDYL KLCN KTSA WEBC WJAS WNBZ XEAC XFB	ak ae z ak ae ak z ak z ak z	20 1000 100 1000 1000 1000 50 100 1000 500	NJ D C N (2.5) C (2.5) D 1295 P	Cienfuegos, Cuba. E-10:00-noon; 6:00-9:00 Salt Lake City, Utah. M-6:30-1:00 Blytheville, Ark. C San Antonio, Texas. C-7:00-mid. Superior, Wis. C-7:00-mid. Pittsburgh, Pa. E-7:30-12:30 Saranac Lake, N. Y. E San Luis Potosi, S. L. P. Jalapa, Ver. C-8:00-9:00; 1:00-2:30; 8:00-11:30 San Juan, P. R.
1300 2	kilc	cycl	es 2	30.6 meters
CMKJ HIZ KALE KFAC KFH KFJR WBBR WEVD WFAB WHAZ WIOD WOQ	z z ak ae ak ae ak ae ae ae	20 10 500 1000 500 1000 500 1000 500 1000	3CT C2 3 1 1 1 1 2	Guantanamo, Cuba. E Santo Domingo, D. R. L Portland, Ore. $P-7.00-10:30; 2:30-5:00; 6:00-7:00$ Los Angeles, Calif. $P-7:00-mid$. Wichita, Kans. $C-7-8:30; 9-11; 11:30-2; 3-11$ Portland, Ore. $P-10:30-2:30; 5-6; 7-11$ Brooklyn, N. Y. $E-6:00-7:00, 10:00-noon; 6:00-8:00$ New York, N. Y. $E-5:lent$ New York, N. Y. $E-9:00-10:00; noon-3:00; 9:00-10:00$ Troy, N. Y. $E-Silent$ Miami, Fla. $E-7-15$ -mid. (W4XB) Kansas City, Mo. $C-6-7; 8:35-9:05; 11-11:30; 2-3; 11-mid.$

INDEX BY FREQUENCIES AND DIAL NUMBERS With Tuesday's Time on the Air

				With Tuesday's Time on the Alf	
1310	kilo	ocyc	les 2	228.9 meters	
CFJC	ak	100	FLE	Kamloops, B. C. P-7:30-10:30; noon-2:00; 6:00-7:30 Charlottetown, P. E. I. A-Noon-1:30	
CHCK	ak z	50 100		Kirkland Lake, Ont. E	
CJKL CJLS CKCV	z	100		Yarmouth N.S. A	
KCRJ	ak ak	50 100	D	Quebec, Que. E-Noon-2:00; 6:30-11:00 Jerome, Ariz. M-7:30-9:30; noon-1:00; 4:30-6:00	
KFBK	ak	100	С	Sacramento, Calif. P-7:00-11:00	
KFGQ KFPL	ak ak	$\begin{array}{c} 100 \\ 100 \end{array}$	7	Boone, Iowa. C Dublin, Texas. C—6:30-8:30; 9:00-3:15; 7:00-10:45	
KFPM	ae	15		$\begin{array}{c} \text{Greenville, Texas. } C = 7:45-9:00:1:(0)-2:45; 6:00-9:00\\ \text{Oklahoma City, Okla. } C = 7:45-9:00:1:(0)-2:45; 6:00-9:00\\ \text{Oklahoma City, Okla. } C = 7:00-2:00; 4:30-11:00\\ \text{Oklahoma City, Okla. } C = 7:00:2:00; 4:30-11:00\\ \text{Oklahoma City, Okla. } C = 7:00:2:00; 4:00:10:00\\ \text{Oklahoma City, Okla. } C = 7:00:10:00\\ \text{Oklahoma City, Okla. } C = 7:00:10:00$	
KFXR KFYO	ak ak	$100 \\ 100$	(.25) (.25)	Lubbock, Texas. $C = 7:00-2:00; 4:00-10:00$	
KGBX	ae	100		Springfield, Mo. C Wolf Point, Mont. M—7:30-9:00; 11:30-3:00; 6:00-7:00	
KGCX KGEZ	ak aj	$\begin{array}{c} 100 \\ 100 \end{array}$	(.25)	Wolf Point, Mont. M—7:30-9:00; 11:30-3:00; 6:00-7:00 Kalispell, Mont. M—8:00-9:00 Kearney, Neb. C—7:00-9:00	
KGFW	ak	$\begin{array}{c} 100 \\ 100 \end{array}$		Kearney, Neb. C-7:00-9:00	
KIFH KIT	z ak	100		Juneau, Alaska. L Yakima, Wash. P-7:00-11:00	
KMED	ck	100		Takina, wash. $P = 700-11.00$ Medford, Ore. $P = 8:00 = 8:00$ Shreveport, La. $C = 7:00-1:00; 5:00-8:00$ El Paso, Texas. $M = 7:00-1:30; 3:00-10:00$ Aberdeen Wash. $P = 7:30-10:00$ Laurel, Miss. $C = 7:00-10:00; 11:00-2:00; 4:00-7:00$	
KRMD KTSM	ak ak	100 100	8	El Paso, Texas. M-7:00-1:30; 3:00-10:00	
KXRO	ak	$100 \\ 100$		Aberdeen .Wash. P7:30-10:00 Lourol Miss. C-7:00-10:00: 11:00-7:00: 4:00-7:00	
WAML WBEO	ak ae	100		Marquette, Mich. $C = 9:30-1:15; 5:00-7:00$	
WBOW	ak	100		Latter, Miss. C— $300-1000$, 150-2007, 100-200 Marquette, Mich. C— $9:30-1:15; 5:00-7:00$ Terre Haute, Ind. C— $7:00-11:00$ Wilkes Barre, Pa. E— $8:00-11:30$ Joliet, III. C— $9:30-1:00; 5:00-8:00$	
WBRE WCLS	ak ae	100 100	b	Joliet, Ill. C-9:30-1:00; 5:00-8:00	
WDAH	ck	100	Sa	El Paso, Texas. M—Silent Buffalo, N, Y, E_{-7} , 00 ± 00	
WEBR WEXL	aej ak	$\begin{array}{c} 100 \\ 50 \end{array}$	(.25)	El Paso, Texas, M —Silent Buffalo, N. Y. E—7:00-1:00 Royal Oak, $Mich. E$ —7:30-5:00	
WFBG	ae	$100 \\ 100$	3 K	Altoona, Pa. E-10:30-4:30; 7:00-10:00 Flint, Mich E-7:00-mid	
WFDF WGAL	ak ae	100	5	Lancaster, Pa. $E = -9.30 \cdot 2 - 30; 4:30 - 6:00$ Newport News, Va. $E = -7:00 - 1:00; 5:00 - 11:00$	
WGH	ae	$100 \\ 100$	4	Newport News, Va. E—7:00-1:00: 5:00-11:00 Philadelphia Pa E—9:00-11:00: 1:00-2:00: 8:30-mid.	
WHAT WIAS	ak ak	100	7	Newport News, Va. $E = -7.00 - 1100; 5:00 - 11:00$ Philadelphia, Pa. $E = -9:00 - 11:00; 1:00 - 2:00; 8:30 - mid.$ Ottumwa. Jowa. $C = -7:00 - 11:00$ Johnstown, Pa. $E = -9:00 - 10:30; 4:30 - 7:00$	
WJAC	ae ak	100 100	3 (2.5)		
WKBC WLBC	ak	100	6	Muncie, Ind. C—/:00-10:00	
WMBO WNBH	ak	10 100	(.25)		
WOL	ae ae	100		New Bedford, Mass. E-8:00-2:00; 4:00-10:00 Washington, D. C. E-7:00-mid. Reading, Pa. E-7:00-9:30; 6:00-mid.	
WRAW WROL	ak ak	100 100	5	Reading, Pa. $E \rightarrow 7:00-9:30$; 6:00-mid. Knoxville Tenn. $C \rightarrow 7:00-1:00:4:00-11:00$	
WSAJ	ae	100		Knoxville, Tenn. C7:00-1:00; 4:00-11:00 Grove City, Pa. E7:15-8:15	
WSJŠ WTEL	ak ah	$\begin{array}{c}100\\100\end{array}$	C 4	Winston-Salem, N. C. E-7 43-mid. Philadelphia Pa. E-7 00-9 00: noon-1:00: 5:00-8:30	
WTJS	ak	100	(.25)	Grove City, Pa. $B = 715-815$ Winston-Salem, N. C. $E = 745$ -mid. Philadelphia, Pa. $E = 700-900$; noon-1:00; 5:00-8:30 Jackson, Tenn. $C = 7:00-2:00; 4:00-10:00$ Elkhart, Ind. $C = 6:00-7:30$ Elkhart, Ind. $C = 6:00-7:30$	
WTRC XEFB	ek ak	$\frac{50}{100}$	6 (.1) 1315	Elkhart, Ind. $C = -6:00-7:30$ Monterrey, N. L. $C = -11:00-2:00; 6:00-11:00$	
XEI	ak	250		Monterrey, N. L. C-11:00-2:00; 6:00-11:00 Morelia, Mich. C-2:00-3:30; 9:00-10:00	
1320	kild	ocyc	les 2	227.1 meters	KCYS.
CMCY	ak	500	1325	Havana, Cuba. E	
KGHF KGMB	ak ak	250 250	(.5) C	Havana, Cuba. E Pueblo, Colo. M— $6:30-9:30$ Honolulu, T. H. L— $6:00-11:00$ Idaho Falls, Idaho. M— $6:00-11:00$	13 40
KID	ae	250	(.5) C	Idaho Falls, Idaho. M—6:00-11:00 Akron, Ohio. E—8:00-mid.	DIAL
WADC WSMB	ae ak	$\begin{array}{r}1000\\500\end{array}$	N	New Orleans, La. C-7:00-mid.	DIAL
1330	kilo	ocyc	les 2	225.4 meters	
CMJI	ak	45	1335	Ciego de Avila, Cuba. E San Diego, Calif. P-7:00-1:00 Tacoma, Wash. P-6:45-11:00	r
KGB KMO	agj ak	$1000 \\ 250$	СТ	Tacoma, Wash. $P = -6:45-11:00$	0
KSCJ WDRC	aj	1000	1C(2.5)	Sioux City, Iowa. $C-7:30-11:00$ Hartford, Conn. $E-8:00$ -mid.	0Z
WDRC WSAI	ae ak	$\begin{array}{c} 1000 \\ 1000 \end{array}$	CH R (2.5)	Cincinnati, Ohio. E—8:00-mid.	120
WTAQ	ae	1000	IC	Eau Claire, Wis. C-7:00-8:00	CUT OUT DOTTED LINES
1340				223.7 meters	BS
KFPY KGDY	ak ak	1000 250	с	Spokane, Wash. P—6:45-mid. Huron, S.D.C	is7
KGNO	ak	250		Porta City, Kans. C= $6:30-9:00$ Pensacola, Fla. E= $9:00-10:00$ Portland, Maine. E=(Mail returned) Toledo, Ohio. E= $7:00-1:00$	i Z
WCOA WLEC	ae z	500 250	(.5) C	Portland, Maine. E—(Mail returned)	õ
WSPD	8.0	1000	Ċ	Toledo, Ohio. E-7:00-1:00	1

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Tuesday's Time on the Air

Ŋ,

1350	kilo	cyc]	les 2	22.1 meters			
KIDO	ak	1000	<u>.</u>	Boise, Idaho. M— St. Louis, Mo. C-	-8:00-9:30		
KWK TGW	ak ak	1000 500	в	St. Louis, Mo. C-	-7:00-mid.		
WAWZ	8e	250	i	Guatemala City, G Zarephath, N. J.	E-7.45-8.45.5:0	1:00;6:00-7:00; 0-6:30	9:00-11:00
WBNX WEHC	ae	250	1 D	Zarephath, N. J. 1 New York, N. Y.	E-6:00-7:30; 9:0	0-1:00	
WENC	ae	500	D	Charlottesville, Va.	Е		
1360	kilo	cyc]	les 2	20.4 meters			
CMJP	ak	75		Moron, Cuba. E-	10:00-noon; 8:00	-10:00	
KGER KGIR	ak ak	1000 500	N (1)	Butte Mont M-	P-6:00-mid.		
WCSC	ae	500		Long Beach, Calif. Butte, Mont. M- Charleston, S. C. Syracuse, N. Y. E Chicago, III. C-5	E8:00-10:30; n	00n-2:00; 7:00-	10:00
WFBL WGES	ak ae	1000 500	C (2.5)	Syracuse, N. Y. E		00	
WQBC	ak	500		Chicago, Ill. C—5 Vicksburg, Miss.		:00	
1050	1						
1370	kilo	cycl	les 2	18.8 meters	in the second		
CHPR	z	100		St. John, N. B. A			
CMCN CMCR	z ak	250 150	1375 1375	Havana, Cuba. E	N		
CMGE	Z	30	1375	Havana, Cuba. E- Cardenas, Cuba. I	-ixoon-1:00; 4:0	10-6:00; 8:00-9:t	0
KCRC	ak	100	2(.25)	Enid Okla, C-61	30-9·00·11·00-2·6	00;5:00-7:45;10	:00-mid.
KFBL KFJM	ae ak	50 100	3	Everett, Wash. P- Grand Forks, N. D. Fort Worth, Texas. Tucson, Ariz. M-	-9:00-noon; 3:00	-6:00; 9:00-mid	
KFJZ	ae	100		Fort Worth, Texas.	C7:00-11:00		
KGAR	ae	100	(.25)	Tucson, Ariz. M-	-7:00-9:00		
KGFG KGFL	bk ak	100 100	24	Oklahoma City, Ok Roswell, N. M. M	(la. C 	-7.30	
KGKL	ak	100		San Angelo, Texas.	C-8:00-4:30;	6:00-10:00	
KICA KLUF	ak	100 100	4	San Angelo, Texas. Clovis, N. M. M-	9:30-2:00; 7:30-9	:30	
KMAC	z ak	100	5	Galveston, Texas. San Antonio, Texas	C—7:00-8:30;	10:00-11:00; no	oon-1:30: 4:00-
KONO	ak	100	5	6:00; 7:00-8:00; 10 San Antonio, Texas 4:00; 6:00-7:00; 8	1:00-12:30	8:00-10:00; 11	
KOOS	ac	100		4:00; 0:00-7:00; 8 Marshfield Ore P	:00-10:00 		
KRE	ak	100		Marshfield, Ore. P Berkeley, Calif. P	-6:30-9:30; noor	n-3:00; 6:00-9:0	0
KSO KUJ	ak ak	$100 \\ 100$	B(.25)	Des Moines, Iowa. Walla Walla, Wash.	C-6:30-1:00		
KVL	ak	100	3	Seattle, Wash, P-	-6:00-9:00: noon	-3-00-6-00-9-00	1 mid -1.30
KWKC	z,	100	, 7	Seattle, Wash. P- Kansas City, Mo.	C	-0.00, 0.00-7.00	, mid1.90
WBTM WCBM	ak ae	100 100	(.25)	Danville, Va. E—1 Baltimore, Md. E-	1:00-1:00; 6:30-1	0:00	
WDAS	ae	100	(.25)	Philadelphia, Pa.	E9:00-11:00		
WGL WGLC	ae ak	$100 \\ 100$	(.25) C C	Philadelphia, Pa. Fort Wayne, Ind. Hudson Falls, N. Y	C-6:30-mid.		
WHBD	ak	100		Mount Urah Ohio	E-8-00-11-30	noon_0.00	
WHBQ	ak	100		Memohis Tenn	C-7.55 2.00. 4.0	0 10.20	
WHDF WHET	ak ak	$100 \\ 100$	(.25)	Calumet, Mich. E Dothan, Ala. C-9	—/:00-9:00:11:3	0-1:30; 5:30-8:3	0
WIBM	ae	100	iĸ	Jackson, Mich. E-	-7:30-9:00		
WJBK WJTL	ae ae	50 100	1	Jackson, Mich. E- Detroit, Mich. E- Atlanta, Ga. E	-7:00-sunset; 9:0	00-mid.	
WLEY	ak	100	(.25)	Lexington, Mass.	E-Noon-3.00. 6	5-00-9-00	
WLVA	ck	100	7	Lynchburg, Va. E	-7:00-11:00; 1:0	0-6:30	
WMBR WPFB	ak ak	100 100	••••	Lexington, Mass. Lynchburg, Va. E- Tampa, Fla. E-7 Hattiesburg, Miss. St. Albans, Vt. E	:00-9:30		
WODM	ae	100	D	St. Albans, Vt. E	C		
WRAK Wram	ak ae	100 100	× · · · •	Williamsport, Pa.	E-8:30-3:00; 5:	:00-10:30	
WRDO	ae	100		Augusta, Maine	E-7:30-mid. E-9:00-1:00 · 4 ·3	0-8:30	
WRJN	ae	100	D	Williamsport, Pa. Wilmington, N. C. Augusta, Maine. I Racine, Wis. C—9 Buffalo N V	:00-2:30; 4:00-10	:30	
WSVS XEFZ	ak ae	50 100	D 	Buffalo, N. Y. E- Mexico City, D. F.	0.00-10.00; 2:00-	-3 :00	
1000	4 .4						

1380 k	cilo	cycl	les	217.3 meters
KOH KQV TGX WKBH WSMK	z ak ak z ae ak z	150 500 75 1000 200 125	1382 C 2C C 2 C	Camaguey, Cuba. E Reno, Nev. P-8:00-10:00 Pittsburgh, Pa. E-7:00-10:00 Guatemala City, Guat. LaCrosse, Wis. C-7:30-10:00 Dayton, Ohio. E-7:00-8:00; 10:00-mid. Torreon, Coah.

INDEX BY FREQUENCIES AND DIAL NUMBERS With Tuesday's Time on the Air

1390	kild	ocycl	.es 2	15.7 meters	
CJRC	z	100		Middlashunsh Man C	
HÌH	ak	15 1000	1395 C	San Pedro de Macoris, D. R. L-12:15-2:00 Little Rock, Ark. C-7:00-mid.	
KLRA KOY	ae ae	500	(1)	Phoenix Ariz, IV	
WHK	ae	1000	C(2.5)	Cleveland, Ohio. E–7:00-mid.	
1400	kild	beyel	les 2	14.2 meters	
KLO	ah	500	С	Ogden, Utah. M-8:30-10:30 Tulsa, Okla. C	
KTUL WARD	z ak	250 500	(.5)		
WBAA	z	500	1	Lafayette, Ind. C—Silent Devidence N. V. $E_{}7_{-}11^{+}30^{+}6_{-}7^{+}30^{-}$	
WBBC WKBF	ae ak	500 500	2 1N	Indianapolis, Ind. C6:00-mid.	
WLTH	ak	500	22	Brooklyn, N. Y. $E = -11:30-1:30; 7:30-9$ Brooklyn, N. Y. $E = -11:30-1:30; 7:30-9$	
WVFW XEFV	ak ae	500 100	4	Brooklyn, N. 1. L Jaurex, Chih. $C-9:00-3:00; 5:00-11:00$	
1410		ocvel	les 2	212.6 meters	
CKFC	ak	50	5	Vancouver, B. C. P-3-4:30; 8:30-10:30	
CKMO	z	100	5	Vancouver, B. C. $P = /(30-3) + (30-1)$	
CMCH CMCM	ak z	50 15		Havana, Cuba. E Havana, Cuba. E	
KFLV	ak	500	4	Rockford, Ill. C-9-12:30; 4-6; 8:30-mid. Amarillo, Texas. C-6-8; 10-12:30; 3-4:30; 6-7; 9-10	
KGRS WAAB	ae ae	1000 500	1 CH		
WBCM	ae	500 1000	К 1	Bay City, Mich. $E = 8:00 - mid.$	
WDAG WHBL	ae ae	500	4	Bay City, Mich. $E = 8.00$ -mid. Bay City, Mich. $E = 8.00$ -mid. Amarillo, Texas. $C = 8.10$; 12:30-3; 4:30-6; 7:30-9; 10-mid. Sheboygan, Wis. $C = 7.10$; 12:30-3; 6-8; 10-mid. Bluefield, W. Va. $E = 7.00-9.00$; noon-3:00; 6:00-8:00	
WHIS WODX	ak ae	250 500	2 3C	Sheboygan, Wis. C-7:10; 12:30-3; 6-8; 10-mid. Bluefield, W. Va. E-7:00-9:00; noon-3:00; 6:00-8:00 Mobile, Ala. C-7:00-6:15; 7:45-10:30	
WRBX	ae	250	2	Roanoke, va. E	
WSFA	ck	500	3C	Montgomery, Ala. C-6:00-7:45	
1420	kil	-	les 2	211.1 meters	
CKGB	z,	100	1.2.1	Timmons, Ont. E San Antonio, Texas. C—6:00-mid.	
		100		San Antonio, reas, C-0.00-mig.	
KABC KBPS	ak aj	100 100	4	D 11.00 12.20 2.00 5.00	
KBPS KCMC	aj ak	100 100	4	D 11.00 12.20 2.00 5.00	
KBPS KCMC KFIZ KGFF	aj ak ak ak	100 100 100 100	4 	D 11.00 12.20 2.00 5.00	
KBPS KCMC KFIZ	aj ak ak	100 100 100 100 100 100	4 	Portland, Ore. P-11:00-12:30; 3:00-5:00 Texarkana, Ark. C-7:00-2:00; 4:00-9:00 Fond du Lac, Wis. C-10:00-1:00; 4:00-10:00 Shawnee, Okla. C-7:30-3:00; 5:00-9:00 San Francisco, Calif. P-9:00-1:00; 4:00-9:00 Alamosa, Colo. M	
KBPS KCMC KFIZ KGFF KGGC KGIW KGIX	aj ak ak ak ak ak	100 100 100 100 100 100 100	4 i	Portland, Ore. $P-11:00-12:30; 3:00-5:00$ Texarkana, Ark. $C-7:00-2:00; 4:00-9:00$ Fond du Lac, Wis. $C-10:00-1:00; 4:00-10:00$ Shawnee, Okla. $C-7:30-3:00; 5:00-9:00$ San Francisco, Calif. $P-9:00-1:00; 4:00-9:00$ Alamosa, Colo. M Las Vegas, Nev. M	
KBPS KCMC KFIZ KGFF KGGC KGIW KGIX KICK KIDW	aj ak ak ak ak ak a z z	100 100 100 100 100 100 100 100 100	4 1	Portland, Ore. $P-11:00-12:30; 3:00-5:00$ Texarkana, Ark. $C-7:00-2:00; 4:00-9:00$ Fond du Lac, Wis. $C-10:00-1:00; 4:00-10:00$ Shawnee, Okla. $C-7:30-3:00; 5:00-9:00$ San Francisco, Calif. $P-9:00-1:00; 4:00-9:00$ Alamosa, Colo. M Las Vegas, Nev. M	
KBPS KCMC KFIZ KGFF KGGC KGIW KGIX KICK KIDW KORE	aj ak ak ak ak ak ak z a	100 100 100 100 100 100 100 100 100	4 1	Portland, Ore. P-11:00-12:30; $3:00-5:00$ Texarkana, Ark. C-7:00-2:00; $4:00-9:00$ Fond du Lac, Wis. C-7:00-2:00; $4:00-9:00$ Shawnee, Okla. C-7:30-3:00; $5:00-9:00$ San Francisco, Calif. P-9:00-1:00; $4:00-9:00$ Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Lamar, Colo. M-8:00-10:00; $7:00-10:00$ Eugene, Ore. P-7:45-9:00 Eugene, Ore. P-7:45-9:00	
KBPS KCMC KFIZ KGFF KGGC KGIW KGIX KICK KIDW KORE KUMA KWCR	aj akk as as as as as as as as as as as as as	100 100 100 100 100 100 100 100 100 100	4 1 B (.25)	Portland, Ore. P-11:00-12:30; $3:00-5:00$ Texarkana, Ark. C-7:00-2:00; $4:00-9:00$ Fond du Lac, Wis. C-7:00-2:00; $4:00-9:00$ Shawnee, Okla. C-7:30-3:00; $5:00-9:00$ San Francisco, Calif. P-9:00-1:00; $4:00-9:00$ Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Lamar, Colo. M-8:00-10:00; $7:00-10:00$ Eugene, Ore. P-7:45-9:00 Eugene, Ore. P-7:45-9:00	
KBPS KCMC KFIZ KGFF KGGC KGIW KGIX KICK KIDW KORE KUMA KWCR	aj aakaa aa aa aa aa aa aa aa aa	100 100 100 100 100 100 100 100 100 100	4 i 	Portland, Ore. P-11:00-12:30; $3:00-5:00$ Texarkana, Ark. C-7:00-2:00; $4:00-9:00$ Fond du Lac, Wis. C-7:00-2:00; $4:00-9:00$ Shawnee, Okla. C-7:30-3:00; $5:00-9:00$ San Francisco, Calif. P-9:00-1:00; $4:00-9:00$ Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Lamar, Colo. M-8:00-10:00; $7:00-10:00$ Eugene, Ore. P-7:45-9:00 Eugene, Ore. P-7:45-9:00	
KBPS KCMCC KGIZ KGFF KGGC KGIX KICK KIDW KORE KUMA KWCR KXL WACO WAGM	aj ak aakaak aak z aak aak aakaak aakaak aak	$ \begin{array}{r} 100 \\ 1$	4 1 B (.25) 4 C	Portland, Ore. P-11:00-12:30; $3:00-5:00$ Texarkana, Ark. C-7:00-2:00; $4:00-9:00$ Fond du Lac, Wis. C-7:00-2:00; $4:00-9:00$ Shawnee, Okla. C-7:30-3:00; $5:00-9:00$ San Francisco, Calif. P-9:00-1:00; $4:00-9:00$ Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Lamar, Colo. M-8:00-10:00; $7:00-10:00$ Eugene, Ore. P-7:45-9:00 Eugene, Ore. P-7:45-9:00	
KBPS KCMCC KFIZ KGFF KGGCC KGIW KGIW KICK KICK KUMA KWCR KUMA KWCR KXL WACO WAGM WACO WAZL	ajkkaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	100 100 100 100 100 100 100 100 100 100	4 1 B (.25) 4 C 2	Portland, Ore. P-11:00-12:30; $3:00-5:00$ Texarkana, Ark. C-7:00-2:00; $4:00-9:00$ Fond du Lac, Wis. C-7:00-2:00; $4:00-9:00$ Shawnee, Okla. C-7:30-3:00; $5:00-9:00$ San Francisco, Calif. P-9:00-1:00; $4:00-9:00$ Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Lamar, Colo. M-8:00-10:00; 7:00-10:00 Eugene, Ore. P-7:45-9:00 Eugene, Ore. P-7:45-9:00	
KBPS KCMC KFIZ KGFF KGGW KGIX KICK KORE KUMA KWCR KXL WACO WACO WACL WEED	aakkkkk aaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i B (.25) 4 C 2 D	$\begin{array}{c} \hline \text{Portland} & \text{Ore}. P-11:00-12:30; 3:00-5:00\\ \hline \text{Texarkana, Ark.} C-7:00-2:00; 4:00-9:00\\ \hline \text{Fond du Lac, Wis.} C-10:00-1:00; 4:00-10:00\\ \hline \text{Shawnee, Okla.} C-7:30-3:00; 5:00-9:00\\ \hline \text{San Francisco, Calif.} P-9:00-1:00; 4:00-9:00\\ \hline \text{Alamosa, Colo.} M\\ \hline \text{Las Vegas. Nev.} M\\ \hline \text{Carter Lake, Iowa.} C-(\text{Mail returned})\\ \hline \text{Larmar, Colo.} M-8:00-10:00; 7:00-10:00\\ \hline \text{Eugene, Ore.} P-7:45-9:00\\ \hline \text{Yuma, Ariz.} M7:00-9:00; 11:00-2:00; 6:00-10:00\\ \hline \text{Cedar Rapids, Iowa.} C-7:00-\text{Mid.}\\ \hline \text{Portland, Ore.} P-7:45-9:00\\ \hline \text{Waco, Texas.} C-8:00-2:00; 5:00-10:30\\ \hline \text{Presque Isle, Maine.} E-11:00-1:00; 4:00-7:00\\ \hline \text{Anniston, Ala.} C-7:00-9:00\\ \hline \text{Hazelton, Pa.} E-11:00-9:00\\ \hline \text{Greenville, N. C.} E-9:00-6:00\\ \hline \end{array}$	
KBPS KCMC KFIZ KGFFC KGGC KGIW KGIX KICK KUMA KUMA KUMA KWCR KXL WACO WAACD WAACD WEED WEHS WELL	aakaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 I B (.25) 4 C 2 D a	Portland, Ore. P-11:00-12:30; 3:00-5:00 Texarkana, Ark. C-7:00-2:00; 4:00-9:00 Fond du Lac, Wis. C-10:00-1:00; 4:00-10:00 Shawnee, Okla. C-7:30-3:00; 5:00-9:00 San Francisco, Calif. P-9:00-1:00; 4:00-9:00 Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Lamar, Colo. M-8:00-10:00; 7:00-10:00 Eugene, Ore. P-7:45-9:00 Yuma, Ariz. M-7:00-9:00; 11:00-2:00; 6:00-10:00 Cedar Rapids, Iowa. C-7:00-Mid. Portland, Ore. P-7:00-10:00 Waco, Texas. C-8:00-2:00; 5:00-10:30 Presque Isle, Maine. E-11:00-1:00; 4:00-7:00 Anniston, Ala. C-7:00-9:00 Hazelton, Pa. E-11:00-9:00 Greenville, N. C. E-9:00-6:00 Cicero, III. C-4:00-6:00 Cicero, III. C-4:00-6:00	
KBPS KCMC KFIZ KGFF KGGW KGK KICK KIDW KOR KUMA KWCR KUMA KWCR KXL WACO WACO WACO WACO WAZL WENS WEHS WENS	ааааааа z z aaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i B (.25) 4 C 2 D	Portland, Ore. P-11:00-12:30; 3:00-5:00 Texarkana, Ark. C-7:00-2:00; 4:00-9:00 Fond du Lac, Wis. C-10:00-1:00; 4:00-10:00 Shawnee, Okla. C-7:30-3:00; 5:00-9:00 San Francisco, Calif. P-9:00-1:00; 4:00-9:00 Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Lamar, Colo. M-8:00-10:00; 7:00-10:00 Eugene, Ore. P-7:45-9:00 Yuma, Ariz. M-7:00-9:00; 11:00-2:00; 6:00-10:00 Cedar Rapids, Iowa. C-7:00-Mid. Portland, Ore. P-7:00-10:00 Waco, Texas. C-8:00-2:00; 5:00-10:30 Presque Isle, Maine. E-11:00-1:00; 4:00-7:00 Anniston, Ala. C-7:00-9:00 Hazelton, Pa. E-11:00-9:00 Greenville, N. C. E-9:00-6:00 Cicero, III. C-4:00-6:00 Cicero, III. C-4:00-6:00	
KBPS KCMC KFIZ KGFF KGGK KGIX KICK KIDW KORE KUMA KWCR KUMA KWCR KXL WACO WACO WACO WACO WACO WACO WACO WACO	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i B (.25) 4 C 2 D a 2 D	$\begin{array}{c} \hline \text{Portland} & \text{Ore}. P-11:00-12:30; 3:00-5:00\\ \hline \text{Texarkana, Ark.} C-7:00-2:00; 4:00-9:00\\ \hline \text{Fond du Lac, Wis.} C-7:30-3:00; 5:00-9:00\\ \hline \text{San Francisco, Calif.} P-9:00-1:00; 4:00-9:00\\ \hline \text{Alamosa, Colo.} M\\ \hline \text{Las Vegas. Nev. M}\\ \hline \text{Carter Lake, Iowa.} C-(\text{Mail returned})\\ \hline \text{Larmar, Colo.} M-8:00-10:00; 7:00-10:00\\ \hline \text{Eugene, Ore.} P-7:45-9:00\\ \hline \text{Yuma, Ariz.} M-7:00-9:00: 11:00-2:00; 6:00-10:00\\ \hline \text{Cedar Rapids, Iowa.} C-7:00-Mid.\\ \hline \text{Portland, Ore.} P-7:00-1:00\\ \hline \text{Waco, Texas.} C-8:00-2:00; 5:00-10:30\\ \hline \text{Presque Isle, Maine.} E-11:00-1:00; 4:00-7:00\\ \hline \text{Anniston, Ala.} C-7:00-9:00\\ \hline \text{Hazelton, Pa.} E-11:00-9:00\\ \hline \text{Greenville, N. C.} E-9:00-9:30\\ \hline \text{Americus, Ga.} C-7:01:30: 6:00-9:00\\ \hline \text{Hateler, Ne, M. K.} K = 0:00-9:00\\ \hline \text{Hateler, Ne, M. K.} K = 0:00-9:00\\ \hline \text{Hateler, Ne, M. K.} K = 0:00-9:00\\ \hline \text{Hateler, Color, II:} C-7:00-9:00\\ \hline \text{Hateler, Color, II:} C-7:00-9:00\\ \hline \text{Hateler, Ne, M. K.} K = 0:00-9:30\\ \hline \text{Armericus, Ga.} C-7:01:30: 6:00-9:00\\ \hline \text{Hateler, Color, II:} C-7:00-9:00\\ \hline \text{Hateler, Color, II:} K = 0:00-9:30\\ \hline \text{Armericus, Ga.} C-7:01:30: 6:00-9:00\\ \hline \text{Hateler, V. Y. E}\\ \hline \text{Ciencero, III:} C-7:01:30: 6:00-9:00\\ \hline \text{Hateler, Color, II:} C-7:00-9:00\\ $	
KBPS KCMC KFIZ KGFF KGGFC KGIW KGIX KICK KICW KORE KUCA KUCA WACO WACO WACO WACO WACO WACO WACO WA	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i B (.25) 4 C 2 D a a D y	$\begin{array}{llllllllllllllllllllllllllllllllllll$	
KBPS KCMC KFIZ KGFC KGGC KGIW KGCK KICK KICK KICK KICK KICK KICK KUCA KWCR KXL WACN WACN WACN WACN WEED WELL WENC WHDL WHCM WJMS	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i B(.25) 4 C D C a D Y D a 2 D D S 	Portland, Ore. P-11:00-12:30; 3:00-5:00 Texarkana, Ark. C-7:00-2:00; 4:00-9:00 Fond du Lac, Wis. C-10:00-1:00; 4:00-10:00 San Francisco, Calif. P-9:00-1:00; 4:00-9:00 Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Lamar, Colo. M-8:00-10:00; 7:00-10:00 Eugene, Ore. P-7:45-9:00 Yuma, Ariz. M-7:00-9:00; 11:00-2:00; 6:00-10:00 Cedar Rapids, Iowa. C-7:00-Mid. Portland, Ore. P-7:00-10:00 Waco, Texas. C-8:00-2:00; 5:00-10:30 Presque Isle, Maine. E-11:00-1:00; 4:00-7:00 Anniston, Ala. C-7:00-9:00 Hazelton, Pa. E-11:00-9:00 Greenville, N.C. E-9:00-6:00 Cicero, Ill. C-4:00-6:00 Battle Creek, Mich. E-9:00-9:30 Americus, Ga. C-7:6:15 Tupper Lake, N.Y. E Cicero, Ill. C-7:00-1:30; 6:00-9:00; 11:00-1:00 Wilmington, Del. E-7:00-11:00; 2:00-5:00; 9:00-mid. Baton Rouge, La. C	KCYS.
KBPS KCMC KFIZ KGFC KGIZ KGC KGIW KGIW KGIW KGIW KGIW KGIW KGIW KGIW	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i B(.25) 4 C D Y D a a D y D a a 2 D D y a a 2 D	Portland, Ore. P-11:00-12:30; 3:00-5:00 Texarkana, Ark. C-7:00-2:00; 4:00-9:00 Fond du Lac, Wis. C-10:00-1:00; 4:00-10:00 San Francisco, Calif. P-9:00-1:00; 4:00-9:00 Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Lamar, Colo. M-8:00-10:00; 7:00-10:00 Eugene, Ore. P-7:45-9:00 Yuma, Ariz. M-7:00-9:00; 11:00-2:00; 6:00-10:00 Cedar Rapids, Iowa. C-7:00-Mid. Portland, Ore. P-7:00-10:00 Waco, Texas. C-8:00-2:00; 5:00-10:30 Presque Isle, Maine. E-11:00-1:00; 4:00-7:00 Anniston, Ala. C-7:00-9:00 Hazelton, Pa. E-11:00-9:00 Greenville, N.C. E-9:00-6:00 Cicero, Ill. C-4:00-6:00 Battle Creek, Mich. E-9:00-9:30 Americus, Ga. C-7:6:15 Tupper Lake, N.Y. E Cicero, Ill. C-7:00-1:30; 6:00-9:00; 11:00-1:00 Wilmington, Del. E-7:00-11:00; 2:00-5:00; 9:00-mid. Baton Rouge, La. C	ксу <u>я</u> . 1430
KBPS KCMX KFIZ KGFC KGIW KGIW KGIW KGIW KCRK KUCK KUCK KUCK KUCK KUCK KUCK KUCK	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i I B(.25) 4(.25) 4(.25) C D a D D a C H(.25) C H(.25) C C C C C C C C C	Portland, Ore. P-11:00-12:30; 3:00-5:00 Texarkana, Ark. C-7:00-2:00; 4:00-9:00 Fond du Lac, Wis. C-10:00-1:00; 4:00-10:00 San Francisco, Calif. P-9:00-1:00; 4:00-9:00 Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Lamar, Colo. M-8:00-10:00; 7:00-10:00 Eugene, Ore. P-7:45-9:00 Yuma, Ariz. M-7:00-9:00; 11:00-2:00; 6:00-10:00 Cedar Rapids, Iowa. C-7:00-Mid. Portland, Ore. P-7:00-10:00 Waco, Texas. C-8:00-2:00; 5:00-10:30 Presque Isle, Maine. E-11:00-1:00; 4:00-7:00 Anniston, Ala. C-7:00-9:00 Hazelton, Pa. E-11:00-9:00 Greenville, N.C. E-9:00-6:00 Cicero, Ill. C-4:00-6:00 Battle Creek, Mich. E-9:00-9:30 Americus, Ga. C-7:6:15 Tupper Lake, N.Y. E Cicero, Ill. C-7:00-1:30; 6:00-9:00; 11:00-1:00 Wilmington, Del. E-7:00-11:00; 2:00-5:00; 9:00-mid. Baton Rouge, La. C	1430
KBPS KCMC KFIZ KGFC KGIZ KGGC KGIW KGIW KGIW KGIW KGIW KGIW KGIW KGIW	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i B(.25) 4 C D a D D a C H(.25) (.25) C H(.25)	$\begin{array}{llllllllllllllllllllllllllllllllllll$	
KBPS KCRS KGFZ KGFZ KGFZ KGGC KGIW KGGC KGIW KGCK KICK KICK KICK KICK KICK KICK KICK	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i B(.25) 4 C D a D D a C H(.25) (.25) D D a C H(.25) D D	Portland, Ore. P-11:00-12:30; 3:00-5:00 Texarkana, Ark. C-7:00-2:00; 4:00-9:00 Fond du Lac, Wis. C-10:00-1:00; 4:00-10:00 Shawnee, Okla. C-7:30-3:00; 5:00-9:00 San Francisco, Calif. P-9:00-1:00; 4:00-9:00 Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Larmar, Colo. M-8:00-10:00; 7:00-10:00 Eugene, Ore. P-7:45-9:00 Yuma, Ariz. M-7:00-9:00; 11:00-2:00; 6:00-10:00 Cedar Rapids, Iowa. C-7:00-Mid. Portland, Ore. P-7:00-1:00 Waco, Texas. C-8:00-2:00; 5:00-10:30 Presque Isle, Maine. E-11:00-1:00; 4:00-7:00 Anniston, Ala. C-7:00-9:00 Hazelton, Pa. E-11:00-9:00 Greenville, N. C. E-9:00-6:00 Cicero, Ill. C-4:00-6:00 Battle Creek, Mich. E-9:00-9:30 Americus, Ga. C-7:00-1:30; 6:00-9:00; 11:00-1:00 Wilmington, Del. E-7:00-1:00; 2:00-5:00; 9:00-mid. Baton Rouge, La. C Ironwood, Mich. C-7:30-1:30; 4:30-7:00 Cicero, Ill. C-1:30-4:00 Kansas City, Kans. C-7:00-11:00 Springfield, Mass. E-8:00-mid. Detroit, Mich. E-7:30-mid. Detroit, Mich. E-7:30-mid. Detroit, Mich. E-7:30-mid. Detroit, Mich. C-7:30-1:00 Pacules Koals, Ala. C-7:00-1:00 Pacules Kw. C	1430
KBPS KCMC KFIZ KGFF KGGFC KGCW KGIW KGIW KGIW KGIW KGIW KGIW KGIW KGI	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i B(.25) 4 C D a D D a C H(.25) (.25) C H(.25)	Portland, Ore. P-11:00-12:30; 3:00-5:00 Texarkana, Ark. C-7:00-2:00; 4:00-9:00 Fond du Lac, Wis. C-10:00-1:00; 4:00-10:00 Shawnee, Okla. C-7:30-3:00; 5:00-9:00 San Francisco, Calif. P-9:00-1:00; 4:00-9:00 Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Larmar, Colo. M-8:00-10:00; 7:00-10:00 Eugene, Ore. P-7:45-9:00 Yuma, Ariz. M-7:00-9:00; 11:00-2:00; 6:00-10:00 Cedar Rapids, Iowa. C-7:00-Mid. Portland, Ore. P-7:00-1:00 Waco, Texas. C-8:00-2:00; 5:00-10:30 Presque Isle, Maine. E-11:00-1:00; 4:00-7:00 Anniston, Ala. C-7:00-9:00 Hazelton, Pa. E-11:00-9:00 Greenville, N. C. E-9:00-6:00 Cicero, Ill. C-4:00-6:00 Battle Creek, Mich. E-9:00-9:30 Americus, Ga. C-7:00-1:30; 6:00-9:00; 11:00-1:00 Wilmington, Del. E-7:00-1:00; 2:00-5:00; 9:00-mid. Baton Rouge, La. C Ironwood, Mich. C-7:30-1:30; 4:30-7:00 Cicero, Ill. C-1:30-4:00 Kansas City, Kans. C-7:00-11:00 Springfield, Mass. E-8:00-mid. Detroit, Mich. E-7:30-mid. Detroit, Mich. E-7:30-mid. Detroit, Mich. E-7:30-mid. Detroit, Mich. C-7:30-1:00 Pacules Koals, Ala. C-7:00-1:00 Pacules Kw. C	1430
KBPS KCMC KFIZ KGFC KGIZ KGFC KGIW KGIW KGIW KGIW KGIW KGIW KORE KUCA KUCA WACA WACA WACA WACA WACA WACA WACA W	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	4 i I B (.25) 4 C D a D D a C H(.25 4 C D a C D C C (.25) C C (.25) C C C C C C C C C C C C C	Portland, Ore. P-11:00-12:30; 3:00-5:00 Texarkana, Ark. C-7:00-2:00; 4:00-9:00 Fond du Lac, Wis. C-10:00-1:00; 4:00-10:00 Shawnee, Okla. C-7:30-3:00; 5:00-9:00 San Francisco, Calif. P-9:00-1:00; 4:00-9:00 Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Larmar, Colo. M-8:00-10:00; 7:00-10:00 Eugene, Ore. P-7:45-9:00 Yuma, Ariz. M-7:00-9:00; 11:00-2:00; 6:00-10:00 Cedar Rapids, Iowa. C-7:00-Mid. Portland, Ore. P-7:00-1:00 Waco, Texas. C-8:00-2:00; 5:00-10:30 Presque Isle, Maine. E-11:00-1:00; 4:00-7:00 Anniston, Ala. C-7:00-9:00 Greenville, N. C. E-9:00-6:00 Gicero, Ill. C-4:00-6:00 Battle Creek, Mich. E-9:00-9:30 Americus, Ga. C-7:00-1:30; 6:00-9:00; 11:00-1:00 Wilmington, Del. E-7:00-11:00; 2:00-5:00; 9:00-mid. Baton Rouge, La. C Ironwood, Mich. C-7:30-1:30; 4:30-7:00 Cicero, Ill. C-1:30-4:00 Kansas City, Kans. C-7:00-11:00 Springfield, Mass. E-8:00-mid. Detroit, Mich. E-7:00-10:00 Muscle Shoals, Ala. C-7:00-10:00 Paducah, Ky. C	1430
KBPS KCMC KFIZ KGFC KGIZ KGFC KGIW KGIW KGIW KGIW KGIW KGIW KORE KUCA KUCA WACA WACA WACA WACA WACA WACA WACA W	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	100 100 100 100 100 100 100 100 100 100	4 i I B (.25) 4 C D a D D a C H(.25 4 C D a C D C C (.25) C C (.25) C C C C C C C C C C C C C	Portland, Ore. P-11:00-12:30; 3:00-5:00 Texarkana, Ark. C-7:00-2:00; 4:00-9:00 Fond du Lac, Wis. C-10:00-1:00; 4:00-10:00 Shawnee, Okla. C-7:30-3:00; 5:00-9:00 San Francisco, Calif. P-9:00-1:00; 4:00-9:00 Alamosa, Colo. M Las Vegas. Nev. M Carter Lake, Iowa. C-(Mail returned) Larmar, Colo. M-8:00-10:00; 7:00-10:00 Eugene, Ore. P-7:45-9:00 Yuma, Ariz. M-7:00-9:00; 11:00-2:00; 6:00-10:00 Cedar Rapids, Iowa. C-7:00-Mid. Portland, Ore. P-7:00-1:00 Waco, Texas. C-8:00-2:00; 5:00-10:30 Presque Isle, Maine. E-11:00-1:00; 4:00-7:00 Anniston, Ala. C-7:00-9:00 Hazelton, Pa. E-11:00-9:00 Greenville, N. C. E-9:00-6:00 Cicero, Ill. C-4:00-6:00 Battle Creek, Mich. E-9:00-9:30 Americus, Ga. C-7:00-1:30; 6:00-9:00; 11:00-1:00 Wilmington, Del. E-7:00-1:00; 2:00-5:00; 9:00-mid. Baton Rouge, La. C Ironwood, Mich. C-7:30-1:30; 4:30-7:00 Cicero, Ill. C-1:30-4:00 Kansas City, Kans. C-7:00-11:00 Springfield, Mass. E-8:00-mid. Detroit, Mich. E-7:30-mid. Detroit, Mich. E-7:30-mid. Detroit, Mich. E-7:30-mid. Detroit, Mich. C-7:30-1:00 Pacules Koals, Ala. C-7:00-1:00 Pacules Kw. C	1430

[73]

INDEX BY FREQUENCIES AND DIAL NUMBERS With Tuesday's Time on the Air

				while ruesday's rime on the All
KGNF	ak	500	D	North Platte Nab C 7/00 august
WBAK	ak	500		North Platte, Neb. C-7:00-sunset Harrisburg, Pa. E
WCAH	ае	500		Columbus, Ohio. E-8:00-mid.
WFEA	ae	500		Manchester, N. H. $E = 7:30-11:00$
WHEC	ае	500	С	Rochester, N. Y. E
WHP	ak	500	1C(1)	Harrisburg, Pa. E-8:30-10:30: 11:30-1:30: 2:30-4:00: 4:30-1:00
WNBR	ae	500	C	Harrisburg, Pa. $E-8:30-10:30; 11:30-1:30; 2:30-4:00; 4:30-1:00$ Memphis, Tenn. $C-8:00-1:00; 3:00-10:00$ Albany, N. Y. $E-7:30-1:00$
WOKC	-	500	-	Albany, N. Y. E7:30-1:00
1440	kil	ocvo	les	208.2 meters
CMPL		ocy c		
CMBL KDFN	ak ak	200 500	1445	Havana, Cuba. EMail returned Casper, Wyo. M-7:30-2:00; 3:30-9:00
KLS	ае	250	D	Casper, wyo. $M = 7:30-2:00; 3:30-9:00$
KXYZ	ak	250	D	Houston, Texas. C-6:30-1:00; 2:30-11:00
TIFS	z	7.	5 1441	Oakland, Čalif. P.—8:00-sunset Houston, Texas. C.—6:30-1:00; 2:30-11:00 Cartago, C. R. L
WBIG	ae	500	C(1)	Greensboro, N. C. E-8:00-11:00 Allentown, Pa. E-7:30-mid.
WCBA WMBE	, aj	250	a	Allentown, Pa. E-7:30-mid.
WSAN) ас ај	500 250	3C(1)	Peorta, III. C $-6:00-11:00; 8:00-mid.$
WTAD	ak	500	3	Peoria, III. C-6:00-11:00; 8:00-mid. Allentown, Pa. E-7:30-mid. Quincy, III. C-11:00-8:00
1450	K11	ocyc	les	206.8 meters
CFCT CKX KTBS	ae	50		
CKX	ak	500	F	Victoria, B. C. P-8:00-12:30; 6-8; mid2:00 Brandon, Man. C-7:00-10:30
KTBS	ck	1000	N	Shreveport, La. C7:00-mid. San Jose, C. R. L
TIEP WGAR	z	7. 500		San Jose, C. R. L
WHOM	ak Iae	250	B (1)	Cleveland, Ohio. E-6:30-1:00
WSAR	ae	250	1999 - 19	Fall River Mass $E_{} = 8.00 - mid$.
WTFI	ak	500		Cleveland, Ohio. E=6:30-1:00 Jersey City, N. J. E=8:00-mid. Fall River, Mass. E=-8:00-3:30; 5:00-10:00 Athens, Ga. E=8:00-9:00 Nature Lorado Torres Co. 10:00 3:00. 4:00 3:00
XEAB	ak	7.	5	Neuvo Laredo, Tams. C-10:00-3:00; 4:00-7:00
1460	kil	ocve	les	205.4 meters
KSTP	ae	10000		
WJSV		10000	N (25) C	St. Paul, Minn. C-6:45-12:30 Washington, D. C. E-6:30-mid.
-			100	
1470	KII		ies .	204.0 meters
KGA	ak			
BUL AC		5000	N	Spokane, Wash. P-6:00-mid.
WLAC	ae	5000	С	Spokane, Wash. P-6:00-mid. Nashville, Tenn. C-7:00-mid.
WLAC	ae	5000	С	
wlac 1480	* kilo	5000 CCYC	c les 2	202.6 meters
WLAC 1480 CMBK KOMA	ae	5000	с les 2 1485	Havana, Cuba. E
WLAC 1480 CMBK	kilo z	5000 CCYC 15	c les 2	Havana, Cuba. E
WLAC 1480 CMBK KOMA WKBW	kilo ^z ak ae	5000 DCYC 15 5000 5000	C les C C C	202.6 meters Havana, Cuba. E Oklahoma City, Okla. C—6:30-mid. Buffalo, N. Y. E—10:00-1:00
WLAC 1480 CMBK KOMA WKBW 1490	kilo ^z ak ae kilo	5000 5000 5000 5000 5000 5000 5000	с les С С les	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY	e kilo ^z ak ae kilo ue	5000 5000 5000 5000 5000 5000	с les С С les ву	202.6 meters Havana, Cuba. E Oklahoma City, Okla. C—6:30-mid. Buffalo, N. Y. E—10:00-1:00
WLAC 1480 CMBK KOMA WKBW 1490 WCKY	e kilo ^z ak ae kilo ue	5000 5000 5000 5000 5000 5000	с les С С les ву	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500	kilo ^z kilo ^z kilo kilo	5000 Cyc 5000 5000 Cyc 5000 Cyc	C les C C les BY les	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB	e kilo ^z ak ae kilo ue	5000 5000 5000 5000 5000 5000	\int_{C}^{C}	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFI	ae kilo ^z ak ae kilo z kilo z ak ak	5000 500 5000 5	C les C C les BY les	202.6 meters
wlac 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFI KGFI	ae kilo ^z ak ae kilo z ak ak ak	5000 5000 5000 5000 5000 Cyc 5000 Cyc 100 100 100 100	C les C C les BY les Les C C C C C C C C C C C C C C C C C C C	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFI KGFK	ae kilo ^z ak ae kilo ee kilo ^z ak ak ak ak	5000 5000 5000 5000 5000 Cyc 5000 0Cyc 100 100 100 100 100	C les C C les BY les F C C C Les C C C C C C C C C C C C C C C C C C C	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFK KGFK KGFK KGKS KGKS	ae kilo ^z ak ae kilo z ak ak ak	5000 5000 5000 5000 5000 Cyc 5000 Cyc 100 100 100 100	C les C C les BY les Les C C C C C C C C C C C C C C C C C C C	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFI KGFK KGFK KGFK KGKY KNOW	ae kilo ^z ak ae kilo ee kilo z ak ak ak ck	5000 5000 5000 5000 5000 Cyc 100 100 100 100 100 100 100 10	C les C C les BY les F C C C Les C C C C C C C C C C C C C C C C C C C	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFI KGFI KGFK KKOW KPJM KPO	ae kilo zak ae kilo zak ak ak ak ak ak ak ak ak ak	5000 5000 5000 5000 5000 Cyc 5000 Cyc 100 100 100 100 100 100 100 10	C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C C C 1485 C C C C C C C C C C C C C	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFK KGFK KGFK KGFK KGCKY KNOW KPJM KPO KREG	ae kilo zak ae kilo zak ak ak ak ak ak ak ak ak ak	5000 5000 5000 5000 5000 Cyc 5000 Cyc 100 100 100 100 100 100 100 10	C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C C C C C C C C C C C C	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KOB KGFK KGFK KGFK KGFK KGFK KKOW KPO KREG KXO	ae kilo zak ae kilo zak ak ak ak ak ak ak ak ak ak ak	5000 5000 5000 5000 5000 Cyc 5000 Cyc 100 100 100 100 100 100 100 10	C les 2 1485 C C les 2 les 2 les 1 F C (.25)	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFK KGFK KGFK KGFK KGFK KKO KNOW KPO KREG KXO WCNW	ae kilo zak ae kilo zak ak ak ak ak ak ak ak ak ak	5000 5000 5000 5000 5000 Cyc 5000 Cyc 100 100 100 100 100 100 100 10	C les 2 1485 C les 2 les 1 F C(.25)	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFI KGFK KGKB KGFK KNOW KPJM KPJM KPO KREG KXO WCNW WHEF	ae kilo zak ae kilo zak ak ak ak ak ak ak ak ak ak ak ak ak a	5000 5000 5000 5000 5000 0CYC 100 100 100 100 100 100 100 10	C les 2 1485 C C les 2 les 2 les 1 F C (.25)	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KGFK KGFK KGFK KGFK KGFK KGFK KGFK KCNW KPO KRO WFDV WKBB	ae kilo zak ae kilo zak ak ak ak ak ak ak ak ak ak zae	5000 100 1	C 1485 C C 1485 C 1 1 1 1 1 1 1 1 1 1 1 1 1	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFK KGFK KGFK KGFK KGFK KKOW KPJM KROG KXO WCNW WFDV WHEF WKBB	ae kilo zak ae kilo zak ak ak ak ak ak ak ak ak ak ak ak ak a	5000 5000 5000 5000 5000 Cyc 5000 Cyc 5000 Cyc 5000 00 00 100 100 100 100 100	C les 2 1485 C les 2 les 1 F C (.25) 	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KGFK KGFK KGFK KGFK KGFK KGFK KGFK KCNW KPO KRO WFDV WKBB	ae kilo zak ae kilo zak ae kilo zak ak ak ak ak ak ak ak zak zak	5000 Cyc 15 5000 Cyc 5000 Cyc 100 100 100 100 100 100 100 10	C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1485 C C 1 C C 1 C C 1 C C 1 C C C 1 C C C C C C C C C C C C C	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KOBFI KGFKK KGFKB KGFKB KGFKB KGFKB KGFKW KPJM KFDV WFDV WFDV WFDV WKBBY WKBZ WKBU WMBQ	ae kilo zak ae kilo zak ak ak ak ak ak ak ak ak ak ak ak ak a	5000 5000 5000 5000 CYC 5000 CYC 100 100 100 100 100 100 100 10	C les 2 1485 C les 2 les 1 F C (.25) 	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KGFK KGFKB KGFKB KGFKB KGFKB KKOW WFDV WHEFB WKBU WKBU WMBQ WMBQ	ae kild zakae kee kild zakae ak ak ak ak zakae zakae ak ak ak ak ak	5000 5000 5000 5000 5000 Cyc 5000 Cyc 100 100 100 100 100 100 100 10	C les 2 1485 C les 2 les 1 F C (.25) 	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KDB KGFI KGFI KGFK KGKY KNOW KPJM KRO WCNW WFEF WKBV WKBZ WKBZ WKBV WMBF	ae kild zakae kae kild kak ak ak ak ak ak ak ak ak ak ak ak ak	5000 5000 5000 5000 5000 CYC 5000 CYC 5000 CYC 100 100 100 100 100 100 100 10	C 1485 C C 1485 C C 185 185 185 185 185 185 195 105 105 105 105 105 105 105 10	202.6 meters
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KGFK KGFKB KGFKB KGFKB KGFKB KKOW WFDV WHEFB WKBU WKBU WMBQ WMBQ	ae kild z ak ae kild z ak ak ak ak ak ak ak ak ak ak ae z ak ak ae z ak ae ak ae ak ae ae ak ae ae ae ak ae ae ae ae ae ae ae ae ae ae ae ae ae	5000 Cyc 15 5000 Cyc 5000 Cyc 100 100 100 100 100 100 100 10	C les 2 1485 C les 2 les 2 les 1 F C (.25) i P (.25) i	202.6 meters Havana, Cuba. E Oklahoma City, Okla. C-6:30-mid. Buffalo, N. Y. E-10:00-1:00 201.2 meters Covington, Ky. E-7:00-mid. 199.9 meters Chicoutimi, Que. E-6:30-11:30 Santa Barbara, Calif. P-7:30-mid. 199.9 meters Chicoutimi, Que. E-6:30-11:30 Santa Barbara, Calif. P-7:30-mid. Corpus Christi, Tex. C-7:00-3:00; 6:00-10:00 Moorhead, Minn. C-8:00-9:00 Tyler, Texas. C-8:00-10:00, noon-2:00; 5:00-6:00; 7:30-9:00 Scottsbluff, Neb. M-9:00-1:30; 5:30-9:00 Austin, Texas. C-7:00-10:0, 5:30-9:00 Santa Ana, Calif. P-9:00-11:00 Prescott, Ariz. M-7:00-8:00 Wenatchee, Wash. P-7:00-10:00 Santa Ana, Calif. P-9:00-11:00 Brooklyn, N. Y. E-2:00-6:00 Rome, Ga. C-7:00-10:00; noon-3:00; 6:00-9:00 Rome, Ga. C-7:00-10:00; noon-3:00; 6:00-9:00 Rosciusko, Miss. C East Dubuque, III. C-7:00-10:15; 11:45-1:30; 5:30-9:00 Richmond, Ind. C Ludington, Mich. E-9:00-9:00 LaGrange, Ga. C-10:00-noon; 3:00-6:00 Brooklyn, N. Y. E-7:00-10:03; 8:00-mid. Lapeer, Mich. E-10:00:2:00; 3:00-6:00
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KGGFK KGGFKB KGGFKB KGGFKB KGGFKB KGGFKB KKGKY WFDV WFDV WKBD WKBDV WMPCF WOPI WPCDW	ae kild zakae kae kild kak ak ak ak ak ak ak ak ak ak ak ak ak	5000 5000 5000 5000 5000 CYC 5000 CYC 5000 CYC 100 100 100 100 100 100 100 10	C 1es C C 1485 C C 1es By 1es 1 F C (.25) 1 P (.25) 1 	202.6 meters Havana, Cuba. E Oklahoma City, Okla. C-6:30-mid. Buffalo, N. Y. E-10:00-1:00 201.2 meters Covington, Ky. E-7:00-mid. 199.9 meters Chicoutimi, Que. E-6:30-11:30 Santa Barbara, Calif. P-7:30-mid. 199.9 meters Chicoutimi, Que. E-6:30-11:30 Santa Barbara, Calif. P-7:30-mid. Corpus Christi, Tex. C-7:00-3:00; 6:00-10:00 Moorhead, Minn. C-8:00-9:00 Tyler, Texas. C-8:00-10:00, noon-2:00; 5:00-6:00; 7:30-9:00 Scottsbluff, Neb. M-9:00-1:30; 5:30-9:00 Austin, Texas. C-7:00-10:0; 5:30-9:00 Santa Ana, Calif. P-9:00-10:00 Santa Ana, Calif. P-9:00-11:00 Erooklyn, N. Y. E-2:00-6:00 Rome, Ga. C-7:00-10:0; noon-3:00; 6:00-9:00 Kosciusko, Miss. C East Dubuque, III. C-7:00-10:15; 11:45-1:30; 5:30-9:00 Richmond, Ind. C Ludington, Mich. E-9:00-9:00 LaGrange, Ga. C-10:00-noon; 3:00-6:00 Brooklyn, N, Y. E-7:30-10:00 Brishamton, N. Y. E-7:30-10:00 Parier, Mich. E-10:00-2:00; 3:30-6:00; 7:00-10:30 Binghamton, N. Y. E-7:30-10:00 Pristol, Tenn. E-7:30-10:00 Pri
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KGFK KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KGFKB KCNW WFDV WHEFB WKBV WMBQC WMBQC WMBPC WNBFI WPEN WRDW WSYB	ae kild zakae ke kild zakae kae kae kae kae akae ae ae ae ae ae ae ae ae ae ae ae ae a	$\begin{array}{c} 5000 \\ \hline 000 \\ \hline 000 \\ \hline 000 \\ \hline 100 \\ \hline$	C les 2 1485 C les 2 les 1 F T (.25) i (.25)Az	202.6 meters Havana, Cuba. E Oklahoma City, Okla. C-6:30-mid. Buffalo, N. Y. E-10:00-1:00 201.2 meters Covington, Ky. E-7:00-mid. 199.9 meters Chicoutimi, Que. E-6:30-11:30 Santa Barbara, Calif. P-7:30-mid. 199.9 meters Chicoutimi, Que. E-6:30-11:30 Santa Barbara, Calif. P-7:30-mid. Corpus Christi, Tex. C-7:00-3:00; 6:00-10:00 Moorhead, Minn. C-8:00-9:00 Tyler, Texas. C-8:00-10:00, noon-2:00; 5:00-6:00; 7:30-9:00 Scottsbluff, Neb. M-9:00-1:30; 5:30-9:00 Austin, Texas. C-7:00-10:0; 5:30-9:00 Santa Ana, Calif. P-9:00-10:00 Santa Ana, Calif. P-9:00-11:00 Erooklyn, N. Y. E-2:00-6:00 Rome, Ga. C-7:00-10:0; noon-3:00; 6:00-9:00 Kosciusko, Miss. C East Dubuque, III. C-7:00-10:15; 11:45-1:30; 5:30-9:00 Richmond, Ind. C Ludington, Mich. E-9:00-9:00 LaGrange, Ga. C-10:00-noon; 3:00-6:00 Brooklyn, N, Y. E-7:30-10:00 Brishamton, N. Y. E-7:30-10:00 Parier, Mich. E-10:00-2:00; 3:30-6:00; 7:00-10:30 Binghamton, N. Y. E-7:30-10:00 Pristol, Tenn. E-7:30-10:00 Pri
WLAC 1480 CMBK KOMA WKBW 1490 WCKY 1500 CRCS KGGFK KGGFKB KGGFKB KGGFKB KGGFKB KGGFKB KKGKY WFDV WFDV WKBD WKBDV WMPCF WOPI WPCDW	ae kild z ae kild ae kild z ak ak ak ak ak ak ak ak ak ak ak ak ak	5000 Cyc 15 5000 Cyc 5000 Cyc 100 100 100 100 100 100 100 10	C les 2 C By les 2 les 2 les 1 F C (.25) i P (.25) i 	202.6 meters Havana, Cuba. E Oklahoma City, Okla. C-6:30-mid. Buffalo, N. Y. E-10:00-1:00 201.2 meters Covington, Ky. E-7:00-mid. 199.9 meters Chicoutimi, Que. E-6:30-11:30 Santa Barbara, Calif. P-7:30-mid. Corpus Christi, Tex. C-7:00-3:00; 6:00-10:00 Moorhead, Minn. C-8:00-9:00 Tyler, Texas. C-7:00-01:30; 5:30-9:00 Scottsbuff, Neb. M-9:00-1:30; 5:30-9:00 Scottsbuff, Neb. M-9:00-1:30; 5:30-9:00 Prescott, Ariz. M-7:00-8:00 Wenatchee, Wash. P-7:00-10:00 Santa Ana, Calif. P-7:00-2:00; 4:00-9:00 Brooklyn, N. Y. E-2:00-6:00 Brooklyn, N. Y. E-2:00-6:00 Rome, Ga. C-7:00-10:00; noon-3:00; 6:00-9:00 Kosciusko, Miss. C East Dubuque, III. C-7:00-10-15; 11:45-1:30; 5:30-9:00 Richmond, Ind. C Ludington, Mich. E-9:00-9:00 LaGrange, Ga. C-10:00-noon; 3:00-6:00 Brooklyn, N. Y. E-9:00-10:00 Brooklyn, N. Y. E-9:00-10:00 </td

(Continued on page 91)

Frequency in kilocycles in second column. Night power in watts in third column. Network effliations in fourth column: C Columbia, R National Red, B National Blue, N National Red and Blue. F Canadian.

ALABAMA	Fresno KMJ 580 500 C		Twin Falls KTFI 1240 1000
Anniston AMC 1420 100	Giendale	Bridgeport WICC 600 250 C	ILLINOIS
Birmingham	KIEV 850 100	Hartford	Carthage
API 1140 5000 N		WDRC 1330 1000 C	WCAZ 1070 50
BRC 930 500 C	Hollywood	WTIC 1060 50000 R	Chicago
KBC 1310 100	KFWB 950 1000	Storrs	KYW 1020 10000
Dothan	KMTR 570 500	WCAC 600 250	WAAF 920 500
HET 1370 100	KNX 1050 25000	DELAWARE	WBBM 770 25000
Gadsden	Long Beach	Wilmington	WCFL 970 1500
JBY 1210 100	KFOX 1250 1000	WDEL 1120 250	WCRW 1210 100
Huntsville	KGER 1360 1000	WILM 1420 100	WEDC 1210 100
BHS 1200 100	Los Angeles	DISTRICT OF	WENR 870 50000
Mobile	KECA 1430 1000 N	COLUMBIA	WGES 1360 500
ODX 1410 500 C	KFAC 1300 1000	Washington	WGN 720 50000
Montgomery	KFI 640 50000 N	WJSV 1460 10000 C	WJJD 1130 20000 WLS 870 50000
SFA 1410 500 C	KFSG 1120 500	WMAL 630 250 B	WMAQ 670 5000
Muscle Shoals	KFVD 1000 250	WOL 1310 100 WRC 950 500 R	WMBI 1080 5000
NRA 1420 100	KGFJ 1200 100	WRC 950 500 R	WSBC 1210 100
ALASKA	KHJ 900 1000 C	FLORIDA	Cicero
Anchorage	KRKD 1120 500	Clearwater WFLA 620 1000 N	WEHS 1420 100
FQD 600 250	KTM 780 500	Gainesville	WHFC 1420 100
Juneau	Oakland	WRUF 830 5000	WKBI 1420 100
IFH 1310 100	KLS 1440 250	Jacksonville	Decatur
Ketchikan	KLX 880 1000	WJAX 900 1000 N	WJBL 1200 100
GBU 900 500	KROW 930 500	Miami	East Dubuque
ARIZONA	Pasadena KPPC 1210 50	WIOD 1300 1000 N	WKBB 1500 100
Jerome	KPPC 1210 50 Sacramento	WQAM 560 1000 C	Harrisburg
CRJ 1310 100	KFBK 1310 100 C	Orlando	WEBQ 1210 100
Lowell	San Bernardino	WDBO 580 250 C	Joliet
SUN 1200 100	KFXM 1210 100	Pensacola	WCLS 1310 100
Phoenix	San Diego	WCOA 1340 500	LaSalle
OY 1390 500	KFSD 600 1000 N	St. Petersburg	WJBC 1200 100
TAR 620 500 N	KGB 1330 1000 C	WSUN 620 1000 N	Peoria
Prescott	San Francisco	Tampa	WMBD 1440 500
PJM 1500 100	KFRC 610 1000 C	WDAE 1220 1000 C	Quincy WTAD 1440 500
Tucson	KFWI 930 500	WMBR 1370 100	
GAR 1370 100	KGGC 1420 100	GEORGIA	Rockford KFLV 1410 500
VOA 1260 500	KGO 790 7500 N	Americus	Rock Island
Yuma	KJBS 1070 100	WENC 1420 100	WHBF 1210 100
UMA 1420 100	KPO 680 50000 N	Athens	Springfield
ARKANSAS	KTAB 560 1000	WTF1 1450 500	WCBS 1210 100
Blytheville	KYA 1230 1000 N	Atlanta WGST 890 250 C	WTAX 1210 100
LCN 1290 100	San Jose KOW 1010 500	WGST 890 250 C WJTL 1370 100	Tuscola
Fayetteville		WSB 740 50000 N	WDZ 1070 100
UOA 1260 1000	Šanta Ana KREG 1500 100	Augusta	Urbana
Fort Smith	Santa Barbara	WRDW 1500 100	WILL 890 250
FPW 1210 100	KDB 1500 100 C	Columbus	Zion
Hot Springs	Stockton	WRBL 1200 100	WCBD 1080 5000
THS 1040 10000 N	KGDM 1100 250	LaGrange	INDIANA
1500 100	KWG 1200 100 C	WKEU 1500 100	Anderson
Jonesboro		Macon	WHBU 1210 100
BTM 1200 100	COLORADO	WMAZ 1180 500	Elkhart
Little Rock	Alamosa	Rome	WTRC 1310 50
ARK 890 250	KG1W 1420 100	WFDV 1500 100	Evansville
GHI 1200 100	Colorado Springs	Savannah	WGBF 630 500
LRA 1390 1000 C	KVOR 1270 1000 C	WTOC 1260 500 C	Fort Wayn
Texarkana	Denver	Thomasville 100	
CMC 1420 100	KFEL 920 500	WQDX 1210 100	WGL 1370 100 WOWO 1160 1000
CALIFORNIA	KFXF 920 500	Hilo	
	KLZ 560 1000 C KOA 830 12500 N	KWFV 1210 100	Gary WIND 560 1000
Bakersfield		Honolulu	
ERN 1200 100 C		KGMB 1320 250 C	Hammond WWAE 1200 100
Berkeley	Grand Junction	KGU 750 2500 N	
RE 1370 100	KFXJ 1200 100	IDAHO	Indianapolis
Beverly Hills	Greeley	Boise	WFBM 1230 1000 WKBF 1400 500
MPC 710 500	KFKA 880 500	KIDO 1350 1000	
Burbank	Lamar	Idaho Falis	Muncle
ELW 780 500	KIDW 1420 100	KID 1320 250	WLBC 1310 100
El Centro	Pueblo	Nampa	Richmond
XO 1500 100	KGHF 1320 250	KFXD 1200 100	WKBV 1500 100
Eureka	Yuma	Pocatello	South Bend WFAM 1200 100
	KGEK 1200 100	KSEI 890 250	WFAM 1200 100

1

_		
WSBT	1230 500 C	
WBOW	Haute 1310 100	
West WBAA	Lafayette 1400 500	
	IOWA	L
Ame WOI	640 5000	
Boon	e .	
Cart	1310 100 er Lake 1420 100	
Ceda	r Rapids	
Cour	cii Bluffs	
KOIL Deco	1260 1000 B rah	1
Deco KGCA KWLC	1270 100 1270 100	Ŀ
Des M	Noines	
WOC-	1270 100 1270 100 Molnes 1370 100 B 1000 50000 R	
WHO lowa WSUI		
WSUI Mars	880 500 halltown	
Ottu	halltown 1200 100	Ŀ
WIAS	mwa 1310 100 andoah 890 500	
KFNF	890 500	Ŀ
KMA Slouv	930 500	Ľ
KSCJ Wates WMT	1330 1000 C	
		ŀ
H Abiie	ANSAS	
KFBI	1050 5000	
Coffe KGGF	1010 500	Ι,
KGNO	1340 250	5
Coffey KGGF Dodg KGNO Kansa WLBF Lawre	as City 1420 100	;
Lawre KFKU WREN	nce 1220 500	
Manh	1220 1000 B	•
KSAC	580 500	۱.
KSAC Topel WIBW Wichl	580 1000 C	١.
KFH	1300 1000 C	Ι,
	NTUCKY	
Covin WCKY Louis	1490 5000B	
Louis' WAVR	Ville 940 1000	
WAVE WHAS WLAP	940 1000 820 50000 C 1200 100	1
Paduo	ah 🛛	1
WPAD	1420 100	
LO Baton WJBO	VISIANA Rouge	1
WJBO Monre	1420 100 ne	
Monro KMLB	1200 100	7
WBBX	1200 100	1
w DSU W JBW	1250 1000 C 1200 100 1320 500 N	7
WSMB WWL	850 10000 I	۷
Shreve KRMD KTBS	eport 1310 100	V
KTBS	1450 1000 N	۷

KWEA KWKH	1210	100 10000	
	MAIN	10000 E	
Augus WRDO	1370	100	
Bango WABI WLBZ Portia	1200 620	100 500 C	
WCSH	940	1000 R	
		250 e	
Presq WAGM MA	1420 RYLA	100 ND	
WBAL	1060	10000 B	
WCAO WCBM	600 1370	250 C 100	
WFBR	1270 erlan	500 R	ļ
WCAO WCBM WFBR Cumb WTBO Hager	1420	100	
Hager WJEJ MASSA	1210	100 SETTS	1
Babso	n Par	k	
WBSO Boston WAAB WBZ WEEI WHDH WNAC Cholse	920	500	
WAAB WBZ	1410 990	500 C 50000 B	
WEEI	590 830 1230	1000 R 1000	Ì
WNAC Chelse	1230 a	1000 C	
Fall R		500 100	
Fall R WSAR Lexing	1450 ton	250	
WLEY New B	1370 edfor	100 d	
WNBH	1310 field	100	ĺ
WSAR Lexing WLEY New B WNBH Spring WBZA WMAS	990 1420	1000 B 100 C	
Worce WORC WTAG	ster 1280	500 C	ĺ
WTAG	580 HIG	720 K	
Battle	Croel	k 50	I
WELL Bay CI WBCM	ty 1410	500	l
Calum WHDF	1370	100	
Detroit WJBK WJR	1370 1370	50	l
	1370 750	10000 B	l
WWJ WXYZ	1420 920 1240	1000 R	
East L WKAR	1240 ansin 1040	1000 8	
Flint			
WFDF Grand	1310 Rapi	100 ds	
Grand WASH WOOD	Rapl 1270 1270	500 500	
Ironwo WJMS Jackso WIBM	od 1420	100	
Jackso WIBM	n 1370	100	
wkzo	azoo 590	1000	
Lapeer WMPC	1500	100	
Luding WKBZ	ton 1500	100	
WBEO	1310	100	
Royal (Dak 1310	50	

MU	NNES	OTA
Mil Fergu	is Fal	ls
Fergu KGDE Minn WCCO WDGY WLB WRHM	1200	100
WCCO	810	50000 C
WDGY	1180	1000 1000
WRHM	1250	1000
Moor KGFK	head 1500	
North WCAL	ifield	100
WCAL	1250 aut	1000
KSTP	1460	10000 N
Mis	SISS	IPPI
Greer WKFI	1210	100
Hattl WPFB	esbur	g 100
Jacks	on	
WJDX	1270	1000 N
Kosci WHEF	1500	100
Laure WAML	1310	100
Merid	llan	
WCOC	880	500 City
Missi WGCM	1210	100
Tupel WJEM	9 90	500
MI	SSOI	500 Rí
Cape	Girar	deau
Cape KFVS Colun	1210 1 bla	100
KFRU	630	500
Jeffers WOS	630	500
Jopiin WMBH	1420	100
M	is City	Y
	950 1370	1000 C 100
KWKC WDAF WHB	610 860	1000 R 500
WOQ	1300	500 1000
ST. JO	seph	
KFEQ St. Lo	680 uls	2500
St. Lo KFUO KMOX	uls 550 1090	500
KSD	550	50000 C 500 R
KF00 KMOX KSD KWK WEW	550 1350 760	1000 B
WIL	1200	1000 100
WIL Spring KGBX KTWO	field	100
KTWO	560	500
MO Billing		A
KGHL	95 0	1000 N
Butte KGIR	1360	500 N
	Falls 1280	1000
Kalisp	ell	
KGEZ	1310	100
Missou KGVO	1200	100
Wolf P KGCX	oint 1310	100
NEB	RASI enter	KA
KMMI	740	1000
Kearn KGFW	ey 1310	100
LINCOL		1
KFAB	770	5000 C

KFOR	1210	100
Norf WJAG	1060	1000
Nort KGNF	1430	.e 500
Oma WAAW	na 660 590	500
WOW Scoti	tsbluff	1000 R
KGKY York KGBZ	1500	100
	930 NEVAD	500
Las V	/egas	
KGIX Reno	1420	100
KOH	1380 HAMP	500 C
Man WFEA	thester 1430	500 C
Ports	mouth	
	740	250 Sey
Asbu	W JER	SET K
WCAP	1280	- 500 A
Atlar WPG	1100	5000 C
CAme WCAM	den 1280	500
Jerse WAAT WHOM	y City 940	300
WHOM Newa		250
Newa WGCP WNEW	1250 1250	1000
WNEW WOR	1250 710	1000 5000
Red E		
WJBI Trent WTNJ	ton	100
WINJ Zarep WAWZ	1280 hath	500
WAWZ NEW	1350 V MEX	250
Albuc	querqu	8
KGGM KOB	1230 1180	250 10000
Clovis KICA	1370	100
Roswa KGFL	1370	100
NE Alban	W YOF	RK
WOKO Aubu	1430	500 C
WMBO	1310	100
WINBE	amtor 1500	100
Brook WARD WBBC	lyn	
WARD WBBC	1400	500 500
WBBR	1400 1300 1500	1000
WCNW WLTH	1500	100 500
WMBO.	1400 1500	100
wvfw ⁻	1400	500
Buffal WBEN WEBR	900	1000 R
WEBR WGR	900 1310 550	100 1000 C
WKBW	1480	5000 C
WSVS Canto	1370 n	50
WCAD	1220	500
Cheste WGNY Fimire	1210	100
Elmira WESG	a 1040	1000

Freeport WGBB 1210 100	w
WGLC 1370 100 C	W W W
Jamestown WOCL 1210 50	Ŵ
New York	1
WBNX 1350 250	
WBOQ 860 50000 WEAF 660 50000 R	W
WEVD 1300 500	
WFAB 1300 1000 WHN 1010 250 WINS 1180 500	W
WHN 1010 250 WINS 1180 500 WJZ 760 50000 B	
WLWL 1100 5000	%
WNYC 810 500	14
WOV 1130 1000 WPAP 1010 250	W
WOAO 1010 250	W
	1
Rochester WHAM 1150 50000 B WHEC 1430 500 C	M
WHEC 1430 500 C	พ
WNBZ 1290 50	
WHEC 1430 500C Saranac Lake WNBZ 1290 50 Schenectady WGY 790 50000 R	ĸ
Syracuse TUEDI 1260 1000 C	k
Troy Table Table	W
WHAZ 1300 500 Tupper Lake	K
WHAZ 1300 500 Tupper Lake WHDL 1420 100 Utica 100 100 100 WIBX 1200 100 100	K K K
WIBX 1200 100 White Plains	
White Plains WFAS 1210 100 Woodside WWRL 1500 100	V
WWRL 1500 100 NORTH CAROLINA	K
Asheville	F
Charlotte	F
WBT 1080 50000 C WSOC 1210 100 N	
Greensboro	F
WBIG 1440 500 C	ŀ
Greenville WEED 1420 100 Raleigh	F
Raleigh WPTF 680 5000 N	F
Wilmington WRAM 1370 100	F
Winston-Salem WSJS 1310 100 C	ŀ
NORTH DAKOTA	F
Bismarck KFYR 550 1000 N	H
Devils Lake KDLR 1210 100	
Fargo WDAY 940 1000 N	1,
Grand Forks KFJM 1370 100	1.
Mandan KGCU 1240 250	1
Minot	1
KLPM 1240 250 OHIO	1
Akron	1
WADC 1320 1000 C WJW 1210 100	1.

Canto WHBC	n 1200	100
Cincin	inati	
Cincin WFBE WKRC WLW	1200 550	100 1000 C
WLW	550 700 5	0000 N
WSAI Clevel	1330	1000 R
WILLAR	1450	500 B
WHK WJAY	1390	1000 C 500
WTAM	610 1070 5	0000 R
Colun WAIU	1 bus 640	500
WCAH WOSU	1430	500 C
WOSU	640 1430 570 1210	750 100
Dayto WSMK	n 1380	200
WSMK Moun WHBD	t Orab 1370	
WHBD Toled	1370 0	100
Toled WSPD	1340	1000 C
Youn WKBN	stown 570	500 C
Zanes	ville	100
WALR	1210	
EIK C	LAHO№ ity	
WALR OKI Eik Ci KASA Enid	1210	100
		100
KCRC Norm WNAD Okiah KFXR KGFG KOMA WKY Ponce	an 1010	500
Oklah	oma C	100
KGFG	1310 1370	100
KOMA	1480 900	5000 C 1000 N
WKY Ponca WBBZ	900 City	
Shaw	1200 nee	100
K(JHH	1420	100
Tulsa KTUL KVOO	1400	250
		25000 N
0 Corva	REGO	N
VOAC	550	1000
KORE	ne 1420	100
Klam	ath Fa	lls
Mars	hfield	100
KORE KORE Klam KFJI Mars KOOS Medf	1370	100
KMED	1.510	100
Porti KALE KBPS KEX KFJR KGW KOIN KWJJ KXL PENI	and 1300	500 C
KBPS	1420	100
KFJR	1180 1300	5000 N 500
KGW	620 940	1000 N 1000 C
KWJJ	1060	500
KXL	1420	100
PENI Aller	NSYLV/ itown	ANIA
Allen WCBA WSAN	1440	250 250
Alto	na	
WFBG Carb	1310 ondale	100
WNBW	1200	10
Erie WLBW	1260	500 C
WLBW Glen WIBG	side 970	
WIBG	9/0	100

Grove City	
Grave City WSAJ 1310	100
Harrishurg	000
WHP 1430	500 C
WKBO 1200	100
Hazelton WAZL 1420	100
Johnstown	
WJAC 1310	100
Lancaster WGAL 1310	100
WGAL 1310 WKJC 1200	100
Philadelphia WCAU 1170 5	0000 C
	100
WFI 560	500 R
WDAS 1370 WFI 560 WHAT 1310 WIP 610 WLIT 560 WPEN 1500	100 500 C
WLIT 560	500 R
WPEN 1500	100 250
WTEL 1310	100
WPEN 1500 WRAX 1020 WTEL 1310 Pittsburgh KDKA 980 5	
KDKA 980 5 KQV 1380 WCAE 1220	0000 B 500 C
KOV 1380 WCAE 1220 WJAS 1290	1000 R
WJAS 1290	1000 C
Donding	100
WEEU 830 WRAW 1310 Scranton WGBI 880	1000
WRAW 1310	100
WGBI 880	250
	250
Silverhaven WNBO 1200	100
Sunbury WKOK 1210	
Wilkes-Barre	100
WBAX 1210	100
WBRE 1310	100
WBRE 1310 Williamsport WRAK 1370 York	100
York WORK 1000	1000
Manila	E3
KZEG 618.5 KZRM 618.5 5	1000
ICDICIO 010.5 C	0000
	co
San Juan WKAQ 1240	1000
1290	500
RHODE ISL	AND
Providence WEAN 780	500 C
WEAN 780 WJAR 890	500 C 500 R
WJAR 890 WPRO 1210	100
SOUTH CAR	DLINA
Charleston WCSC 1360	500
Columbia	
	500 N
Greenville WFBC 1200	100
Spartanburg WSPA 1420	⁶ 100
	100 (OTA
Brookings	
Brookings KFDY 550	500
Huron	250
I KGDY 1340	
KGDY 1340 Pierre	
Huron KGDY 1340 Pierre KGFX 630 Rapid City WCAT 1200	200

Sloux KSOO	Falls	
Vermil	llon	1000
Vermil KUSD	890	500
Water	town 1210	100
KGCR Yankt WNAX	on 570	1000 C
TEN	NESS	EE
Bristo WOPI	1500	100
Chatta	nooga	
WDOD Jackso WTJS	1280 n	1000 C
WTJS	1310 Ille	100
WNOX	560	1000 C
Memn	his	100
WHBQ WMC	1370 780	100 500 N
WDDC	1430	500
WREC Nashv WLAC	600 Ille	000 0
WSM	650 3	5000 C 50000 N
Spring	fleid	100
т	EVAC	100
Amari	llo	1000
Amari KGRS WDAG	1410 1410	1000 1000
KNOW	1500	100
Beaur KFDM	nont 560	500
Brown	sville	
KWWG Colleg WTAW	1260 e Stat	500 ion 500
WTAW Corpu	1120 Is Chr	500 Isti
KGFI	1500	100
Dalla: KRLD	1040	10000 C
WFAA WRR	800 1280	50000 N 500 C
Dubli KFPL	1310	100
El Pa KTSM	50	100
	1.510	100
Fort V	Worth 1370 1240	100
Fort V KFJZ KTAT WBAP	1240 800	1000 C 50000 N
Galve	ston 1370	
Greer	nville	100
KFPM Harli	1310 ngen	15
Harli KRGV	1260	500
Hous KPRC KTRH	920 1120	1000 N
KXYZ	1440	1000 C 250
Lubb KEYO	ock 1310	100
San A KGKL	1370	100
San /	Antoni	0
KABC	Antoni 1420 1370 1370 1290	$100 \\ 100$
KONO	1370	100 1000 C
WOAI	1190	50000 N
Tyler KGKB	1500	100
Waco		
WACO	1420	100 C

	-		T
Wichi KGKO	570	250	ĺ.
	JTAH		1
Ogden KLO	1400	500 C	1
Salt L KDYL KSL	аке С 1290 1130	lty 1000 N 50000 C	
	RMO		1
Burlin WCAX	gton 1200	100	'
Rutia WSYB	nd 1500	100	1
WSYB St. All WQDM	1370	100	1
Spring WNBX Water	1260	250	1
Water WDEV	550	500	1.1
	RGIN	IA	۱,
Arling NAA	690	1000	,
Charle WEHC	1350	500	1
Danvil WBTM	le 1370	100	1
Lynch WLVA	burg 1370	100	
Newpo WGH	1310	ws 100	1
Norfol WTAR Peters WPHR	K 780	500 C	
WPHR	1200	100	
Richm WBBL WMBG	1210	100	
WRVA	1110	100 C 5000 N	1
Roano WDBJ WRBX	ke 930	250 C 250	\
	1410		
WASH Aberde		TON	F
KXRO Bellins	1310	100	
KVOS -	1200	100	
KFBL	1370	50	
Olymp KGY Pullma		100	
KWSC	1220	1000	
Seattle KJR KOL KOMO KPCB KRSC	970 1270	5000 N 1000 C	0
KOMO	020	1000 N	
KPCB	650 1120	100 100	(
	1220	1000	
KVL KXA	650 1120 1220 1370 760	100 250	
SDOKAL	16 1120	100	
KFPY	1120 1340 1470	1000 C	0
KHQ	1470 590	5000 N 1000 N	8
Tacom KMO	a 1330 570	250	
KVI Walla	Walla	500 C	8
Wenat	1370 chee	100	6
Yakim	1500 a	100	
KIT	1310	100	C

WEST		GINIA
Bluef	1410	250
WOBU	eston 580	750
Fairn WMMN	1 0nt 890	250
Hunt WSAZ	1ngtor 1190	1000
Whee WWVA	ling 1160	
WTAQ	SCON Claire 1330 du La 1420	1000 C
KFIZ	1420	100
Greer WHBY	1200	100
Janes WCLO LaCro WKBH	1200	100
WKBH	1380	1000 C
Madi WHA WIBA	940	1000
Manii	1280 towoc	500 N
WOMT Milwa WHAD WISN	1210 aukee	100
WHAD WISN	1120 1120	250 C 250 C
WIAD WISN WTMJ Poyne WIBU	620 ette	1000 N
WIBÚ Racin	1210 e	100
Racin WRJN Shebo	1370 ygan	100
Sheba WHBL Steve	1410 ns Pei	500 nt
WLBL Super	ns Poi 900 1or	2500
Super WEBC	1290	
W ۱ Caspe KDFN	romii r	
		500
A 1	NAD.BERT	A A
Calga CFAC	ry 930	100
CFAC CFCN CJCJ	930 1030 690	10000 F 100
Edmo	nton 1120	100
CKUA	580	1000 F 500
Lethri CJOC	idge 840	100 F
BRT. Chilli		MBIA
CHWK	780	100 F
Kaml CFJC	oops 1310	100 F
Kelow	/ na 1210	50 F
Trail	1200	50
Vanco CJOR CKCD CKFC CKFC CKMO CKWX CRCV	600	500
CKCD CKFC	1010 1410	100 50
CKMO	1410 1010	100 100
CRCV	1100	1000 F
CFCT	1450	50
Brand	NITO	BA
Brand CKX	1450	500 F

Midd	lochur	rh	I
CJRC	1echur 1390	100	L
Winn CKY	910	5000 F	
NEW I	BRUNS		
Frede CFNB	1030	500 F	Ľ
St. Ja CFBO	ohn 1210	100 F	ł
CHPR	1370	100	
NOV Glace VAS	A SCO Bay		
VAS Halif	685 av	2000	
CHNS	1050	500 F	
Sydn CJCB Wolfy CKIC	880	50 F	
CKIC	1010	50	
Yarm CJLS	1310	100	
0	NTARI	0	
Bran CKPC 10-BQ	930	100 F	
10-BQ Chat	1200 ham	15	
CFCO	600	50 F	
Coba CKMC	1210	50	
	Willian 780	50 F	
Hami CHML CKOC	1010	50	
CKOC	1120 ton	500 F	
Kings CFRC Kirkl CJKL Kitch	1510	100	
CJKL	and La 1310	ke 100	
Kitch CKCR	ener 1510	100	
CEPL	on 730	100 F	
North	Bay	100 F	
Ottav CKCO CRCO	va 1010	1001	
CRCO	880	1000 F	
Presc CFLC	930	100	
UNID	atharii 1200	1es 100	
10 472	ford 1200	15	
Sudb CJCS Timn CKGB	ury 780	500	
Timn	nins		
Toror	1420 ito	100	
CFRB	690 1 580	10000 C 100	
CKCL CRCT CKNC	960 1030	5000 N 100 F	
Wind	sor		
Wing 10-BP	840 ham	5000 C	
10-BP	1200		
PRINC	SLAND	VARD	
CFCY CFCY CHCK	ottetov 630	vn 500 F	
CHCK	1310	50	
Sumr CHGS	1120	50 F	
Q	UEBEC	;	
Chico CRCS	utimi 1500	100 F	
Hull CKCH	1210	100 F	
Citon	1210	TOOL	

	-	_	-
Mont VE9EK	magny 1195	10	
Mont CFCF CHLP	600	500	N
CFCF CHLP CKAC CRCM	1120	100	14
CKAC	730	5000	С
	910	5000	ř
CINC	Carlisle		_
CHNC	1210	100	F
Queb CHRC CKCV	5 930	100	F
CKCV	1310	50	-
SASK	ATCHE	WAN	
Canoi	ra		
10-BU	1200	15	
Flemi CJRW	ing 540	500	F
Moose CHAB	e Jaw	000	•
CHAB	1200	100	_
CJRM	540	1000	F
Princ CKBI	e Alber 1210	t 100	
Regin	1210	100	
Regin CHWC	1010	500	F
CKCK	1010	500	F
Saska	toon 1230		
CFQC	1230	500	F
Yorkt CJGX	630		E.
		500	
NEWF	OUND	LAND	
VOAC	hn's 800	40	
VOAS	810	100	
VOGY	810 950	100 75	
VOKW	1085	- 30	
VONF	1195 900	400	
		500 DN	
St. Pi	erre		
St. Pi FQN	erre 572	250	
FQN	erre 572	250	
FQN CE	572	250	
FQN CE AM	572 572 NTR/	250 AL CA	
FQN CE AM COS	S72 572 NTR/ IERI(250 AL CA	
FQN CE AM COS	S72 572 NTR/ IERI(250 AL CA CA	
FQN CE AM COS Carta TIFS	572 572 NTR/ IERI(TA RI 1441 1014	250 AL CA	
FQN CE AM COS Carta TIFS	572 572 NTR/ IERI(TA RI 1441 1014	250 AL CA CA 7.5 30	
FQN CE AM COS Carta TIFS	572 572 NTR/ IERI(TA RI 1441 1014	250 AL CA CA 7.5 30	
FQN CE AM COS Carta TIFS	572 572 NTR/ IERI(TA RI 1441 1014	250 AL CA CA 7.5 30 75	
FQN CE AM COS Carta TIFS	erre 572 NTR/ IERIC TA RI 50 1441 1014 0se 912 833 1450	250 AL CA 7.5 30 75 7.5 7.5 7.5	
FQN CE AM COS Carta TIFS	erre 572 NTR/ IERI(itari go 1441 1014 912 833 1450 714 800	250 AL CA CA 7.5 30 75 7.5 7.5 7.5 30 75	
FQN CE AM COS Carta TIFS	erre 572 NTR/ IERI(itari go 1441 1014 912 833 1450 714 800	250 AL CA 7.5 30 75 7.5 7.5 30 75 7.5 30 75 500	
FQN CE AM COS Carta TIFS	erre 572 NTR/ IERI(TA RI 07A RI 07A RI 1014 912 833 1450 714 800 1100 2 550 0	250 AL CA 7.5 30 75 7.5 7.5 30 75 7.5 30 75 500 250	
FQN CE AM COS Carta TIFS TIGA San J TICR TIEA TIEA TIEP TIFB TIFB TIFD TIRCA TISO TITV	erre 572 NTR/ IERI(iTA RI 005e 912 833 1450 714 800 1100 8 550 2 999	250 AL 7.5 30 75 7.5 7.5 7.5 30 75 50 75 50 7.5	
FQN CE AM COS Carta TIFS TIGA San J TICR TIEA TIEA TIEP TIFB TIFB TIFD TIRCA TISO TITV	erre 572 NTR/ IERI(TA RI 07A RI 07A RI 1014 912 833 1450 714 800 1100 2 550 0	250 XL 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30	
FQN CE AM COS Carta TIFS	erre 572 NTR/ IERI(TA RI 0 1441 1014 0 5 8 33 1450 714 8 00 1100 5 550 2 999 8 614	250 AL 7.5 30 75 7.5 30 75 500 7.5 30 75 30 75 30	
FQN CE AM COS Carta TIFS TIGA TIFS TIGA TIEP TIFS TIFS TIFS TIFS TIFS TIFS TIFS TIFS	erre 572 NTR/ IERIC iTA RI go 1441 1014 05e 912 833 1450 714 800 1100 550 2 999 869 614 XEMA	250 AL 7.5 30 75 7.5 30 75 7.5 30 75 7.5 30 75 7.5 30 7.5 30 7.5 250 7.5 250 7.5 250 7.5 250 7.5 250 7.5 250 7.5 275 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7	
FQN CE AM COS Carta TIFS TIGA TIFS TIGA TIEP TIFS TIFS TIFS TIFS TIFS TIFS TIFS TIFS	erre 572 NTR/ IERIC iTA RI go 1441 1014 05e 912 833 1450 714 800 1100 550 2 999 869 614 XEMA	250 AL CA 7.5 30 75 7.5 30 75 500 7.5 30 7.5 30 7.5 30 7.5 30 7.5 250 250 250 250 250 250 250 250 250 25	
FQN CE AM COS Carta TIFS TIGA San J TICR TIEP TIFB TICP TIFB TICP TIRCA TIEP TICP TICR TICR TICA TICR TICA TICA TICA TICA TICA TICA TICA TICA	erre 572 NTRA IERIC 1014 1014 05e 912 912 933 1450 714 833 1450 714 100 5 550 9 999 869 614 TEMA emala 1350 1380	250 AL CA 7.5 30 75 7.5 30 75 7.5 30 75 7.5 30 75 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 7.5 30 7.5 7.5 30 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	
FQN CE AM COS Carta TIFS TIGA TIGA TIEP TIFS TIGA TIEP TIFB TIFB TIFB TIFB TIFB TIFCA TISO TITV TIXA Guat TGW TGW TGW TGW TGW Carta San S TIV TIXA CARCS Carta San S TIGA TIFS TIGA TIFS TIFS TIFS TIFS TIFS TIFS TIFS TIFS	erre 572 NTR/ IERIC TA RI 1014 05e 912 833 1450 714 800 1100 £ 550 2 999 869 614 550 2 999 869 614 4 1350 1380	250 AL CA 7.5 30 7.5 300 7.5 300 7.5 300 7.5 LA City 5000 75 COR	
FQN CE AM COS Carta, TIFS TIGA TIEA TIEA TIEA TIEP TIFA TIEP TIFA TIEP TIFA TIEP TIFA TIEP TIFA TIEP TIFA TIEP TIFA TIEP TIFA TIES TIEA TIES San J. San S. San San San San San San San San San San	erre 572 NTR/ IERIC IERIC 1441 1014 912 833 1450 714 800 1450 714 800 1100 2 550 2 999 614 NTEMA emala 1350 1380 ALVAD alvadoa	250 AL CA 7.5 30 75 7.5 7.5 7.5 30 75 7.5 30 75 7.5 30 75 7.5 30 75 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	
FQN CE AM COS Carta TIFS TIGA San J. TIGA TIEA TIEA TIEA TIEA TIFD TIFD TIFD TIFD TIFO TIFV TIRCA TIFV TIRV TIVL TIVL TIVL TIVL TIVL TIVL San S. San S. RUS	erre 572 NTR/ IERIG TA RI 1014 05e 912 833 1450 714 800 714 800 714 800 714 800 999 869 614 ATEMA i380 1380 ALVAD alvado 664	250 XL XA 7.5 30 75 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 500 XL X X X X X X X X	
FQN CE AM COS Carta TIFS TIGA TIGA TIEP TIFB TIGP TIFB TIGP TIFB TIGP TIFB TIGP TIFCA TISO TITV TIXA Guat TGW TGW TGW TGW TGW TGW TGW TGW	erre 572 NTR/ IERIG TA RI 1014 05e 912 833 1450 714 800 714 800 714 800 714 800 714 800 1100 869 614 1350 1380 1380 ALVAD 664 EXIC	250 AL CA 7.5 30 75 7.5 30 75 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 30 7.5 500 0 0 0 0 0 0 0 0 0 0 0 0	
FQN CE AM COS Carta TIFS TIGA TIEA TIEP TIFB TIFB TIFD TIFD TIFD TIFD TIFD TIFO TIFV TIVV TIVV TIVV TIVV TIVV TIXA GUAT GUAT GUA GUAT TGX ELS San S RUS MI AGUAS	erre 572 NTR/ IERIC TA RI 1441 1014 05e 912 833 1450 714 833 1450 714 833 1450 714 840 869 614 1350 1380 ALVAD alvadoa 664 EXIC CCALIE CCALIE	250 XL CA 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	5
FQN CE AM COS Carta TIFS TIGA TIEA TIEP TIFB TIFB TIFD TIFD TIFD TIFD TIFD TIFO TIFV TIVV TIVV TIVV TIVV TIVV TIXA GUAT GUAT GUA GUAT TGX ELS San S RUS MI AGUAS	erre 572 NTR/ IERIC TA RI 1014 014 1014 912 833 1450 714 800 1100 550 2 550 2 959 869 614 1350 1380 ALVAD alvadon 664 EXIC CALLE ccallent	250 NL CA 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 800 7.5 00 Chty 500 75 500 0 NTE:	5
FQN CE AM COS Carta TIFS TIGA TICR TICR TICR TICR TICR TICR TICR TICR	erre 572 NTR/ IERIG TA RI 1014 05e 91441 1014 05e 91441 800 1140 550 2 999 869 614 1380 1380 ALVAD alvadon 0 ALVAD alvadon CALIE CALIE CALIE 805	250 XL CA 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	
FQN CE AM COS Carta TIFS TIGA TIGA TIEP TIFB TIGP TIFB TIGP TIFB TIGA TIFB TIGA TIFB TIGA TIFB TIGA TIFS TIFA TIFS TIFA TIFS TIFS TIFS TIFS TIFS TIFS TIFS TIFS	erre 572 NTR/ IERI(TA RI 1014 912 833 1450 912 833 1450 714 800 1100 559 259 869 61 1380 1380 ALVAD alvadon 664 5380 1380 ALVAD calient 805 califo ali	250 AL CA CA 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	
FQN CE AM COS Carta TIFS TIGA TIEA TIEP TIFB TIFB TIFD TIFD TIFD TIFD TIFD TIFD TIFD TIFD	erre 572 NTR/ IERI(TA RI 1441 1014 05e 912 833 1450 714 100 £ 550 2 999 614 1350 1380 ALVAD 664 EXIC CALIE calient 805 ALIFO all 560	250 XL CA 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	
FQN CE AM COS Carta TIFS TIGA TIEA TIEP TIFB TIFB TIFD TIFD TIFD TIFD TIFD TIFD TIFD TIFD	erre 572 NTR/ IERI (TA RI 1014 1014 912 833 1450 1104 805 84 80 80 80 80 80 80 80 80 80 80 80 80 80	2500 AL CA 7.5 30 75 7.5 30 7.5 500 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	
FQN CE AM COS Carta TIFS TIGA TIEA TIEP TIFB TIFB TIFD TIFD TIFD TIFD TIFD TIFD TIFD TIFD	erre 572 NTR/ IERI(TA RI 1441 1014 05e 912 833 1450 714 100 £ 550 2 999 614 1350 1380 ALVAD 664 EXIC CALIE calient 805 ALIFO all 560	250 AL CA CA 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	

[78]

CHIHUAHUA Chihuahua XEFI 1260 250 NUEVO LEON Monterrev XEF 11260 250 CMUEVO LEON XEF 1122 250 CMUEVO LEON CMUE 1327 30 CMUEVO LEON CMUE 1320 30 CMUEVO LEON CMUE 1330 45 CMUEVO LEON CMUE 1333 45 CMUE 925 CMUE 1333 45 CMUE 925 CMUE 1333 45 CMUE 926 CMUE 1205 CMUE 333 CMUE 1205 CMUE 333 45 CMUE 333 45	15 75
Chihuahua Monterrey Chifu ahua Chifu abua Chifu abu	150 5000 500 1400 1000 30 30 5 100 15 75
XEFI 1260 250 XEFJ 1010 CMJE 240 50 CMDE 625 Juarez XEFJ 1000 100 CMJE 1240 50 CMDE 625 XEFV 1015 500 XEFJ 1000 100 CMJE 526 CMDE 625 XEFV 1015 500 XET 690 500 CMGE 1375 30 CMO 630 CMDE 625 CMAE CMO 630 CMO CMO 630 CMO CMMS S00 CMO CMAS S00	150 5000 500 1400 1000 30 30 5 100 15 75
Juarez XEFy 1000 1000 Constraints CMLR 730 CMLR	5000 500 1400 1000 30 5 100 15 75
XEFV 1400 100 XEF 1132 230 Cardenas XEJ 1015 500 XET 690 500 CMW 530 COAHUILA PueBLA PueBLA CMJ CMW 530 Satilio XET 630 50 CMW 500 Satilio QUERETARO CMJH 1135 500 CMGB 1235 XET 1380 125 QUERETARO CMHJ 1125 60 CMGF 971 YER 735 150000 XEFS 1000 40 CMHL 1290 20 CMGF 971 XEF 1380 125 XEFS 1000 40 CMHL 1290 20 CMGF 971 XER 735 150000 XEAC 1295 100 CMHL 1200 100 Moron CMGF 930 Sant Luis Potosi CMGA 834 100 Santalago CMKC 1300 20 <td< td=""><td>500 1400 1000 30 30 5 100 15 75</td></td<>	500 1400 1000 30 30 5 100 15 75
XEJ 1015 500 XET 690 500 CMGE 1375 30 CMW 595 COAHUILA Piedras Negras XEPN 985 75000 XET 630 50 CMGE 1375 30 CMW 595 Saltillo 0 QUERETARO Queretaro CMJI 11335 45 CMGE 875 VEID 1380 125 XEFS 1000 40 Queretaro Queretaro CMHI 1120 CMGE 820 Villa Acuna XEF 1380 125 SAN LUIS POTOSI XEA Calon CMHI 1200 100 CMGF 971. Mexico City XEFA 1030 100000 XEAF 990 750 Calon CMKL 1220 CMHI 11037 Santage XEFA 1250 S00 XEAF 990 750 CMKL 13300 20 CMKC 1037 Santage XEFA 1250 S00 XEAF 990 750 CMAKLIPAS CMKL	1400 1000 30 5 100 15 75
COAHUILA Piedras Negras XEPN 585 75000 XEX Puebla XETH 860 100 Ciego de Avita CMX 875 CMX 875 Matanzas XEN 585 75000 Yuebla XETH 860 100 Ciego de Avita CMI H 1150 50 CMX 875 Matanzas XEN 1000 40 QUERETARO Queretaro CMI H 1150 50 CMGB 1205 XET B 1380 125 XEFS 1000 40 CMGH 1205 CMGF 971. XEF C 735 150000 XEFS 1000 40 CMHU 1220 20 CMGF 1040 XEF Z D. F. SONCRA Colon XEA 1090 100 CMA 834 100 CMGF 1245 XEF J 1030 10000 XEAF 990 750 CMHK 1225 50 CMKI 1030 20 Matanzas XEF J 1370 100 XEF 990 750 XEAR 1450 7.5 CMKJ 1300 20 DOMINIC XEF J 1370 100 XEF 985 1000 XEAR 1450 7.5 CMAF 680 1000 CMAF 680 1000 XEN 711 1000 Reynosa XEAW 965 10000 CMBD 965 250 SanteO 1052 SanteO 1052 XEE W 830 500 XEFW 1280 70 CMBG 1052 225 HIH 1395 HIH 1395 XEE W 830 500 XEFW 1280 70 CMBK 1445 15 HIJ 1195 XEE W 1280 70 XEFW 1280 70	1000 30 30 5 100 15 75
COAHULA Piedras Negras XEPN PUEBLA S31 (Matarzas CM 4 (Matarzas) CM 6 (Matarzas)	30 30 5 100 15 75
Piedras wegras Puebla CMGN 11335 45 CMGB 1205 Saltillo XETH 860 100 CMJD 11335 45 CMGB 1205 Saltillo QUERETARO CMJD 11335 45 CMGB 1205 XEL 1000 40 Queretaro Queretaro CMJD 11125 60 CMGF 971. XETB 1380 125 XEFS 1000 40 XEFS 1000 40 CMHU 1125 60 CMGF 971. XER- 735 150000 XEAC 1295 100 San Luis Potosi CMHU 1200 100 CMJP 1360 Piaar del R XEA Nogales Cuerces CMHK 1225 50 Santa Clarz CMKC 1034 XEF 1030 10000 XEAF 1990 750 XEAF 1450 7.5 CMHK 1225 50 Santa Clarz XEF 1085 500 XEAR 1450 7.5 CMHK 1225 50 CMKZ 1034 CMKC 1034 XEFZ 1370 100 XEFE 985 1000 Tampico CMAF 680 1000 CMAF 680 1000 CMAF 680 1000 CMAF 680 1000 Marcoris XEE 9940 500 XEAW 965 10000 XEAF 1300 225 CMBD 965 250 Santeotor Marcoris XEE 7 1210 50 XEFW 1280 70	30 5 100 15 75
XEPN 353 73000 XETH 860 100 CM30 50 CMGC RMGC RMGC <t< td=""><td>30 5 100 15 75</td></t<>	30 5 100 15 75
Saltillo QUERETARO Cinfugos	5 100 15 75
ABL 1000 40 Queretaro CMHJ 1125 60 CMGH 1040 XETB 1380 125 XEFS 1000 40 Marcona CMHJ 1125 60 CMGH 1040 Villa Acuna SAN LUIS POTOSI San Luis Potosi CMHH 1200 100 CMJP 1360 XEF D. F. SonoRA CMGA CMGA CMGA Santa clar. Mexico City Nogales XEAF 990 750 CMHK 1225 50 Santa clar. XEB 1030 10000 XEAF 990 750 CMKJ 1300 20 Marcoris XEFZ 1370 100 XEFE 985 100 CMKJ 1300 20 DOMINIA XEFZ 1370 100 XEFE 985 100 CMAF 680 1000 CMKC 103 XEFZ 1370 100 XEFE 985 000 CMAF 680 <td>15 75</td>	15 75
Torreon XETB XEFS 1000 40 CMH31 1290 20 Moron Villa Acuna XEF 380 L25 XEFS 1000 40 CMH31 1290 20 Moron Villa Acuna XEF 735 150000 SAN LUIS POTOSI San Luis PotoSI CMHW 1200 100 CMJP 1360 CMJP 100 XETS 1360 CMKC 1300 CMKC 1000 XEK 1000 XEFS	75
XE13 1380 125 XILIS Constant Constant <td></td>	
Willa Acuna XER- SAN LUIS POTOSI San Luis Potosi XEAC CMHW 1200 100 CMJP 1360 XEF- 735 150000 San Luis Potosi XEAC Colon Colon CMJP Pinar del R Mexico City Nogales XEAC 1295 100 Colon CMHW 1200 CMJP 1361 Mexico City Nogales XEAF 990 750 Cruces CMHI 1225 50 CMHI 1037 Santa Clar; XEFA 1250 500 XEAF 990 750 CMHK 1225 50 CMHI 1037 Santa Clar; CMHI 1037 Santales CMHI 1037 Santales CMHI 1037 Santales CMHI 1037 Santales CMHI 1037 Sante Clar; Santales CMHI 1037 Santales CMKC 1034 McKI 1300 CMKI 1300 CMKI 1300 CMKI 1037 Santales CMKI 1037 <td></td>	
XER- XER- XEF 735 150000 XEF San Luis Potosi XEAC 1295 100 SONORA Colon CMGA 834 100 Pinar del R CMAB 1249 Mexico City XEAI 1090 100 Nogales XEAF 990 750 CMHK 1225 50 CMHK 11255 CMHK 1037 Mexico City XEB 1030 10000 XEAF 990 750 CMHK 1225 50 Guantanamo CMKJ 1300 20 Domini Santago CMKJ 1300 20 Domini Santago CMKJ 1300 20 XEFA 1250 500 XEAF 1450 7.5 Havana CMKJ 1300 20 Domini San Pedro Marcoris Domini San Pedro Marcoris XEN 711 1000 Reynosa XEV 940 5000 XEAW 965 10000 CMBD 965 250 Santa Ciar CMKJ 1300 20 XEN 711 1000 XEY Nugalo Marcoris Marcoris XED 940 5000 XEAW 965 10000 CMBG 1052 225 Santo Dom XETW 830 500 XEFW 1280 70 CMBG 1052 225 HiH HJ XETY 1100 500 XEFW 1280 70 CMBK 1445 15 HIX 580 HIX 580 XEW 1100 250 XES 1020 250 CMBK 1445 15 HIX 1300	
XEF XEAC 1295 100 Color	
Mexico City Sonora CMCA 834 100 Santa Clar: Mexico City Nogales Cruces Cruces CMHI 1030 XEAI 1090 100 XEAF 990 750 CMCA 854 100 CMHI 1037 XEAI 1090 100 XEAF 990 750 CMHK 1225 50 Santa Clar: CMHI 1037 Santago CMKC 1034 CMKC 1034 CMKC 1034 CMHI 1037 Santago CMKC 1034 Santa Clar: CMKC 1034 Santa Clar: CMKC 1034 CMKC 1034 CMKC 1034 Santa Clar: CMKC 1034 Santa Clar:	20
Mexico City Nogales Cruces CMHI 1037 XEAI 1090 100 XEAF 99 750 CMHK 1225 50 CMHC 1034 XEB 1030 10000 TAMAULIPAS Guantanamo CMKC 1034 XEFA 1250 500 Nuevo Laredo CMKC 11300 CMKC 1034 XEFZ 1370 100 XEFE 985 100 Havana CMAF 680 1000 REPUBI XEK 990 100 XENT 1115 150000 CMAF 680 1000 Marcoris Narectoris XEN 711 1000 XEAW 965 10000 CMAF 680 1000 Marcoris Marcoris XEN 711 1000 XEAW 965 10000 CMBD 965 250 HIH 1337 HIH 1397 XED 940 5000 XEFW 1280 70 CMBJ 1140 500 HIJ 1195 HIJ 1195 XET 830 500 XEFW 1280 70 CMBK 1485 15 HIX 580 HIX 580 XET 1210 50 XES 1020 250 CMBK 1445 1200 HIX 580 HIZ 1300	3
MEARC 1090 100 XEAF 990 750 CMHK 1225 50 Santiago XEB 1030 10000 TAMAULIPAS Guantanamo CMKJ 1300 20 XEFA 1250 500 XEAF 990 750 Guantanamo CMKL 1300 20 XEFA 1250 500 XEAF 980 7.5 Guantanamo CMKJ 1300 20 XEFZ 1370 100 XEFB 985 100 Havana CMBC 1270 150 XEN 711 1000 XEAW 965 10000 CMBD 965 250 XED 940 5000 XEFW 1280 70 CMBG 1052 225 XETW 830 500 XEFW 1280 70 CMBG 1052 225 XETW 830 500 XES 1020 250 CMBK 1485 15 HIJ 1190	250
AEAT 1030 10000 AEAT ATAMAULIPAS Guantanamo CMRC 1034 XEB 1030 10000 TAMAULIPAS Guantanamo CMRC 1034 XEFA 1250 500 XEAR 1450 7.5 Guantanamo CMRC 1034 XEFG 1085 500 XEAR 1450 7.5 Havana CMRC 1030 DOMINIO XEN 711 1000 Reynosa CMAF 680 1000 San Pedro XEO 940 500 XEAW 965 10000 CMBC 1270 150 Marcoris XEO 940 500 XEAW 965 10000 CMBG 1052 225 XETW 830 500 XEFW 1280 70 CMBG 1140 500 HIJ 1190 XETT 1210 50 XES 1020 250 CMBK 1485 15 HIJ 1300 XETW<	
XEFA 1250 500 Nuevo Laredo Guantanito CMKJ 1300 20 XEFG 1085 500 XEAB 1450 7.5 CMKJ 1300 20 XEFG 1085 500 XEAB 1450 7.5 CMKJ 1300 20 XEFZ 1370 100 XEFB 1850 7.5 CMAF 680 1000 REPUBL XEN 711 1000 Reynosa CMBC 1270 150 Marcoris XEO 940 5000 XEAW 965 10000 CMBG 1052 225 XETW 830 500 XEFW 1280 70 CMBJ 1140 500 XETZ 1210 50 XES 1020 250 CMBL 1445 10 HIX 580 XETW 1100 250 XEFW 1280 70 CMBK 1445 1412 1300	150
XEFG 1085 500 XEAB 1450 7.5 CMR.J 1300 20 DOMINI XEFZ 1370 100 XEFB 985 100 Havana REPUBI XEN 990 100 XENT 115 150000 CMR.J 1300 20 DOMINI XEN 711 1000 Reynosa CMBC 1270 150 Marcoris XEO 940 5000 XEAW 965 10000 CMBD 965 250 HIH 1395 XET 830 500 XEFW 1280 70 CMBG 1052 225 Santo Dom XETZ 1210 50 XES 1020 250 CMBK 1485 15 HIX 580 XEW 1100 250 XES 1020 250 CMBK 1445 200 HIZ 1300	200
XEFG 1035 500 XEFA 1430 7.3 XEFZ 1370 100 XEFE 985 100 XEFA Perubasis XEK 990 100 XENT 1115 150000 CMAF 680 1000 San Pedro XEO 940 5000 XEAW 965 10000 CMAF 630 1000 Marcoris XEO 940 5000 XEAW 965 10000 CMBD 965 250 HIH 1395 XET 830 500 XEFW 1280 70 CMBJ 1140 500 HIJ 1495 XETZ 1210 50 XES 1020 250 CMBK 1485 15 HIX 580 XEWW 1100 250 YEAP CMBL 1445 200 HIZ 1300	CAN
XEF2 1370 100 XEFB 985 100 Havana San Pedro XEK 990 100 XENT 1115 150000 CMAF 680 1000 San Pedro XEN 711 1000 Reynosa CMBC 1270 150 Marcoris XEO 940 5000 XEAW 965 10000 CMBD 965 225 HIH 1395 XET 830 500 XEFW 1280 70 CMBG 1052 225 Santo Don XETZ 1210 50 XES 1020 250 CMBK 1485 15 HIX 580 XEW 1100 250 XES 020 250 CMBK 1445 200 HIZ 1300	
XER 990 1000 XEN 1 1115 150000 CMAF 680 1000 Marcoris XEN 711 1000 Reynosa CMBC 1270 150 HiH 1395 XEO 940 5000 XEAW 965 10000 CMBD 965 250 HiH 1395 XET 780 500 Tampico CMBJ 1052 225 Santo Dorr XETZ 1210 500 XES 1020 250 CMBK 1485 15 HIX 580 XEW 1100 250 XEAW 965 1020 250 CMBK 1445 100 110 100	
XEN 711 1000 Reynold CMBC 120 1305 XEO 940 5000 XEAW 965 10000 CMBD 965 250 HiH 1395 XEP 780 500 Tampico CMBD 965 225 Santo Dom XETW 830 500 XEFW 1280 70 CMBJ 1140 500 HIJ 1195 XETZ 1210 50 XES 1020 250 CMBK 1485 15 HIX 580 XEW 1100 250 VEBACPUIZ CMBL 1445 200 HIZ 1300	
XEO 940 5000 XEAW 965 1000 CMBD 965 230 Santo Don XEP 780 500 Tampico CMBG 1052 225 HIJ 1195 XETW 830 500 XEFW 1280 70 CMBJ 1140 500 HIJ 1195 XETZ 1210 50 XES 1020 250 CMBK 1485 15 HIX 580 XEWW 1100 250 VERACPUT CMBL 1445 200 H1Z 1300	15
XEP 780 500 Tampico CMBG 1052 225 Santo Don XETW 830 500 XEFW 1280 70 CMBJ 1140 500 HIJ 1195 XETZ 1210 50 XES 1020 250 CMBK 1485 15 HIX 580 XEWW 1100 250 VEFACPUIZ CMBL 1445 200 HIZ 1300	
XETX 1210 50 XES 1020 250 CMBJ 1140 500 HIX 580 XEWW 1100 250 VEBACPUZ CMBL 1445 15 HIX 1300	
XETZ 1210 50 XES 1020 250 CMBK 1485 15 HIX 380 XEWW 1100 250 VEDACDUZ CMBL 1445 200 HIZ 1300	
XEWW 1100 250 VEPACEUZ CMBL 1445 200 HIZ 1300	
VERALICUE I GINAR ITO I TANK	10
757 760 10000 Jalapa CMDS 765 200 Bost-au-P	Ince
YEC 638 2000 XFB 1290 1000 CMPW 1140 600 HHK 920	1000
VEO 940 5000 Veracruz CMPV 1230 250	
XFX 840 500 XEU 1010 100 CMB1 1230 250 SOUT	Ή.
Toluca YUCATAN CMC 835 500 AMER	
Amerida	
XEC 1050 100 CNICA 1253 150 ARGENT	
HIDALGO VEV 546.8 10 CMCB 1052 150 Buenos Ai	res
Bechuich 127 630 500 CMCD 915 500 LB5 830	20000
TETTI 800 100 ALL 000 TO CMCF 873 250	
WEST INDIES CMCH 1410 50 COLON	DIA
JALISCO CUBA CMCJ 1180 500 Bogota	500
Guadalajara CMCM 1410 15 HJN 00.	. 500
XEA 1000 250 Calbarien CMCN 1375 250 VENEZL	JELA
XED 1155 500 CMHD 945.5 500 CMCP 1270 150 CM23635	
Camaguey Children 775 1000 VVIDC 04	5000
MICHOACAN CMJC 1382 150 CMCC 1375 150 VV2BC 89	
Morelia CMJE 11/0 50 CMCK 1000 W22PC 120	
XEI 1310 250 CMJF 910 200 CMCU 1100 500 YV3BC 120	, 1000

The harmonious Morin Sisters, left to right. Marge, Pauline and Evelum, heard on the Seeled Power Sideshow over an NBC (Blue) network on Mondays at 8:00 p.m. EST. These sisters hail from Indiana, but got their jirst real start over WLW. Paul Whitem an heard them there and advised them to try their fortunes at the Chicago NBC studios, where they immediately clicked.



CFAC 930 100 Calgary, Alta. Calgary Herald.
CFBO 1210 100 St. John, N. B.
 C. A. Munro, Ltd. CFCF 600 500 Montreal, Que.
 Canadian Marconi Co.
 Northern Broadcasting Co., Ltd.
CFCN 1030 10000 Calgary, Alta. Voice of the Prairies, Ltd.
 CFCO 600 50 Chatham, Ont.
 John Beardall. CFCT 1450 50 Victoria, B. C.
Victoria Broadcasting Assn.
CFCY 630 500 Charlottetown, P. E. I. Island Radio Broadcasting Co., Ltd.
 CFJC 1810 100 Kamloops, B. C.
 CFJC 1310 100 Kamloops, B. C. Review Publishing Co., Ltd. CFLC 930 100 Prescott, Ont. Badlo Assn. of Prescott
 Teacho Histi. Of Theocott.
CFNB 1030 500 Fredericton, N. B. James S. Neill & Sons, Ltd.
 CFPL 780 100 London, Ont.
 Free Press & Printing Co., Ltd. CFQC 1230 500 Saskatoon, Sask.
 Electric Shop, Ltd.
CFRB 690 10000 Toronto, Ont. Canadian Radio Corp., Ltd.
 CFRC 1510 100 Kingston, Ont.
 Queens University. CFTP 1120 100 Edmonton, Alta.
 Taylor & Pearson, Ltd. CHAB 1200 100 Moose Jaw, Sask.
Moose Jaw Radio Assn.
CHCK 1310 50 Charlottetown, P. E. I. J. A. Gesner.
 CHQS 1120 50 Summerside, P. E. I.
 R. T. Holman, Ltd. CHLP 1120 100 Montreal, Que.
La Patrie Publishing Co., Ltd.
CHML 1010 50 Hamilton, Ont. Maple Leaf Radio Co., Ltd.
 CHNC 1210 100 New Carlisle, Que.
 Dr. Charles Houde. CHNS 1050 500 Halifax, N. S.
Maritime Broadcasting Co., Ltd.
CHPR 1370 100 St. John, N. B. H. P. Robinson.
CHRC 930 100 Quebec, Que.
 CHRC, Ltd. CHWC 1010 600 Regina, Sask.
 R. H. Williams & Sons, Ltd.
Chilliwack Broadcasting Co., Ltd.
CJAT 1200 50 Trail, B. C. Trail Amateur Radio Assn.
 CJCA 730 1000 Edmonton, Alta.
 Edmonton Journal, Ltd.
CJCB 880 50 Sydney, N. S. Nathanson's Radio Headquarters.
 CJCJ 690 100 Calgary, Alta.
 Albertan Publishing Co., Ltd. CJCS 780 500 Sudbury, Ont.
 George McLeod Cootes
Winnipeg Grain Exchange.
CJKL 1310 100 Kirkland Lake, Ont. O. J. Thorpe & Branchaud,
 CJLS 1310 100 Yarmouth, N. S.
 Laurie L. Smith. CJOC 840 100 Lethbridge, Alta.
H. R. Carson, Ltd.

CJOR 600 500 Vancouver, B. C. G. C. Chandler. 1390 CJRC 100 Middlechurch, Man. James Richardson & Sons. CJRM 540 1000 Moose Jaw, Sask. James Richardson & Sons, Ltd. CJRW 640 500 Fleming, Sask. James Richardson & Sons, Ltd. CKAC 730 5000 Montreal, Que. La Presse Publishing Co., Ltd. CKBI 1210 100 Prince Albert, Sask. Prince Albert Radio Club. CKCD 1010 100 Vancouver, B. C. Vancouver Dally Province. CKCH 1210 100 Hull, Que. Dr. J. L. Chabot. CKCK 1010 500 Regina, Sask. Leader-Post, Ltd. 100 Terente, Ont. CKCL 580 Dominion Battery Co., Ltd. CKCO 1010 100 Ottawa, Ont. Dr. G. M. Geldert. CKCR 1510 100 Kitchener, Ont, William C. Mitchell and G. Liddle. CKCV 1810 50 Quebec, Que. Vandry, Inc. CKFC 1410 60 Vanco Radio Service Engineers, Ltd. 60 Vancouver, B. C. CKGB 1420 100 Timmins, Ont. R. H. Thompson CKIC 1010 60 Wolfville, N. S. Acadia University. CKLW 840 5000 Windsor, Ont. Western Ontarlo Broadcasting Co., Ltd. CKMC 1210 50 Cobalt, Ont. R. L. MacAdam. CKMO 1410 100 Vancouver, B. C. Sprott-Shaw Radio Co. 100 Toronto, Ont. CKNC 1030 Canadian National Carbon Co., Ltd. CKOC 1120 500 Hamilton, Ont. Wentworth Radio Broadcasting Co., Ltd. CKOV 1210 50 Kellowna, B. C. Okanagan Broadcasters, Ltd., Box 243. CKPC 930 100 Brantford, Ont. Cyrus Dolph. CKPR 780 50 Fort William, Ont. Dougali Motor Co., Ltd. CKTB 1200 100 St. Catharines, Ont. E. T. Sandell. CKUA 680 500 Edmonton, Alta. University of Alberta. CKWX 1010 100 Vancouver, B. C. Western Broadcasting Co., Ltd. CKX 1450 500 Brandon, Man. Manitoba Telephone System CKY 910 6000 Winnipeg, Man. Manitoba Telephone System. CMAB 1249 20 Pinar del Rio, Cuba. Jose Silvera, Marti No. 101. CMAF 680 1000 Havana, Cuba. International Broadcasting Co., Miramar. CMBC 1270 160 Havana, Cuba. Domingo Fernandez, Maximo Gomez No. 189. CMBD 966 250 Havana, Cuba. Luis Perez Garcia, Enamorados y Flores. CMBQ 1052 226 Havana, Cuba, John L. Stowers, Hospital No. 100 CMBJ 1140 500 Havana, Cuba. Emilio Perera, Consulado y Virtudes. CMBK 1485 15 Havana, Cuba. Alberto Alverez, Paula y Oficios.

	CMBL 1445 200 Havana, Cuba. Julio C. Hidalgo, Vedado.
	CMBN 1185 150 Havana, Cuba.
	G. de Sequeira, Agrimonte No. 32 CMBS 765 200 Havana, Cuba.
	Enrique Artalejo, Calzada y H. St.
	CMBW 1140 600 Havana, Cuba.
	Alvarez, Moris y Cia, Obrapia No. 13. CMBY 1230 250 Havana, Cuba.
2	Callejas-Estefani, Principe No. 33.
1	CMBZ 1005 150 Havana, Cuba. Manuel y G. Salas, San Rafael No. 14.
	CMC 835 500 Havana, Cuba.
	Radio Corp. of Cuba.
	CMCA 1230 150 Havana, Cuba. Manuel Cruz, Ave. de Italia No. 102.
	CMCB 1052 150 Havana, Cuba.
	Metropolitan-Radio de Cuba. CMCD 915 500 Havana, Cuba.
	Angel Bertematy.
	CMCF 873 250 Havana, Cuba. Raoul Karman.
	CMCH 1410 50 Havana, Cuba. Wifredo y Humberto Fontanais Sanchez.
	Wifredo y Humberto Fontanais Sanchez.
1	CMCJ 1180 500 Havana, Cuba. Rafael Rodriques, Estevez No. 4.
	CMCM 1410 15 Havana, Cuba.
	Aurelio Balino, Belas Coain No. 639. CMCN 1375 250 Havana, Cuba.
	Antonio Ginard, Reina y Ave. Buen Retiroe
	CMCP 1270 150 Havana, Cub2. Jose A. Yanis
	CMCQ 775 1000 Havana, Cuba.
	Andres Martinez, Vista Alegre No. 80.
	CMCR 1375 150 Havana, Cuba. Aurelio Hernandez.
	CMCU 1100 500 Havana, Cuba. Jorge Garcia Serra.
	CMCW 965 150 Havana, Cuba.
	Vilarino y Cervantes. CMCY 1325 500 Havana, Cuba,
	Manuel D. Autran, Ave. deLa Pdt s.215.
	CMDD 588 150 Havana, Cuba. G, de Seguira
	CMDE 325 150 Havana, Cuba.
	Radio Aeriai Ad. CMGA 834 100 Colon, Cuba.
	L. Valdes Figueroa, Marti No. 19.
	CMGB 1205 30 Matanzas, Cuba. Jose Anorga, Magdelena No. 1.
	CMGC 820 30 Matanzas, Cuba.
	Oscar S. Mechoso, Indepencia No. 56.
	CMGE 1375 30 Cardenas, Cuba. Genaro Sebater, Cespedes No. 180.
	CMGF 971.5 100 Matanzas, Cuba.
	Bernabe R. de la Torre. CMGH 1040 15 Matanzas, Cuba.
	Octavio y Julio Alvarez.
	CMHD 945.5 500 Caibarien, Cuba. Manuel Alvarez, M. Escobar 17.
	CMHI 1037 250 Santa Clara, Cuba.
	Lavis y Paz. CMHJ 1125 S0 Cienfuegos, Cuba.
	Victorino Lopez Hontanon.
	CMHK 1225 50 Cruces, Cuba. Virgilio Villaneuva Fernandez.
	CMHL 1290 20 Cientuegos, Cuba.
	Oscar Zayas, San Carlos 143.
	San Carlos No. 106
	CMJC 1382 150 Camaguey, Cuba. Feliciano Isaac, Cisnerce y G. Gomes.
	Pendano isaac, Osheroe F G. Comes.

CMJE 1170 59 Camaguey, C Manuel Fernandez, Plaza de Maceo. 58 Camaguey, Cuba. 200 Camaguey, Cuba. CMJF 910 John L. Stowers, Hotel Plaza. 50 Camaguey, Cuba. CMJG 1050 Jose Antonio Lefran, Martires 133. 50 Ciego de Avila, Cuba. CMJH 1150 Luis Marauri Mendosa. CMJI 1835 45 Ciego de Avila, Cuba. Gilberto Gessa Lopez, Independencia 95. 500 Camaguey, Cuba. CMJK 790 Compania Cubana Nacional de Radio S. A. CMJL 980 50 Camaguev, Cuba. Enrique Artime, Cuba No. 27. CMJN 1240 50 Camaguey, Cuba Ernesto de Ugarriza, Martires 11. CMJO 1010 50 Ciego de A Jose M. Rey, C. Central & Maceo. 50 Ciego de Avila, Cuba. CMJP 1360 75 Moron Cesar Canall, Callejas No. 28. 75 Moron, Cuba. 730 5000 Havana, Cuba. CMK National Broadcasting Co. of Cuba. CMKC 1034 150 Santiago, Cuba. Pinol Batlle y Co. CMKJ 1300 20 Guantaname, Cuba Luis Morlote, East Giro 11. CMO 630 500 Havana, Cuba. Jose Fernandes, 25 Numero 445. 1400 Havana, Cuba. CMW 595 Troncoso y Gil, Paseo de Marti 103. CMX 875 1000 Havana, Cuba. Casa "Lavin," Ave. de la Republica 99A. 5000 Montreal, Que. CRCM 910 Canadian Radio Broadcasting Commission 1000 Ottawa, Ont. CRCO 880 Canadian Radio Broadcasting Commission. CRCS 1500 100 Chicoutimi, Que. Canadian Marconi Co., Ltd. CRCT 960 5000 Toronto, Ont. Canadian Radio Broadcasting Commission. CRCV 1100 1000 Vancouver, B. C. Canadian Radio Broadcasting Commission. 250 St. Pierre, Mlg. FQN 572 920 1000 Port-au-Prince, Halti, HHK Haitian Government. нін 1395 15 San Pedro de M., D. R. Domingo Dominguez 1195 15 Santo Domingo, D. B HIJ Tuto Baez, Hostos 34 HIX **Б80** 1600 Santo Domingo, D. R. J. R. Saladin, Director General 10 Santo Domingo, D. R. HIZ 1300 Abbes and Garcia HJN 681 500 Bogota, Colombia Government of Colombia, National Library. KABC 1420 100 San Antonio, Texas. Alamo Broadcasting Co., Inc. 500 Portland, Ore. KALE 1300 Kale, Inc., New Heathman Hotel 250 Little Rock, Ark. KARK 890 Arkansas Radio & Equipment Co. KASA 1210 100 Elk City, Okla. E. M. Woody, Casa Grande Hotel. 100 Portland, Ore. KBPS 1420 Benson Polytechnic School 100 Jonesboro, Ark. **KBTM** 1200 Jay P. Beard. 100 Texarkana, Ark. KCMC 1420 M. P. Mims, Box 865. KCRC 1370 109 Enid. Okia. Enid Radiophone Co.

KCRJ 1310 100 Jeroma Chas. C. Robinson, Drawer D. 100 Jerome, Ariz. KDB 1500 100 Santa Barbara, Calli Santa Darbara Broadcasters, Ltd. **KDFN 1440** 500 Casper, Wyo. Donald Lewis Hathaway. **KDKA 980 50000 Pittsburgh, Pa.** Westinghouse Electric & Mfg. Co. KDLR 1210 100 Devil KDLR, Inc., 1025 3rd Street. 100 Devils Lake, N. D. KDYL 1290 # 1000 Sait Lake City, Utah. Intermountain Broadcasting Corp. KECA 1430 1000 Los Angeles, Calif. Earle C. Anthony, Inc. KELW 780 500 Burbank, Calit, Magnolia Park, Ltd., 3702 Magnolia KERN 1200 100 Bakersfield, Calif. Bee Bakersfield Broadcasting Co. KEX 1180 5000 Portland, Ore. National Broadcasting Co. KFAB 770 5000 Lincoln, Neb. KFAB Broadcasting Co. KFAC 1300 1000 Los Angeles, Calif. E. L. Cord, 645 So. Mariposa. **KFBB** 1280 1000 Great Falis, Mont. Buttrey Broadcast, Inc. KFBI 1050 5000 Abilene, Kans, Farmers & Bankers Life Ins. Co. KFBK 1310 100 Sacramento, Calif. James McClatchy Publishing Co. KFBL 1370 50 Everett, Wash Leese Bros., 2814 Rucker Ave. KFDM 560 500 Beaumont, Taxes. Sabine Broadcasting Co. KFDY 550 500 Brookings, S. D. South Dakota State College. KFEL 920 500 Denver, Colo. Eugene P. O'Fallon, Inc. KFEO 680 2500 St. Joseph, Me. Scroggin & Co. Bank 100 Boone, lowa. KF80 1310 Boone Biblical College. KFH 1300 1000 Wichita, Kans, Radio Station KFH Co. 640 50000 Los Angeles, Calif. KFL Earle C. Anthony, Inc. 100 Spokane, Wash. KFIO 1120 Spokane Broadcasting Corp. KFIZ 1420 100 Fond du Lac. Wis. Reporter Printing Co. KFJB 1200 100 Marshall Electric Co. 100 Marshalltown, lowa KFJI 1210 100 Klamath Falis, Ore. KFJI Broadcasters, Inc., Willard Hotel. KFJM 1870 100 Grand Forks, N. D. University of North Dakota. KFJR 1300 500 Porti Ashley C. Dixon-KFJR, Inc. 500 Portland, Ore, KFJZ 1870 100 Fort Worth, Texas. Fort Worth Broadcasters, Inc. KFKA 888 500 Greeley, Colo. Mid-Western Radio Corp. 500 Lawrence, Kans. KFKU 1220 University of Kansas. KFLV 1410 500 Rockford, Ill. Rockford Broadcasters, Inc. KENE 890 500 Shenandosh, Jawa Henry Field Co. **KFOR 1210** 100 Lincoln, Neb. Howard Shuman KFOX 1250 1000 Long Beach, Calif. Nicholas & Warinner, Inc.

KFPL 1310 100 Dublin, Texas, C. C. Baxter, Box 176 KFPM 1310 15 Greenville, Texas. New Furniture Co. **KFPW** 1210 100 Fort Smith, Ark. Southwestern Hotel Co. KFPY 1840 1000 Spokane, Wash-Symons Broadcasting Co. KFQD 600 250 Anchorage, Alaska Anchorage Radio Club, Inc. KFRC 610 1000 San Francisco, Calif. Don Lee, Inc. KFRU 630 500 Columbia, Mo. KFRU, Inc., 9th and Elm Sta. KFSD 600 1000 San Diego, Calif. Airfan Radio Corp., Ltd. KFSG 1120 600 Los Angeles, Calif. Echo Park Evangelistic Assn. KFUO 550 600 St. Louis, Me. Evangelical Lutheran Church. KEVD 1000 250 Los Angeles, Calif. E. L. Cord, 645 S. Mariposa. KFVS 1210 100 Ca Oscar C. Hirsch, Box 275. 100 Cape Girardeau, Me. KFWB 950 1000 Hollywood, Calif. Warner Bros. Motion Pictures, Inc. 500 San Francisco, Calif. KEWI 930 Radio Entertainments, Ltd. KFXD 1200 100 Nampa, Idahe. Frank E. Hurt, 1024 12th Ave., S. KFXF 920 500 Denver, Colo. Colorado Radio Corp. KFXJ 1200 100 Grand Jct., Cels. Western Slope Broadcasting Co. KFXM 1210 190 San Bernardine, Calif. Lee Bros. Broadcasting Co. 100 Gklahoma City, Okla. KFXR 1310 Exchange Avenue Baptist Church. KFY0 1310 100 Lubbock, Texas Kirksey Bros., Hotel Lubbock. KFYR 550 1900 Bismarck, N. D. Mayer Broadcasting Co. KGA 1470 5000 Spokane, Wash. Northwest Broadcasting Co., Inc. KGAR 1370 100 Tucsen, Ariz. Tucson Motor Service Co. KGB 1330 1000 San Diege, Calit, Don Lee Broadcasting System KGBU 900 500 Ketchikan, Alaska. Alaska Radio & Service Co., Inc. 100 Springfield, Ms. KGBX 1310 KGBX, Inc. KGBZ 930 500 York, Neb. KGBZ Broadcasting Co., 715 Grant Ave. KGCA 1270 100 Decorah, Jewa Charles W. Greenley KGCR 1210 100 Watertown, S. D. Greater Kampeska Radio Corp. KQCU 1240 260 Mandan, N. D. Mandan Radio Assn. KQCX 1810 100 Wolf Point, Ment. E. E. Krebsbach. KGDE 1200 100 Fergus Falls, Mins. C. L. Jaren. **KODM 1100** 250 Stockton, Calif. E. F. Peffer, 42 S. Calif. St. KGDY 1340 250 Huron, S. D. Voice of S. D., Inc., 347 Dakota Ave. KGEK 1200 100 Yuma, Cole. Elmer G. Beehler, 109 W. 2nd St. KGER 1360 1000 Long Beach, Call. Consolidated Broadcasting Co.

	KGEZ 1810 100 Kalispell, Mont.
	Donald C. Treloar, Box 1. KGFF 1420 100 Shawnee, Okia.
	KGFF Broadcasting Co., Inc.
	KGFG 1370 100 Oklahoma City, Okla.
	Oklahoma Broadcasting Co., 1113 N. Broadway
	KGFI 1500 100 Corpus Christi, Texas.
	Eagle Broadcasting Co., Inc. KGFJ 1200 100 Los Angeles, Calif.
	Ben S. McGlashan, 1417 S. Figueroa.
	KGFK 1500 100 Moorhead, Minn.
	Red River Broadcasting Co., Inc.
	KGFL 1370 100 Roswell, N. M.
	KGFL, Inc., 507 N. Main St. KGFW 1310 100 Kearney, Neb.
	Central Nebraska Broadcasting Corp.
	KREY 630 200 Pierre, S. D.
	Dana McNeil, 510 Summit Ave.
	KGOC 1420 100 San Francisco, Calli.
	Golden Gate Broadcasting Co. KGGF 1010 500 Coffeyville, Kans.
	KGGF 1010 500 Coffeyville, Kans. Hugh J. Powell and Stanley Platz.
-	KGGM 1230 250 Albuquerque, M. M.
	New Mexico Broadcasting Co.
	KGHF 1320 250 Puebla, Calo.
	C. P. Ritchie & Geo. J. Ikelman KGHI 1200 100 Little Rock, Ark.
	Lloyd Judd Co., Marion Hotel.
	KGHL 950 1000 Blaings, Mont.
	Northwestern Auto Supply Co.
	KGIR 1360 500 Butte, Ment. KGIR, Inc., 121 W. Broadway.
	1 KGIW 1420 180 Alamosa, Colo.
	Leonard E. Wilson, 326 N. Commercial
	KGIX 1420 100 Las Vegas, Nev.
	J. M. Heaton. Box 656.
	KGKB 1589 190 Tyler, Texas. East Texas Broadcasting Co.
	KGKL 1370 100 San Angelo, Texas.
	KGKL, Inc., St. Angelus Hotel.
	KGKO 570 250 Wichita Falls, Texas. Wichita Falls Broadcasting Co.
	KGKY 1500 109 Scottsbluff, Neb.
	Hilliard Co., Inc., 15171/2 Broadway.
	KQMB 1328 250 Honolulu, T. H. Honolulu Broadcasting Co., 119 Merchant St.
	Honolulu Broadcasting Co., 119 Merchant St.
	KGNF 1439 500 North Platte, Neb. Great Plains Broadcasting Co.
	KONO 1346 250 Dodge City, Kans.
	KGNO Broadcasting Station
	KGO 790 7500 San Francisce, Calif. National Broadcasting Co., Inc.
	KGRS 1410 1000 Amarillo, Taxas.
	KGRS 1410 1000 Amarillo, Texas. E. B. Gish, Beliaire Park.
	KQU 760 2500 Honolulu, T. H.
	Advertiser Publishing Co., Ltd.
	KOVO 1200 100 Missoula, Mont.
	KGVO 1200 100 Missolia, mont. Mosbys, Inc., 240 N. Higgins. KGW 820 1000 Portland, Ore.
	Oregonian rubusning Co.
	KQY 1218 100 Olympia, Wash. KGY, Inc., 11th and Capitol Way.
	KGY, Inc., 11th and Capitol Way.
	KHJ 900 1000 Los Angeles, Calif. Don Lee Breadcasting System.
1	Louis Wasmer, Inc.
	KICA 1870 100 Clovis, N. M.
	Southwest Broadcasting Co.
	KICK 1420 100 Carter Lake, Iowa.
	Red Oak Radio Corp. KID 1820 250 Idaho Falls, Idaho.
	KID Broadcasting Co., Inc.

KIDO 1350 1000 Boise, Idaho. C. G. Phillips & Frank L. Hill. KIDW 1420 100 Lamar, Colo. Lamar Broadcasting Co., Box 688 KIEM 1210 100 Eureka, Calif. Harold H. Hanseth, Vance Hotel. KIEV 850 100 Glendate, Calif. Cannon System, Ltd., Glendale Hotel. KIFH 1810 100 Juneau, Alaska Juneau Broadcasting Co. KIT 1310 100 Yakima, Wash. Valley Broadcasters, Inc. KJBS 1070 100 San Francisco, Callf. Julius Brunton & Sons Co. 970 5000 Seattle, Wash. KJR Fishers Blend Station, Inc. KLCN 1290 100 Blytheville, Ark. C. L. Lintzenich, Main and Division St. KLO 1400 500 Ogden, Utah. Interstate Broadcasting Co. KLPM 1240 250 Minot, N. D. John B. Cooley. KLRA 1390 1000 Little Rock, Ark. Arkansas Broadcasting Co. KLS 1440 250 Oakland, Callf. Warner Bros., 2201 Telegraph Ave. KLUF 1370 100 Gaiveston, Texas. Geo. R. Clough, 3327 Ave. P. KLX 880 1000 Oakland, Calif. Tribune Building Co. 560 1000 Denver, Cole. KLZ Reynolds Radio Co., Inc. 930 600 Shenandoah, lewa, KMA Earl E. May Seed & Nursery Co. KMAC 1870 100 San Antonie, Texas. W. W. McAllister, Blue Bonnet Hotel. KMBC 950 1000 Kansas City, Me. Midland Broadcasting Co. KMED 1319 100 Medlord, Ore. Mrs. W. J. Virgin, Sparta Bldg. 580 600 Fresno, Calif. KMJ James McClatchy Co. KMLB 1200 100 Monroe, La. Liners Broadcasting Station, Inc. KMMJ 740 1960 Clay Center, Nel. The M. M. Johnson Co. KMO 1330 250 Tacoma, Wash. KMO. Inc., Hotel Winthrop. KMOX 1090 50000 St. Louis, Me. The Voice of St. Louis, Inc. KMPC 710 500 Beverly Hills, Calls. Beverly Hills Broadcasting Corp. KMTR 570 500 Hollywood, Calif. KMTR Radio Corp., 915 N. Formosa Ave. KNOW 1600 100 Austin, Texas. Southwest Broadcasting Co. KNX 1850 25000 Hollywood, Calif. Western Broadcast Co., Inc. 830 12.500 Denver, Celo. KOA General Electric Co., 1370 Krameria St. KOAC 559 1008 Corvallis, Ore. Oregon State Agricultural College. KOB 1180 10008 Albuquerque, N. M. Albuquerque Journal, Box 667. KOH 1380 500 Rens, Nev. The Bee, Inc. KOIL 1260 1000 Council Bluffs, laws. Mona Motor Oil Co. KOIN 940 1606 Pertland, Ore. KOIN, Inc., New Heathman Hotel. KOL 1270 1000 Seattle, Wash. Seattle Broadcasting Co.

	KOMA 1480 5000 Oklahoma City, Okla
	National Radio Manufacturing Co.
	KOMO 920 1080 Seattle, Wash. Fishers Blend Station, Inc.
	KONO 1370 100 San Antonio, Texas. Mission Broadcasting Co., St. Anthony Hotel.
	KOOS 1370 100 Marshfield, Ore.
	H. H. Hanseth, Hall Bldg.
	KORE 1420 100 Eugene, Ore.
	Frank L. Hill and Curtis G. Phillippe.
	KOY 1390 500 Phoenix, Ariz,
	Nielsen Radio & Sporting Goods Co.
	KPCB 650 100 Seattle, Wash.
	Queen City-Broadcasting Co.
	KPJM 1500 100 Prescott, Ariz.
	Frank Mauthe, Box 852 KPO 680 50000 San Francisco, Calif.
	National Broadcasting Co., Inc.
	KPOF 880 500 Denver, Colo.
	Pillar Of Fire, 1845 Champa St.
	KPPC 1210 50 Pasadena, Calif.
	Pasadena Presbyterian Church.
	KPQ 1500 100 Wenatchee, Wash.
	Wescoast Broadcasting Co.
	KPRC 920 1000 Houston, Texas.
	Houston Printing Co.
]	KQV 1380 500 Pittsburgh, Pa.
	KQV Broadcasting Co., Investment Bidg. KQW 1010 500 San Jose, Calif.
	KQW 1010 500 San Jose, Calif. Pacific Agricultural Foundation, Ltd.
	KRE 1370 100 Berkeley, Calif.
	First Congregational Church.
	KREG 1500 100 Santa Ana, Calif.
	The Volce of the Orange Empire, Inc.
	KRGV 1260 500 Harlingen, Texas.
E	KRGV, Inc.
	KRKO 1120 500 Los Angeles, Calif
	Fireside Broadcasting Corp.
	KRLO 1040 10000 Oallas, Texas. KRLD Radio Corp., Adolphus Hotel.
1	
	KRID Asda Corp., Adolphus Hotel.
	KRMO 1310 100 Shreveport, La.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Celif. Educational Broadcasting Corp.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 500 Manhattan, Kans.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 120 100 Seattle, Wash. Radio Sales Corp., Waxhington Athletic Club. KSAC 500 Manhattan, Kans. State College of Agriculture. State State State
	KRMO 1310 100 Shraveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 580 500 Manhattan, Kans. State College of Agriculture. KSCJ 1300 1000 Sieux City. Laws.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 580 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sieux City, Iowa. Perkins Bros. Co., 415 Douglae St. 100 Sieux City.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 120 Newshington Athletic Club. KR3C 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 680 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sicux City, Iowa. Perkins Bros. Co., 415 Douglas St. KSO 560 500 St.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 580 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sioux City, Iewa. Perkins Bros. Co., 415 Douglas St. KSO 500 St. Louis, Mo. Pulitzer Publishing Co. 200 Sioux City, Iewa. St. State College of Agriculture.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 580 500 Manhattan, Kans. State College of Agriculture. KSCJ 1300 Sioux City, Iowa. Perkins Bros. Co., 415 Douglas St. KSO 560 51. Vultzer Publishing Co. 520 Pacatello, Idaho.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 120 100 Seatile, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 680 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sicux City, Iowa. Perkins Bros. Co., 415 Douglas St. KS0 560 500 St. Vister Publishing Co. KSEI 800 250 Pocatello, Idaho. Radio Service Corp., 141 S. 6th Ave.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sioux City, Iswa. Perkins Bros. Co., 415 Douglas St. KSO 500 St. Louis, Mo. Pulitzer Publishing Co. KSEI 890 250 Pocatelle, Idaho. Radio Service Corp., 141 S. 6th Ave. KSL 130 Souto Clutah.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 680 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sioux City, Iows. Perkins Bros. Co., 415 Douglas St. KSO 560 500 St. Viliser Publishing Co. KSI 890 250 Pacatello, Idaho. Radio Service Corp., 141 S. 6th Ave. KSL 1130 50000 Salt Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Oes Moines. Lows.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 580 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sieux City, Iewa. Perkins Bros. Co., 415 Douglus St. KSO 550 St. Louis, Mo. Pulitzer Publishing Co. KSL 890 250 Pocatelle, Idaho. Radio Service Corp., 141 S. 6th Ave. KSL 130 5000 Salet Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Ges Moines, Iewa. Des Moines Register & Tribune. 100 Salet Articular. Salet
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 120 100 Seatile, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 580 Solution. Ksac. State College of Agriculture. KSCJ 1330 1000 Sioux City, Iowa. Perkins Bros. Co., 415 Douglas St. KSD 560 500 St. Louis, Mo. Pulitser Publishing Co. KSEI 130 560 Solt Ave. KSL 130 5000 Stat Lake City, Utah. Radio Service Corp., 141 S. 6th Ave. KSL 130 KSD 370 100 Oes Moines, Iowa. Des Moines Register & Tribune. KSO 110 100 Sioux
	KRMO 1310 100 Shrevepart, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 680 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sicu City, Iowa. Perkins Bros. Co., 415 Douglas St. KSO 560 500 St. KSO 560 500 St. Louis, Mo. Pulitzer Publishing Co. KSL 133 50000 Salt Lake City, Utah. Radio Service Corp., 141 S. 6th Ave. KSL 130 50000 Salt Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Oes Moines, Iowa. Des Moines Register & Tribune. KSO 1100 Sioux Falls, S. O. Jos. Heakin, 1613 S. Duluth Ave.
	KRMO 1310 100 Shrevepart, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 680 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sicu City, Iowa. Perkins Bros. Co., 415 Douglas St. KSO 560 500 St. KSO 560 500 St. Louis, Mo. Pulitzer Publishing Co. KSL 133 50000 Salt Lake City, Utah. Radio Service Corp., 141 S. 6th Ave. KSL 130 50000 Salt Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Oes Moines, Iowa. Des Moines Register & Tribune. KSO 1100 Sioux Falls, S. O. Jos. Heakin, 1613 S. Duluth Ave.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 580 Solution. Sate College of Agriculture. KSLJ 1330 1000 Sioux City, Iowa. Perkins Bros. Co., 415 Douglas St. KSLJ 560 500 St. Louis, Mo. Puliter Publishing Co. KSL 1890 250 Pocatello, Idaho. Radio Service Corp., 141 S. 6th Ave. KSL 130 5000 Os Moines, Iowa. Des Moines Register & Tribune. KSO 170 100 Sioux Falis, S. O. Jos. Henkin, 161 S. Duluth Ave. KST 1460 100 Sioux Falis, S. O. Jos. Henkin, 1613 S. Duluth Ave.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 580 500 Manhattan, Kans. State College of Agriculture. KSC J 1330 1000 Sioux City, Iows. Perkins Bros. Co., 415 Douglas St. KSO 560 500 St. KSD 560 560 Solo St. Louis, Mo. Pulitser Publishing Co. KSL 133 50000 Salt Lake City, Utah. Radio Service Corp. 141 S. 6th Ave. KSL 130 50000 Salt Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Ose Moines, Iowa. Des Moines Register & Tribune. KSOO 1100 Oisur Falls, S. O. Jos. Henkin, 1613 S. Duluth Ave. KSTP 1460 10000 St. Paul, Minn. National Battery Broadcasting Co. KSUM 1200 100 Lowal.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSC 580 500 Manhattan, Kans. State College of Agriculture. KSC 1320 1000 Sieux City, Iowa. Perkins Bros. Co., 415 Douglas St. KSD 560 St. Louis, Mo. Pulitzer Publishing Co. KSL 1330 5000 Sait Lake City, Utah. Radio Service Corp., 141 S. 6th Ave. KSL 130 50000 Sait Lake City, Utah. Radio Service Corp. of Utah. KSO 1110 1000 Sioux Falls, S. O. Jos. Henkin, 1613 S. Duluth Ave. KSTP 1480 1000 Si. Falls, S. O. Jos. Henkin, 1613 C. Duluth Ave. KSTP 1480 1000 Si. Falls, Minn. National Battery Broadcasting Co. KSUN 1200 100 Lowell, Ariz. Copper Electrical Co. 100 State Corp.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 120 100 Seatile, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sioux City, Iowa. Perkins Bros. Co., 415 Douglas St. KSO 650 Sot. Louis, Mo. Pulitzer Publishing Co. KSEI 890 260 Postelic, Idaho. Radio Service Corp., 141 S. 6th Ave. KSL 1130 60000 Sait Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Oes Moines, Iowa. Des Moines Register & Tribune. KSO 110 1000 Sioux Fails, S. O. Jos. Henkin, 1613 S. Duluth Ave. KSTP 1460 1000 Sioux Fails, S. O. National Battery Broadcasting Co. KSUN 1200 100 Lewin, Kirz, Copper Electrical Co. KTAB 560 1000 San Francisco, Calif.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 680 500 Manhattan, Kans. State College of Agriculture. KSC J 1330 1000 Sioux City, Jowa. Perkins Bros. Co., 415 Douglas St. KSO 560 500 St. KSD 560 560 Solo St. Louis, Mo. Pulitzer Publishing Co. KSL 138 260 Pacatello, Idaho. Radio Service Corp., 141 S. 6th Ave. KSL 130 50000 Salt Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Oes Moines, Iowa. Des Moines Register & Tribune. KSOO 110 1000 Sioux Falls, S. O. Jos. Henkin, 1613 S. Duluth Ave. KSTP 1480 10000 St. Paul, Minn. National Battery Broadcasting Co. KSUN 1200 100 Lawaiting. Kathonal Battery Broadcasting Co. KTAB 100 San Francisco, Calil. <t< th=""></t<>
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sioux City, Iowa. Perkins Bros. Co., 415 Douglas St. KSO 500 St. Louis, Mo. Pulitzer Publishing Co. KSEI 890 250 Pocatelle, Idaho. Radio Service Corp., 141 S. 6th Ave. KSI 130 6000 Os alt Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Oes Moines, Iowa. Des Moines Register & Tribune. KSO 130 100 Sioux Fails, S. O. Jos. Henkin, 1613 S. Duluth Ave. KSTM 1200 100 Lowell, Ariz. Copper Electrical Co. KTAB 560 1000 San Francisco, Calif. Associated Broadcasters, Ino. KTAB 520 Pootes Point, Ariz.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 120 100 Seatile, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 500 Manhattan, Kans. State College of Agriculture. KSC 500 Situ College of Agriculture. KSG 500 State College of Agriculture. KSC Verkins Bros. Co., 415 Douglas St. KSO Soc 500 St. Louis, Mo. Pulitzer Publishing Co. KSEI 890 250 Postello, Idaho. Radio Service Corp., 141 S. 6th Ave. KSL 1130 50000 Sait Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Oes Moines, Iowa. Des Moines Register & Tribune. KSOO 110 1000 Sioux Fails, S. O. Jos. Henkin, 1613 S. Duluth Ave. KSTP 1460 1000 Sioux Fails, S. O. Jos. Henkin, 1613 S. Duluth Ave. KSUN 1200 100 Lowar, Copper Electrical Co. KSUN 1200 100 Lowar, Ariz. Copper Electrical Co. KTAB S60 500 Phoenix, Ar
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sioux City, Iowa. Perkins Bros. Co., 415 Douglas St. KSO 500 St. Louis, Mo. Pulitzer Publishing Co. KSEI 890 250 Pocatelle, Idaho. Radio Service Corp., 141 S. 6th Ave. KSI 130 6000 Os alt Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Oes Moines, Iowa. Des Moines Register & Tribune. KSO 130 100 Sioux Fails, S. O. Jos. Henkin, 1613 S. Duluth Ave. KSTM 1200 100 Lowell, Ariz. Copper Electrical Co. KTAB 560 1000 San Francisco, Calif. Associated Broadcasters, Ino. KTAB 520 Pootes Point, Ariz.
	KRMO 1310 100 Shreveport, La. Radio Station KRMD, Inc. KROW 930 500 Oakland, Calif. Educational Broadcasting Corp. KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club. KSAC 680 500 Manhattan, Kans. State College of Agriculture. KSCJ 1330 1000 Sicur City, Iowa. Perkins Bros. Co., 415 Douglas St. KSO 500 OS 1. Louis, Mo. Puliter Publishing Co. KSE 1830 250 Pocatello, Idaho. Radio Service Corp., 141 S. 6th Ave. KSL 1130 50000 Salt Lake City, Utah. Radio Service Corp. of Utah. KSO 1370 100 Os Moines, Iowa. Des Moines Register & Tribune. KSD 1170 1000 Situ Pails, S. O. Jos. Henkin, 1613 S. Duluth Ave. KSTP 1460 1000 Situr, 200, 100 Jos. Henkin, 1613 S. Duluth Ave. KSTP 1450 1000 San Francisco, Calif. Associated Broadcasting Co. KXTM Sco Jos. KSUM 1200 100 Lowal, Ariz, Copper Electrical Co. KTAB 560 1000 San Francisco, Calif. Associated Broadcasters, Inc. KTAR 520 <td< th=""></td<>
	KRMO 1310100Shreveport, La.Radio Station KRMD, Inc.KROW 930500Oakland, Calif.Educational Broadcasting Corp.KRSC 1120100Seattle, Wash.Radio Sales Corp., Wawhington Athletic Club.KSAC 580500Manhattan, Kans.State College of Agriculture.KSCJ 13301000Sioux City, Iowa.Perkins Bros. Co., 415Douglas St.KSD 560500St. Louis, Mo.Pulitzer Publishing Co.KSEIKSO 1370100Oes Moines, Iowa.Des Moines Register & Tribune.KSC0KSC01101000Jose Henkin, 1613S. Duluth Ave.KSTP14601000State Collectric Co.KATAKSD110100Les Moines Register & Tribune.KSTP14601000KASIM1200100Lossing Co.KATAKAB5601000San Francisco, Calif.Associated Broadcasting Co.KTAR820500Francisco, Calif.Associated Broadcasting Co.KTAR Broadcasting

KTEL 1240 1000 Twin Falls, Idaha. Radio Broadcasting Corp. KTHS 1040 10000 Hot Springs, Ark. Chamber of Commerce. KTM 780 500 Los Angeles . Calif. Pickwick Broadcasting Corp., Ltd. KTRH 1120 1000 Houston, Texas. KTRH Broadcasting Co., Rice Hotel. KTSA 1290 1000 San Antonio, Texas, Southwest Broadcasting Co. KTSM 1310 100 El Paso, Texas, Tri-State Broadcasting Co., Inc. KTUL 1400 250 Tuisa, Okia, J. T. Griffin KTW 1220 1000 Seattle, Wath: First Presbyterlan Church. KUJ 1370 100 Walla Walla, Wash, KUJ, Inc., Marcus Whitman Hotel. KUMA 1420 100 Yuma, Ariz, Dr. A. H. Schermann, Box 267, KUOA 1260 1000 Fayetteville, Ark. KUDA 1250 1000 Fayetteville, Ark. KUOA, Inc., Washington Hotel. KUSD 890 500 Vermillion, S. D. University of South Dakota. KVI 670 500 Tacoma, Wash. Puget Sound Broadcasting Co., Tacoma Hotel. KVL 1370 100 Seattle, Wash, KVL, Inc., 5th and Virginia St. KVOA 1280 500 Tucson, Ariz. Arizona Broadcasting Co., Inc. KVOO 1140 25000 Tuisa, Okia, Southwestern Sales Corp. KVOR 1270 1000 Colorado Springs, Cele S. H. Patterson KVOS 1200 100 Belling KVOS, Inc., Bellingham Hotel. 100 Bellingham, Wash, 100 Cedar Rapids, lews. KWCR 1420 Cedar Rapids Broadcast Co. 100 Shreveport, La. KWEA 1210 International Broadcasting Corp. KWFV 1210 100 Hilo, Hawall Hilo Broadcasting Co., Ltd. KWG 1200 100 Stockton, Calif. McClatchy Newspapers, Inc. KWJJ 1080 500 Pertland, Ore. KWJJ Broadcast Co., Inc., 328 Salmon St. KWK 1350 1000 St. Louis, Me. Thomas Patrick, Inc., Hotel Chase. KWKC 1370 100 Kansas City, Me. Wilson Duncan Broadcasting Co. KWKH 850 10000 Shreveport, La. International Broadcasting Corp. KWLC 1270 100 Decorah, lowa Luther Coilege KWSC 1220 1000 Pullman, Wash. State College of Washington. KWTO 560 500 Springfield, Mo. KGBX Inc. KWWG 1260 500 Brownsville, Texas. Frank P. Jackson. 760 K X A 250 Seattle, Wash. American Radio Tel. Co., 218 Bigelow Bldg. KXL 1420 100 Portland, Ore. KXL Broadcasters, 269 Pine St. KXO 1500 100 El Centre, Calif. E. R. Irey and F. M. Bowles. KXRO 1310 100 Abe KXRO, Inc., Hotel Morck. 100 Aberdeen, Wash. KXYZ 1440 250 Houston, Texas. Harris County Broadcast Co. 1280 1000 San Francisco, Calif. KYA Pacific Broadcasting Corp.

	KYW			Chicago, Ili.
	Westing KZRM	house El		Manila, P. i.
	Erlange	and Ga	linger.	Inc. (KZEG)
				Buenes Aires, Arg.
	LR5			
	NAA United S	690 States Na	1000	Arlington, Va.
	RUS	554	500	San Salvador, E. S.
	Republi	c of El S	alvado	r.
	TOW	1350		Quatemala, Qua.
	4	o de Gus		
	TGX	1380	75	Guatemala City
	TICR	912	75	San Jose, C. R.
	Govern	ment of	Costa l	Rica.
	TIEA	833	7.5	San Jose, C. R.
	TIEP	1450	7.6	San Jose, C. A.
	TIFB	714	30	San Jose, C. R.
	1110		••	
	TIFS	1441	7.6	Cartago, C. A.
	1		20	Cartago, C. R.
	TIGA	1014		
	TIGP	800 5 Pinto E	75 I Ant	San Jose, C. R. 225
	TIRCA	1100	500	San Jose, C. R.
	Perry C	irton, A	pt. 225	
	TISO	550	250	San Jose, C. R.
	P. F. S	aborio, A	pt. 135	54
	TITV	999	7.5	San Jose, C. R.
	TIVL	869	30	San Jose, C. R.
	1111	003		
	TIXA	614	7.5	San Jose, C. R. J
	VAS	885	2000	Glace Bay, N. S.
		an Marc		
	VESEK	1195	. 1	0 Montmagny, Que.
		farquis,		50X 57
}	VOAC	800	40	St. John's, Nfld.
	VOAS	810	100	St. John's, N. F.
		Sons, L		Ot Johnson M. F.
	VOQY	950	75 Broadc	St. John's, N. F. asting Co.
	VOKW	1085	80 BI	St. John's, N. F.
	Cvril I	. Parkin	6.	
	VONF	1195	400	St. John's, N. F. ng Co., Ltd., Box 1355.
	VOWE		dcastii 500	St. John's, N. F.
	Wesley	United	Church	n, Box 157.
	WAAB	1410	500	Boston, Mass. ng Corp., 1 Winter Pl.
	Bay St	ate Bros	deasti	ng Corp., 1 Winter Pl.
	Chicag	920 o Daily	000 Drover	Chicago, Ili. a Journal.
	- WAAT	940	300	Jersey City, N. J.
1	Breme	r Broadc	asting	Corp., 50 Journal Sq.
	WAAW	V 860	500	Omaha, Neb.
		Grain I 860	50000	New York, N. Y.
	Atlant	ic Broad	casting	Corp.
	WABI	1200	100	Banger, Maine.
	First I	Jniversal		
	WACC) 1420	100 daaset	Waco, Texas.
	WAR	west Broa	1000 1000	Akron, Ohio.
	Allen	T. Simm	ons, P.	Akron, Ohio. O. Box 29.
	WAGI	U 14ZU	100	Presque tale, mu.
	Aroost	ook Bro	adcasti	ng Carp.

	WALU 640 500 Columbus, Ohie.
	Associated Radiocasting Corp.
	WALR 1210 100 Zanesville, Ohie.
	WALR Broadcasting Corp. WAMC 1420 100 Anniston, Ala.
	R. C. Hammett, 1200 Noble St.
	WAML 1310 100 Laurel, Miss. Southland Radio Corp.
	WAPI 1140 5000 Birmingham, Ala.
	WAPI Broadcasting Corp. WARD 1400 500 Brooklyp, N. Y.
	United States Broadcasting Corp.
	WASH 1270 500 Grand Rapids, Mich.
	Kunsky-Trendle Broadcasting Corp. WAVE 940 1000 Louisville, Ky.
	WFIW, Inc.
	WAWZ 1350 250 Zarephath, N. J. Pillar of Fire.
	WA7L 1426 100 Hatieton, Pa.
	Hazleton Broadcasting Service, Inc. WBAA 1400 500 West Lafayette, Ind.
	Purdue University.
	WBAK 1430 1000 Harrisburg, Pa. Commonwealth of Pennsylvania.
	what then 10000 Relimore Md
	Consolidated Gas, Elec. Light & Power Co.
	WBAP 800 50000 Fort Worth, Texas. Carter Publications, Inc.
	AND AND ADDA ADDA WILLAS DANKS DO
	John H. Stenger, Jr., 70 S. Main St. WBBC 1400 500 Brooklyn, N. Y.
1	Brooklyn Broadcasting Corp.
	WBBL 1210 100 Richmond, Va. Grace Covenant Presbyterian Church.
	WRRM 770 25000 Chicago, III.
	WBBM Broadcasting Corp., Wrigley Bidg. WBBR 1200 1000 Brooklyn, N. Y.
	WBBR 1300 1000 Brooklyn, N. V. Peoples Pulpit Assn
	WRRY 1200 100 New Orleans, La.
	Samuel D. Reeks, Marberc Hotel. WBBZ 1200 100 Ponca City, Okla.
	I C. L. Carrell.
	WBCM 1410 500 Bay City, Mich. James E. Davidson, Hotel Wenonah
	WBEN 900 1000 Bunalo, M. T.
	WBEN, Inc. (Buffalo Evening News.) WBEO 1310 100 Marquette, Mich.
	Lake Superior Broadcasting Co., Inc.
	WBHS 1200 100 Huntsville, Ale. Radio Station WBHS, Inc.
	WBIG 1440 500 Greensbore, N. C.
	North Carolina Broadcasting Co., Inc. WBNX 1350 250 New York, N. Y.
	Standard Cahill Co., Inc.
	WBOQ 860 50000 New York, N. Y. Atlantic Broadcasting Corp.
	weaw 1310 100 Terre Haute, Ind.
	Banks of Wabash, Inc., 241/2 S. 6th. WBRC 930 500 Birmingham, Ala.
	Frank M. King, Receiver.
	WBRE 1310 100 Wilkes-Barre, Pa. Louis G. Baltimore, 16 N. Main.
	wpen ast 560 Rahson Park, Mass.
	Broadcasting Service Organization, Inc.
	WBT 1080 50000 Charlotte, N. C. Station WBT, Inc., Wilder Bldg.
	WBTM 1370 100 Danville, Va. Piedmont Broadcasting Corp.
	Piedmont Broadcasting Corp. WBZ 990 50000 Boston, Mass.
	Westinghouse Elec. & Mfg. Co.
	WBZA 990 1000 Springfield, Mass. Westinghouse Elec. & Mfg. Co.

WCAC 600 250 Storrs, Conn. Connecticut Agricultural College. WCAD 1220 600 Canton, N. Y. St. Lawrence University. WCAE 1220 1000 Pittsburgh, Pa. WCAE, Inc., Sun-Telegraph. WCAH 1430 ______ 600 Columbus, Ohie. International Bible Students Assn. WCAL 1250 1000 Northfield, Minn. St. Olaf College, WCAM 1280 500 Can City of Camden, City Hall, 500 Camden, N. J. WCAO 600 250 Baltimore, Md. Monumental Radio Co. 600 Asbury Park, N. J. WCAP 1280 Radio Industries Broadcast Co. WCAT 1200 100 Rapid City S. D. South Dakota State School of Mines WCAU 1170 50000 Philadelphia Pa. WCAU Broadcasting Co., 1622 Chestnut. 100 Burlington, Vt. WCAX 1200 Burlington Dally News, Inc. WCAZ 1070 50 Carthage, Iil. Superior Broadcasting Service, Inc. 250 Allentown, Pa. WCBA 1440 B. Bryan Musselman, 39-41 10th St. WCBD 1080 6000 Zion, Ill. Wilbur Glenn Voliva. WCBM 1370 100 Baltimore, Md. Baltimore Broadcasting Corp. WCBS 1210 100 Springfield, III, WCBS, Inc., 2081/2 S. 5th. WCCO 810 60000 Minneapolis, Minn. Northwestern Broadcasting, Inc. WCFL 970 1500 Chicago, Ill. Chicago Federation of Labor. WCKY 1490 6000 Covington, Ky. L. B. Wilson, Inc. WCLO 1200 100 Janesville, Wis. WCLO Radio Corp. WCLS 1310 100 Joliet, II WCLS, Inc., 301 E. Jefferson St 100 Joliet, III. WCNW 1600 100 Brooklyn, N. Y. Arthur Faske, 1525 Pitkin Ave. WCOA 1340 600 Pensacola, Fla Pensacola Broadcasting Co. WCOC 880 500 Meridian, Miss. Mississlppi Broadcasting Co., Inc. 100 Chicago, III. WCRW 1210 Clinton R. White, 2756 Pine Grove Ave. WCSC 1360 500 Charleston, S. South Carolina Broadcasting Co., Inc. 500 Charleston, S. C. WCSH 940 1000 Portland, Me. Congress Square Hotel Co., 157 High. WDAE 1220 1000 Tampa, Fla. Tampa Publishing Co., Tampa Terrace. WDAF 610 1000 Kansas City, Me. Kansas City Star Co. WDAG 1410 1000 Amarillo, Texas. National Radio & Broadcasting Corp. WDAH 1310 100 El Paso, Texas, Tri-State Broadcasting Co., Inc. WDAS 1370 100 Philadelphia, Pa. WDAS Broadestg. Co., Inc., Broadwood Hotel. WDAY **340** 1000 Fargo, N. D. WDAY, Inc., Black Bldg., 118 Broadway. 250 Roanoke, Va. WDBJ 930 Fimes World Corp., 122 W. Church Ave. WDBO 680 250 Orlando, Fia. Orlando Broadcasting Co., Inc. WDEL 1120 250 Wilmingt WDEL, Inc., 10th and King Sts. 250 Wilmington, Del.

WDEV 650 600 Water Harry C. Whitehill, Stowe St. 500 Waterbury, Vt. WDGY 1180 1000 Minneapolis, Minn, Dr. Geo. W. Young, 909 W. Broadway, WDOD 1280 1000 Chattanooga, Tenn. WDOD Broadcasting Corp., Hotel Patten. WDRC 1330 1000 Hartford, Conn. WDRC, Inc., Corning Bldg., 11 Asylum St. WDSU 1250 1000 New Orleans, La. Jos. H. Uhalt, On Hotel DeSoto. WDZ 1070 100 Tuscola, Ill. James L. Bush. WEAF 660 60000 New York, N. Y. National Broadcasting Co., Inc. WEAN 780 500 Providence, R. I. Shepard Broadcasting Service, Inc. WEBC 1290 1000 Superior, Wis, Head of the Lakes Broadcasting Co. WEBQ 1210 100 Harrisburg, III. Harrisburg Broadcasting Co. WEBR 1810 100 Buttalo, N. Y. Howell Broadcasting Co., Inc., 735 Main. 100 Chicago, Ill. WEDC 1210 Emil Denemark, 3860 Ogden Ave. 100 Greenville, N. O. WEED 1420 Wm. Avera Wynne. 1000 Boston, Mass. WEEI 690 Edison Elec. Illuminating Co. WEEU 830 1000 Reading, Pa. Berks Broadcasting Co., 533 Penn. WEHC 1350 500 Charlottesville, Va. Community Brdestg. Corp. WEHS 1420 100 Cicero, IlL. WEHS, Inc., 6138 W. 22nd St. WELL 1420 50 Battle Creek, Mich. Engulrer News Co., 7 N. McCamly St. WENC 1420 180 Americus, Ga. Americus Broadcast Corp. WENR 870 50000 Chicago, III. Great Lakes Broadcasting Co. WESG 1040 1000 Elmira, N. Y. Elmira Star Gazette, Inc. WEVD 1300 500 New York, N. Y. Jewish Daily Forward, Hotel Claridge. WEW 760 1000 St. Louis, Me. St. Louis University, 221 N. Grand Blvd. WEXL 1310 50 Royal Oak, Mich. Royal Oak Broadcasting Co. WFAA 800 60000 Dallas, Texas Morning News and Journal. WFAB 1300 1000 New York, N. Y. Fifth Avenue Broadcasting Corp. WFAM 1200 WFAM 1200 100 South Bend, Ind. South Bend Tribune, 200 W. Colfax. WFAS 1210 100 White Plains, N. Y. Westchester Broadcasting Corp. 100 Greenville, S. C. WFBC 1200 Greenville News-Piedmont Co. WFBE 1200 100 Cine WFBE, Inc., Hotel Sinton. 100 Cincinnati, Ohle. WF8G 1310 100 Altoena, Pa. Gable Broadcasting Co. 12th Av. & 13th St. WFBL 1360 1000 Syracuse, N. Y. Onondaga Radio Broadcasting Corp. WFBM 1230 1000 Indianapolis, Ind. Indianapolis Power & Light Co. WFBR 1270 600 Baltimore, Md. Baltimore Radio Show, Inc. WFDF 1310 100 Flint, Mich. Flint Broadcasting Co. WFDV 1600 100 Rome, Ga. Rome Broadcasting Corp., 10 3rd Ave.

	WFEA 1430 600 Manchester, N. H.
	New Hampshire Broadcasting Co.
	WFI 560 500 Philadelphia, Pa.
	WFI Broadcasting Co., 801 Market.
	WFLA 620 1000 Clearwater, Fla.
	Florida West Coast Broadcasting Co., Inc.
	WGAL 1310 100 Lancaster, Pa. WGAL, Inc., 8 W. King St.
	WGAL, Inc., 8 W. King St.
1 1	WGAR 1450 600 Cleveland, Ohis.
	WGAR Broadcasting Co., Hotel Statler. WGBB 1210 100 Freeport, N. Y.
	WGBB 1210 100 Freeport, N. Y. H. H. Carman, 64 S. Grove St.
	WGBF 630 500 Evansville, Ind.
	Evansville On the Air, Inc.
	WGBI 888 250 Scramton, Pa.
	Scranton Broadcasters, Inc.
	WGCM 1210 100 Mississippi City, Miss.
	Great Southern Land Co., Gulfport, Miss.
	WGCP 1250 1000 Newark, N. J.
	May Radlo Broadcasting Co.
	WGES 1360 500 Chicago, Ill.
	Oak Leaves Broadcasting Station, Inc.
	WGH 1810 100 Newport News, Va.
	Hampton Roads Broadcasting Corp.
	WGL 1370 100 Fort Wayne, Ind. F. C. Zieg, 213 W. Main St.
	WGLC 1370 100 Hudson Falls, N. Y.
	WGLC 1370 100 Hudson Falls, N. Y. O. T. Griffin & G. F. Bissell.
	WGN 720 50000 Chicago, Ill.
1	WGN 720 50000 Chiczgo, Ill. WGN, Inc., Tribune Tower.
	WGNY 1210 100 Chester, N.Y.
	Peter Goelet (Orange County).
	WGR 550 1000 Buffalo, N. Y.
	Buffalo Broadcasting Corp.
	WGST 890 250 Atlanta, Ga.
	Georgia School of Technology.
	WGY 798 59000 Schenectady, N. Y. National Broadcasting Co., Inc.
	WHA 949 1000 Madison, Wis.
	University of Wisconsin.
	WHAD 1120 250 Milwaukee, Wis.
	Marquette University.
	WHAM 1150 50000 Rochester, N. Y.
	Stromberg-Carlson Tel. Mfg. Co.
	WHAS 820 50000 Louisville, Ky. Courler Journal & Louisville Times.
	Courier Journal & Louisville Times.
	WHAT 1310 100 Philadelphia, Pa. Curtls-Martin Newspapers, Inc.
	WHAZ 1300 500 Troy, N. Y. Rensselaer Polytechnic Institute.
	WHB 880 500 Kansas City, Me.
	WHB Broadcasting Co., Scarritt Bldg.
	WHBC 1200 100 Canton, Ohlo,
	Edw. P. Graham, 319 Tusc. St., W.
	WHBD 1370 100 Mount Orab, Ohla.
	F. P. Moler.
	WHBF 1219 100 Rock Island, Ill.
	Rock Island Broadcasting Co.
1	WHBL 1410 600 Sheboygan, Wis.
	Press Publishing Co.
	WHBQ 1370 100 Memphia, Tenn. Broadcasting Sta. WNBQ, Inc., Hotel Claridge.
	WHBU 1210 100 Anderson, Ind.
	Anderson Broadcasting Corp.
	WHBY 1200 100 Green Bay, Wis.
	WHBY 1200 100 Green Bay, Wis. WHBY, Inc., Bellin Bldg.
	WHDF 1376 100 Calumet, Mich.
	Upper Michigan Broadcasting Co.
	WHDH 830 1000 Boston, Mass.
	Matheson Radio Co., 62 Boylston.
	WHDL 1420 100 Tupper Lake, N. Y.
	Tupper Lake Broadcasting Co.

WHE8 740 250 Portsmouth, N. H. Granite State Broadcasting Corp. WHEC 1430 500 Rochester, N. Y. WHEC, Inc., 40 Frankiin St. WHEF 1500 100 Kosciusko, Miss. Attala Milling & Produce Co. 100 Dothan, Ala. WHET 1370 Troy Broadcasting Co. WHFC 1429 100 Cicero, Ill. WHFC, Inc., 6138 W. 22nd St. WHIS 1410 250 Bluefield, W. Va. Daily Telegraph Printing Co., Inc. WHK 1390 1000 Cleveland, Ohie. Radio Air Service Corp. WHN 1010 250 New York, N. Y. Marcus Loew Booking Agency. WHOM 1460 260 Jersey City, N. J. New Jersey Broadcasting Corp. WHP 1430 580 Harrisburg, Pa. WHP, Inc., Harrisburg Telegraph. WIAS 1310 100 Ottumwa, lewa. Iowa Broadcasting Co., Hotel Ottumwa. WIBA 1280 500 Madison, Wis. Badger Broadcasting Co., Inc. WIBG 970 100 Glenside. Pa. WIBG, Inc., Keswick Bldg. WIBM 1370 100 Jackson, Mich. WIBM, Inc., Otsego Hotel. WIBU 1210 100 Poynette, Wis. Wm. C. Forrest, R. F. D. No. 3. WIBW 580 1000 Topeka, Kans. Topeka Broadcasting Assn. Inc. WIBX 1200 100 Utica, N. Y. WIBX, Inc., 1st Natl. Bank Bldg. WICC 600 250 Bridgeport, Cens. Shepard Broadcasting Service, Inc. WIL 1200 100 St. Louis, Me. Missouri Broadcasting Corp. WILL 890 250 Urbana, Ill. University of Illinois. WILM 1420 100 Wilmington, Del. Delaware Broadcasting Co., Inc. WIND 560 1000 Gary, Ind. Johnson-Kennedy Broadcasting Corp. WINS 1180 500 New York, N. Y. American Radio News Corp. WIOD 1300 1000 Miami Fla. Isle of Dreams Broadcasting Corp. WIP 610 500 Philadelphia, Pa. Pennsylvania Broadcasting Co. WIS 1018 680 Columbia, S. O. Station WIS, Inc., 1811 Main St. WISN 1120 250 Milwaukee, Wis. American Radio News Corp. WJAC 1310 190 Johnstown, Pa. WJAC, Inc., Tribune Bldg. Annex. WJAG 1050 1000 Norfolk, Neb. Norfolk Daily News. WJAR 890 600 Providence, R. L Outlet Co., Weybossett St. WJAS 1290 1000 Pittsburgh, Pa. Pittsburgh Radio Supply House. WJAX 900 1000 Jacksonville, Fis. City of Jacksonville. WJAY 610 600 Cleveland, Ohia. Cleveland Radio Broadcasting Corp. WJBC 1200 100 LaSalle, III. Kaskaskia Broadcasting Co. WJBI 1210 100 Red Bank, N. J. Monmouth Broadcasting Co., Inc. WJBK 1370 50 Detroit, Mich. James F. Hopkins, Inc., Curtiss Bidg.

100 Decatur, III. WJBL 1200 Commodore Broadcasting, Inc. 100 Baton Rouge, La. WJBO 1420 Baton Rouge Broadcasting Co. Inc. WJBW 1200 106 New Orleans, La. C. C. Carlson, 2743 Dumaine St. WJBY 1210 100 Gadsden, Ala. Gadsden Broadcasting Co., 112 N. 8th St. WJDX 1270 1000 Jackson, Miss. Lamar Life Insurance Co. WJEJ 1210 100 Hagerstown, Md. Hagerstown Broadcasting Co., Inc. WJEM 990 500 Tupelo, Miss. Britt A. Rogers, Jr. WJJD 1130 20000 Chicage, III. WJJD, Inc., 201 N. Weils St. WJMS 1420 100 Ironwood, Mich. WJMS, Inc., St. James Hotel. WJR 750 10000 Detroit, Mich. WJR, Inc., Fisher Bldg. WJSV 1460 10000 Washington, D. C. Old Dominion Broadcasting Co. WJTL 1370 100 Atlanta, Ga. Oglethorpe University. WJW 1210 100 Akron, Ohio. WJW, Inc., 41 S. High St. WJZ 760 50000 New York, N. Y. National Broadcasting Co., Inc. WKAQ 1240 1000 San Juan, P. R. Radio Corp. of Porto Rico. WKAR 1040 1000 East Lansing, Mich. Michigan State College. WKBB 1500 100 East Duboue, III. Richard W. Hoffman WKBC 1310 100 Birmingham, Ala. R. B. Broyles, Tutwiler Hotel. WKBF 1400 500 Indianapolis, Ind. Indianapolis Broadcasting, Inc. WKBH 1380 1000 LaCrosse, Wis. WKBH, Inc., 409 Main St. WKBI 1420 100 Cicero, III. WKBI, Inc., 6138 W. 22nd St. WKBN 570 500 Youngstown, Ohlo. WKBN Broadcasting Corp. WKBO 1200 100 Harrisburg, Pa. Keystone Broadcasting Corp. WKBV 1509 100 Richmond, Ind. Wm. O. Knox, Box 286 WKBW 1480 5000 Buffale, N. Y. Buffalo Broadcasting Corp. WKBZ 1500 100 Ludington, Mich. Karl L. Ashbacker & Sons. WKEU 1500 100 LaGrange, Ga. Radio Station WKEU, 906 Hill St. WKFI 1210 100 Greenville, Miss. J. Pat Scully, Box 302. WKJC 1200 100 Lancaster, Pa. Lancaster Broadcasting Service, Inc. 100 Sunbury, Pa. WKOK 1210 Sunbury Broadcasting Co. WKRC 550 1000 Cincinnati, Ohlo. WKRC, Inc., Hotel Alms. 900 1000 Oklahoma City, Okla. WKY Oklahoma Publishing Co. WKZO 590 1000 Kalamazoo, Mich. John E. Fetzer, Burdick Hotel. WLAC 1470 5000 Nashville, Tenn. Life & Casualty Insurance Co. WLAP 1200 100 Louisville, Ky. American Broadcasting Corp. of Ky. WLB 1250 1000 Minneapolis, Minn. University of Minnesota.

WLBC 1310 100 Muncle, Ind. D. A. Burton, Anthony Bldg. WLBF 1420 100 Kansas City, Kans. WLBF Broadcasting Co., Huron Bidg. WLBL 900 2500 Stevens Point, Wis, Wisconsin Dept. of Agriculture and Markets. WLBW 1260 500 Erie, Pa. Broadcasters of Pennsylvania, Inc. WLBZ 620 500 Bangor, Me. Malne Broadcasting Co., Inc., 100 Main. WLEC 1340 250 Portland, Me. Casco Bay Broadcasting Co. WLEY 1370 100 Lexington, Mass. Albert S. Moffat WLIT 560 500 Philadelphia Lit Bros. Broadcasting System, Inc. 500 Philadelphia, Pa. WLS 870 50000 Chicago, Ili. Agricultural Broadcasting Co. WLTH 1400 500 Brooklyn, N. Y. Voice of Brooklyn, Inc. WLVA 1370 100 Lynchburg, Va. Lynchburg Broadcasting Corp. WLW 700 50000 Cincinnati, Ohie, Crosley Radio Corp. WLWL 1100 5000 New York, N.Y. Missionary Society of St. Paul. WMAL 630 250 Washington, D. C. National Broadcasting Co., Inc. WMAQ 870 5000 Chicago, Ill. National Broadcasting Co., Inc. WMAS 1420 100 Springfield, Mass. WMAS, Inc., Hotel Stonehaven. WMAZ 1180 500 Macon, Ga. Southeastern Broadcasting Co. WMBC 1420 100 Detroit, Mich. Michigan Broadcasting Co. WMBD 1440 500 Peoria, III. Peoria Broadcasting Co. WMBG 1210 100 Richmond, Va. Havens and Martin, Inc. WMBH 1420 100 Joplin, Mo. W. M. Robertson. WMBi 1080 5000 Chicago, III. Moody Bible Institute. 100 Auburn, N. Y. WMBO 1310 WMBO, Inc., Metcalf Bldg. WMBQ 1500 100 Brooklyn, N. Y. Paul J. Gollhofer, 95 Leonard St. WMBR 1370 100 Tampa, Fla. F. J. Reynolds, 907 Florida Ave. WMC 780 500 Mer WMC, Inc., Hotel Gayoso. 500 Memphis, Tenn. WMCA 570 500 New York, N. Y. Knickerbocker Broadcasting Co. WMMN 890 250 Fairmont, W. Va. A. M. Rowe, Inc., 325 Main St. WMPC 1500 100 Lapeer, Mich. First Methodist Protestant Church. WMT 600 600 Waterloo, lows, Waterloo Broadcasting Co. WNAC 1230 1800 Boston, Mass. Shepard Broadcasting Service, Inc. WNAD 1010 500 Norman, Okla, University of Oklahoma. WNAX 570 1000 Yankton, S. D. The House of Gurney, Inc., 2nd and Capital St. 100 Binghamton, N. Y. WNBF 1500 Howitt-Wood Radio Co., Inc. WNBH 1310 100 New Bedford, Mass. New Bedford Broadcasting Co. WNBO 1200 100 Silver Haven, Pa. John Browniee Spriggs. (Washington, Pa.)

WNBR 1430 500 Memphis, Tenn. Memphis Broadcasting Co., Hotel DeVoy. WNBW 1200 10 Carbondale, Pa. WNBW, Inc., 50 Main St., N. WNBX 1260 250 Springfield, Vt. WNBX Broadcasting Corp., 39 Main St. WNBZ 1290 50 Sarana Smith & Mace, 70 Broadway. 50 Saranac Lake, N. Y WNEW 1250 1000 New Wodaam Corp., 1060 Broad 1000 Newark, N. J. WNOX 560 1000 Knoxville, Tenn. WNOX, Inc. WNRA 1420 100 Muscle Shoals, Ala. Kathryn Jones WNYC 810 500 New York, N. Y. Dept. of Plant and Structures. WOAI 1190 50000 San Antonio, Texas. Southern Industries, Inc., 1038 Navarro. WOBU 580 750 Charleston, W. Va. WOBU, Inc., Ruffner Hotel. WOC- 1000 50000 Des Maines, Iowa. WHO Central Broadestg. Co., 914 Walnut St. WOCL 1210 50 Jamestown, N.Y. A. E. Newton, 840 N. Main St. WODX 1410 500 Mobile, Ala. Mobile Broadcasting Corp., Battle House. 640 5000 Ames, lowa. WOI Iowa State College. 500 Albany, N. Y. WOKO 1430 500 Albany WOKO, Inc., Hotel Ten Eyck. 100 Washington, D. C. WOL 1810 American Broadcasting Co., Annapolis Hotel. WOMT 1210 100 Manitewoc, Wis. Francis M. Kadow, Box 326. WOOD 1270 500 Grand Rapids, Mich. Kunsky-Trendle Broadcasting Corp. WOPI 1500 100 Bristol, Tenn Radiophone Broadcasting Station WOPI, Inc. WOQ 1300 1000 Kansas City, Mo. Unity School of Christianity. WOR 710 5000 Newark, N. J. Bamberger Broadcasting Service, Inc. WORC 1280 500 Worcester, Mass. Alfred F. Kleindienst, 60 Franklin St. WORK 1000 1000 York, Pa. York Broadcasting Co., 15 S. Beaver St. WOS 630 500 Jefferson City, Mo. State Highway Control, Capitel Bldg. WOSU 570 750 Columbus, Ohio. Ohio State University. WOV 1180 1000 New York, N. Y. International Broadcasting Corp. WOW 590 1000 Omaha, Neb. Woodmen of the World, 4th and Farnam. WOWO 1160 10000 Fort Wayne, Ind. Main Auto Supply Co., 213 W. Main. WPAD 1420 100 Paducah, Ky. Paducah Broadcasting Co., Inc. WPAP 1010 250 New York, N. Y. Marcus Loew Booking Agency. 100 Philadelphia, Pa. WPEN 1500 William Penn Broadcasting Co WPFB 1370 100 Hattiesburg. Miss. Otis P. Eure, Box 530. WPG 1100 5000 Atlantic City, N. J. Columbia Broadcasting System. WPHR 1200 100 Petersburg, Va. WLBG, Inc., Medical Arts Bidg. WPRO 1210 100 Providence, R. I. Cherry & Webb Broadcasting Co., 15 Chestnut. WPTF 680 5000 Raleigh, N. C. Durham Life Insurance Co.

WQAM 560 1000 Miami, Fla. Miami Broadcasting Co., Inc., 327 N. E. 1st Ave. WQAN 880 250 Scranto Scranton Times, 149 Penn Ave. 250 Scranton, Pa. WOAO 1010 250 New York, N. Y. Marcus Loew Booking Agency. WQBC 1360 500 Vicksburg, Miss. Delta Broadcasting Co., Hotel Vicksburg. WQDM 1870 100 St. Albans, Vt. A. J. St. Antoine and E. J. Regan. WODX 1210 100 Thomasville, Ga. Stevens Luke, 135 E. Jackson St. 100 Williamsport, Pa. WRAK 1370 100 Willia WRAK, Inc., 244 W. 4th St. WRAM 1370 100 Wilmington, N. C. Wilmington Radio Assn., Princess St. WRAW 1310 100 Reading, Pa. Reading Broadcasting Co., 533 Penn Bt. WRAX 1020 250 Philadelphia, Pa. WRAX Broadcasting Co., 217 S. Broad St. 100 Columbus, Ga. WRBL 1200 WRBL Radio Station, Inc. WRBX 1410 250 Roanoke, Va. Richmond Development Corp. WRC 950 500 Washington, D. C. National Broadcasting Co., Inc. WRDO 1870 100 Augusta, Me. WRDO, Inc., Augusta House. WRDW 1500 100 Augusta, Ga. Virgil V. Evans Co., 309 8th St. WREC 800 500 Memphis, Tenn. WREC, Inc., Hotel Peabody. WREN 1220 1000 Lawrence, Kane. Jenny Wren Co., 8th and Vermont St. WRHM 1250 1000 Minneapolis, Minn. Minnesota Broadcasting Corp., 115 E. Grant. WRJN 1370 100 Racine, Wis. Racine Broadcasting Corp., Hotel Racine. WRNY 1010 250 New York, N. Y. Marcus Loew Booking Agency 100 Knozville, Tenn. WROL 1310 Stuart Broadcasting Corp., 524 S. Gay. WRR 1280 500 Dallas, Texas. City of Dallas, Hilton Hotel. WRUF 830 5000 Gainesville, Fla. State University. WRVA 1110 5000 Richmond, Va. Larus & Bro. Co., Inc., 22nd and Gary St. WSAL 1330 1000 Cincinnati, Ohlo. Crosley Radio Corp., 1329 Arlington. WSAJ 1310 10 Grove City College 100 Grove City, Pa. 250 Allentown, Pa. WSAN 1440 WSAN, Inc., 39 10th St. WSAR 1450 250 Fall River, Mass. Doughty & Welch Electric Co., Inc. WSAZ 1190 1000 Huntington, W. Va. WSAZ, Inc., 9291/2 4th Ave. WSB 740 50000 Atlanta, Ga. Atlanta Journal, 7 N. Forsyth St. WSBC 1210 100 Chicago, Ill. Gene T. Dyer, 1258 S. Michigan Ave. 500 South Bend, Ind. WSBT 1230 South Bend Tribune. WSEN 1210 100 Columbus, Ohio. Columbus Broadcasting Corp., 144 S. High. WSFA 1410 500 Montgomery, Ala. Montgomery Brdg. Co., Inc., Jeff. Dav. H'l. WS1X 1210 100 Springfield, Tenn. 638 Tire & Vuicanizing Co. WSJS 1310 100 Winsten-Salem, N. C. Winston-Salem Journal Co., 416 N. Marshall.

850 50000 Nashville, Tenn. WSM National Life & Accident Insurance Co. WSMB 1320 500 New Orleans, La. WSMB, Inc., Malson Blanche Bldg. WSMK 1380 200 Dayton, Ohio-S. M. Krohn, Jr., 4th and Main St. WSOC 1210 100 WSOC, Inc., Box 730. 100 Charlotte, N. C. WSPA 1420 100 Spartanburg, S. C. Virgil V. Evans, Ravenel and Avant St. WSPD 1340 1000 Toledo, Ohio. Toledo Broadcasting Co., 505 Jefferson WSUI 880 500 lowa City, Iowa, State University of Iowa. WSUN 620 1000 St. Petersburg, Fla. Florida Westcoast Broadcasting Co., Inc. WSVS 1370 50 Buffale, N.Y. Seneca Vocational High School. WSYB 1500 100 Rutland, Vt. Philip Weiss Music Co., 80 West St. WSYR 670 250 Syracuse, N. Y. Central New York Broadcasting Corp. WTAD 1449 500 Quincy, Ill. Illinois Broadcasting Corp., State and 6th. WTAG 580 750 Worcester, Mass. Worcester Telegram Publishing Co. WTAM 1979 50000 Cleveland, Ohio. National Broadcasting Co., Inc. WTAQ 1330 1000 Eau Claire, Wis, Gillette Rubber Co., Hotel Eau Claire. WTAR 780 500 Norfelk, Va. WTAR Radio Corp., Wainwright Bidg. 500 College Station, Texas. WTAW 1128 Agricultural and Mechanical College. WTAX 1210 100 Springfield, Ill. WTAX, Inc., 416 E. Capitol Ave. WTBO 1420 100 Cumberland, Md. Associated Broadcasting Corp. Box 794. WTEL 1310 100 Philadelphia, Pa. Foulkrod Radio Engineering Co., Inc. WTFI 1450 500 Athens, Ga. Liberty Broadcasting Co., Costa Bidg. WTIC 1060 50000 Hartford, Conn. Travelers Broadcasting Service Corp. WTJS 1810 100 Jackson, Tenn. Sun Publishing Co., Sun Bldg. WTMJ 620 1000 Milwaukee, Wis. The Journal Co., 333 W. State St. WTNJ 1280 500 Trenton, N. J. Trenton Broadcasting Co., Stacy Trent Hote WTOC 1260 500 Savannah, Ga. Savannah Broadcasting Co., Inc., DeSoto Hotel. WTRC 1310 50 Elkhart, Ind. Truth Radio Corp., Hotel Elkhart. WVFW 1400 500 Brooklyn, N. Y. Paramount Brdestg. Co., 1 Nevins St. WWAE 1200 100 Hammond, Ind. Hammond Calumet Broadcasting Corp. WWJ 920 1000 Detroit, Mich. Evening News Assn., 616 Lafayette Blvd. WWL 850 10000 New Orleans, La. Loyola University, Roosevelt Hotel. WWNC 570 1000 Asheville, N. C. Citizen Broadcasting Co., Inc., Flatiron Bldg. WWRL 1500 100 Woodside, N. Y. Long Island Broadcasting Corp. WWSW 1500 100 Pittsburgh, Pa. Walker & Downing Radio Corp. WWVA 1160 6000 Wheeling, W. Va. West Virginia Broadcasting Corp. WXYZ 1240 1000 Detroit, Mich. Kunsky-Trendle Broadcasting Corn.

	XEA 1000 250 Guadalajara, jal. Alberto Palos Souza. Juan Manuel 383
	XEAB 1450 7.5 Nuevo Laredo, Tama.
	Homberto Garcia.
	XEAC 1295 100 San Luis Potosi, S.L.P.
	Francisco de P. Cabrera. XEAE 980 800 Tijuana, B. C.
	Adolfo Labastida Jr Ave D 542
	Adolfo Labastida, Jr., Ave. D 542. XEAF 990 750 Nogales, Son. Manuel Mascarenas M., Hotel Central.
	XEAI 1090 100 Mexico City, D. F.
	XEA1 1090 100 Mexico City, D. F. Carlos Gonzales Caballero, Insurgentes 366.
	YEAD EED 100 Manufacture e
	Luis L. Castro, C. Altamirano 156.
	XEAW 965 10000 Reynosa, Tams. International Broadcasting Co., S. A. XEB 1030 10000 Mexico City, D. F.
	XEB 1030 10000 Mexico City D F
	El Buen Tono, S. A., Buen Tono No. 6. XEC 1000 50 Toluca, D. F.
	XEC 1000 50 Toluca, D. F.
	Jesus R. Benavides, Independencia 76.
	XED 1155 500 Guadalajara, Jal. Radiofonografica de Guadalajara, S. A.
	XEF 735 160000 Villa Acuna, Coab.
	Compania Radiodifusora de Acuna, S. A.
	XEFA 1250 500 Mexico City, D. F.
	Eduardo Limon Segui, Meditarraneo 236 XEFB 1315 100 Monterrey, N. L.
	Jesus Quintanilla, 5 de Mayo Oriente 112.
	XEFC 1050 100 Merida Vuo
	J. Molina Font, Calle 59, 517.
	Rafael T. Carranza.
	XEFG 1085 500 Mexice City, D. F. Ricardo Gonzales Montero, Tepic 48
	Ricardo Gonzales Montero, Tepic 48
	XEFI 1280 250 Chihushus, Chih. Feliciano Lopes Isles, Ap. 157.
	XEFJ 1000 100 Monterrey, N. L.
	XEFJ 1000 100 Monterrey, N. L. R. Junco de la Vega, C. Morelos Oriente 759.
	XEFO 949 5000 Mexice City, D. F. Partido Nacional Revolucionario.
	XEFS 1800 40 Queretare Ore
	Carvador Ballenes, Carle Montes 23.
	XEFV 1400 100 Jaurez, Chih. J. Onofre Meza, Ave. Lerdo Norte 521.
	XEFW 1280 70 Tampico, Tams.
	XEFW 1280 70 Tampico, Tams. J. Expedito Martinez, C. Madero Ponlente 19.
	XEFZ 1370 100 Mexico City, D. F. Manuel Zetina
_	XEH 1132 250 Manterrey, N. L.
	Iarnava y Cia, P. Mier 215.
	XEI 1310 260 Morella, Mich
	Carlos Gutierrez M., F. I. Madero 545 XEJ 1015 500 Juarez, Chih.
	Juan G. Buttner, Ave. Lerdo 309.
	XEK 990 100 Mexico City, D. F.
	Arturo Martinez. Jalapa No. 51
	XEL 1000 40 Saltillo, Coah. Antonio Garza Castro, Aldama 59
	XEN 711 1000 Mexics City, D. F. Cerveceria Modelo S. A., Motolinia 22. XENT 115 150000 Nueve Larde, Tama. Cia Industrial Universal S. A., Apt. 47.
	Cerveceria Modelo S. A., Motolinia 22.
	Cia Industrial Universal S A Apt 47
	ALU 340 DUUD MIEXICO GITY. D. P.
	Partido Nacional Revolucionario.
	XEOK 760 2500 Tijuana, B. C. Carlos de la Sierra, (Box 1441, San Diego).
	XEP 780 500 Mexico City, D. F.
	Cia Difusora de Mexico S. A., Durango 74.
	XEPN 585 75000 Pledras Negras, Coate
	Piedras Negras Broadcasting Co. XER 735 150080 Villa Acuna, Coah.
	Compania Radiodifusora de Acuna, S. A.

XES 1020 250 Tampico, Tams.	XEZ 630 500 Merida, Yuc. 🚟 🛽
Fernando Sada, Hotel Inglaterra.	Bartolome Garcia Correa, Calle 58 No. 497.
XET 690 500 Monterrey, N. L. Cadena Radiodifusora Mexicana, S. A.	XFB 1290 1000 Jalapa, Ver. Gobierno del Estado de Veracruz. XFC 805 850 Aguascalientes, Age.
XETB 1380 125 Torreon, Coab. Jose A. Berumen, R. Corona 317. XETH 860 100 Puebla, Pue.	Goblerno del Estado de Aguascallentes. XFG 638.3 2000 Mexico City, D. F.
Ramon Huerta G., Calle 17, Oriente 6.	Secretarla de Guerra y Marina.
XETU 890 100 Pachuca, Hdge.	XFO 940 5000 Mexico City, D. F.
Benito Castillo	National Revolucionarlo Party.
XETW 830 500 Mexico City, D. F.	XFX 840 500 Mexico City, D. F.
Rafael M. Pena, Gante 4. 3er piso	Secretaria de Educacion Publica.
XETZ 1210 500 Mexico City, D. F.	YVIBC 960 6000 Caracas, Venz.
Jose Alvarez del Villar, 92 Londres 190.	Cia Ama Alamacen Americana.
XEU 1010 100 Veracruz, Ver. Fernando Pazos Sosa, Vicario 12. XEW 910 6000 Mexico City, D. F. Cadena Radiodifusora Mexicuna S. A.	YV2BC 882 100 Caracas, Venz. YV3BC 1200 1000 Caracas, Venz. Degwitz & Siblesz.
XEWW 1100 250 Veraciux, Ver.	10-AK 1200 15 Stratford, Ont.
Horacio Remes, Calle Canal 42.	M. I. Higgins, 151 Ontario St.
XEX 630 50 Monterrey, N. L.	10-BP 1200 15 Wingham, Ont.
Luis F. Petit Jean, Aldama 932 Sur.	W. T. Crulckshank.
XEY 545.8 10 Merida, Yuc.	10-BQ 1200 15 Brantford, Ont.
Partido Socialista del Surest.	Tom and Harold Brown.
XEYZ 760 10000 Mexico City, D. F.	10-BU 1200 16 Canora, Sask.
Angel M. Diez, Ave. Juarez 43.	Canora Radio Assn.

SHORT WAVE RELAY BROADCASTING STATIONS Grouped According to Network Programs Transmitted

Frequency in megacycles in first column, wavelength in meters in second column, schedule in third column, time being EST. The location of the broadcast band station is given in parentheses following the geographical location of the short wave transmitter.

COLUMBIA BROADCASTING SYSTEM

W2XE-WABC, Wayne, N. J. (New York, N. Y.) 15.258 19.65 11 a.m. to 1 p.m. 11.823 25.36 3 p.m. to 5 p.m. 11.825 20:30 5 p.m. to 5 p.m. 6.116 46.02 6 to 11 p.m. W3XAU-WCAU, Byberry, Pa. (Philadelphia, Pa. 9.585 31.28 Noon to 6 p.m. 6.057 49:50 8 p.m. to 1 a.m.

NATIONAL "RED" NETWORK

- W1XAL-WEEI Boston Mass. (Boston, Mass.)
- 15.242 19.67 Sunday, 10 a.m. to 1 p.m. 11.780 25.45 Sat., 5:30 to 11 p.m.; Sun., 6:30-8:30 p.m.
- W2XAD-WGY, Schenectudy, N. Y. (Schenectady, N. Y.) 15.320
 19.57 Mon., Wed., Fri., Sun., 4-5 p.m.
 W2XAF-WGY, Schenectudy, N. Y. (Schenectady, N. Y.)
- 9.530 31.46 7.45 to 11 p.m.
 9.530 31.45 7.45 to 11 p.m.
 9.530 16.86 Very Irregular
 11.840 25.35 Irregular
- - 6.076 49.34 3 to 6 p. m.

NATIONAL "BLUE" NETWORK

W1XAZ-WBZ-WBZA, Millis, Mass. (Boston and Springfield, Mass.

9.560 31.36 6 a.m. to midnight

W3XAL-WJZ Boundbrook, N. J. (New York, N. Y.) 17.772 16.87 12.30 to 6:30 p.m., except Sat.
 6.096 49.17 Saturday 3 p.m. to midnight
 W3XL-W1Z, Boundbrook, N. J. (New York, N. Y.)
 6.425 46.66 Fri, 5 p.m. to 1 a.m.
 W4XL W1Z, Supercharge De (Mittaburgh De)

- W8XK-KDKA, Saxonburg, Pa. (Pittsburgh, Pa.)
- 21.451 13.93 7 a.m. to 2 p.m. 15.204 19.72 10 a.m. to 4:15 p.m.

 - 11.870 25.25 4:30 to 10 p.m
 - 6.140 48.83 4:30 p.m. to 12:30 a.m.

NATIONAL "RED" AND "BLUE" NETWORK

- VE9DR-CFCF, Montreal, Quebec (Montreal, Quebec)
- VE9DR-UFUF, Montreal, Quebec (Montreal, Quebec) 6.005 49.93 Sun., noon to 11:15 pm. Other days, 7:30 a.m. to midnight
 VE9GW-CRCT, Bowmanville, Ont. (Toronto, Ontario) 6.092 49.22 Thurs, 7 a.m. to 4 p.m.; Fri. and Sat., 3 to 11 p.m.; Sun., 11 a.m. to 8 p.m
 W4XB-WIOD, Miami Beach, Fla. (Miami Beach, Fla.) 6.036 49.67 Irregular
 W8XAL-WLW, Mason, Ohio (Cincinnati, Ohio) 6.060 49.48 Irregular
- 6.060 49.48 Irregular
- W9XF-WENR, Downer's Grove, Ill. (Chicago, Ill.)
- 6.100 49.15 Sat., silent; Sun., 1 to 2:30 p.m., 4:30 to 7 p.m., 9 p.m. to 2 a.m.; other days, 4:30 to 8 p.m., 9:30 p.m to 2 a.m.

Index by Frequencies and Dial Numbers

			1	(Continued from page 74)	
wwsw	ae	100	(.25)	Pittsburgh, Pa. E-8:00-11:45	
· · · · 5	z	$\frac{100}{100}$	P (.25) DP	Chelsea, Mass. E Hot Springs, Ark. C	
1510	1 .1				
1510	K1IC	сус	les 1	98.6 meters	
CFRC	ak	100		Kingston, Ont. E Kitchener, Ont. E—10-1:30; 4-11	
CKCR	ak	100		Kitchener, Ont. E 10-1.00, 1-11	

AROUND the CLOCK on the SHORT WAVES

MIDNIGHT TO NOON (EST)

өмт	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CBT	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	W3XAU W8XK W9XF	VK2ME W9XF	GSD GSF VK2ME	G8D G8F RV15 VQ7LO	PKIWK RV15 VQ7LO	J1AA RV15	J1AA RV15 VK2ME VK3ME ZGE	PHI Rabat RV15 VE9DR	DJB EAR58 GSE GSG PHI Pont. Rabat VE9DR VE9DR VE9DR VE9DR VK2ME W1XAZ W8XK YV2AM ZGE	DJB GSB GSF Phi VE9DR VE9JR VE9JR VK2ME W1XAZ W8XK YV2AM	CT3AQ DJB DJD GSB GSF Pont. VE9DR VE9QW W1XAL W1XAZ W8XK	CT3AQ DJB DJD GSA 12R0 Pont. VE9DR WE9DR W1XAL W1XAZ W2XE W2XE W2XE

NOON TO MIDNIGHT (EST)

GMT	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	1:00	2:00	3:00	4:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	W1XAZ W2XE	W3XAL W3XAU	DJB DJD GSC GSD I2RO OXY Rabat VE9DR VE9JR W1XAZ W3XAU W3XAU W3XAU W3XAU W3XAU	DJB DJD GSC GSD HAT 12RO OXY Pont. Rabat RV59 VE9GW VE9GW VE9GW VE9GW VE9GW W1XAZ W2XE W3XAL W3XAL W3XAL	W2XAD W2XE	VE9HX W1XAL	CP5 CTIAA CT3AQ DJA EAQ GSA HBL HJIABB OXY Pont. VE9DR VE9GW W1XAL W3XAL W3XAL W3XAL W3XAL YV1BC YV3BC	HJ4ABE Pont.	HJ1ABB	CP5 DJC GGRX HCJB HJ2RL HIX HJ3ABD HJ3ABD HJ3ABD HJ3ABD HJ3ABD WJ3ABD WJ3ABD WJ3ABD WJ3ABD WJ3ABD WS9QW W2S0 W2S0 W2S0 W3XAL W3XAL W3XAL W3XAL W3XAL W3XAL W3XAL Y1BC YV1BC YV1BC	CP5 DJC HC2RL HJ SABD Pont. PRADO VE9DR VE9GW VE9HX W1XAL W1XAZ W1XAZ W1XAZ W3XAL W3XAL W3XAL W3XAL W3XAL	CP5 HJ VE9DR W1XAZ W3XAU W3XAU W3XAU W9XF XETE

One Hundred Best S. W. Stations by Calls

Stations marked with an asterisk (*) will not verify. Frequencies are given in megacycles. Times are given in Eastern Standard. *British Ships, 13.220, 8.831, 4.174 *CEC, Chile, 19.678, 15.855 CEC, Chile, 19, 678, 13, 855
 CGA, Canada, 13, 296, 9, 340
 CNR, Morocco. 12, 820
 CP5, Bolivia, 6, 081. 6:30 to 7:30 or 8 p.m., daily, exc. Sun.; 9-11:30 p.m. daily
 CT1AA, Portugal, 9, 592. Tues. and Frl., 4:30-7 p.m.
 CT3AQ, Madeira, Tues., Thurs., 5-6:30 p.m.; Sun. 10:30 a.m.-noon. DAF, Germany, 12.394 DFB, Germany, 17.512 DIQ, Germany, 10.285 DIQ. Germany, 10.285 DJA, Germany, 552. 5 to 9:15 p.m. DJB, Germany, 5190. 8 s.m. to 4:30 p.m. DJC, Germany, 6.017. 8 to 10:15 p.m. DJD, Germany, 11.753. 10 s.m. to 6 p.m. DJL, Germany, 11.753. 10 s.m. to 6 p.m. EAR58, Canartes, 7.207. 5 to 6:30 p.m. EHY, Spain, 10.164 FTK, France, 15.863 FTM, France, 15.863 FTM, France, 15.863 FTM, France, 19.282 FZS, Indo-China, 11.983 "German Shipa, 13.135, 10.163, 8.328, 4.174 GAS, England, 12.304 (German Surge, 15.153, 10.166, 6.326, 4.174) GAS, England, 12, 304 GBB, England, 13.500 GBS, England, 12.148 GBW, England, 14.450 GSB, England, 9.510. 9 a.m.-1 p.m.; 4-5:45 p.m. GSB, England, 9.510. 9 a.m.-1 p.m. GSC, England, 9.585. 1:15 to 5:45 p.m.; 6 to 8 p.m. GSD England 11.750. 2 to 4 a.m.; 11.15 ro 5:45 p.m. (BS) England, 9.855. 1:15 to 5:45 p.m.; b to 8 p.m.
 (BS) England, 11.750. 2 to 4 a.m.; 1:15 to 5:45 p.m.
 (BSE, England, 11.865. 7-8:45 a.m.
 (BSG, England, 15.140. 2-4 a.m.; 9-11 a.m.
 (BSG, England, 17.70. 7 to 8:45 a.m.
 (GSR, X, England, 4.972. Testing nights
 4.302 8-10 n.m. 8-10 p.m. 4.302. Tests Sunday, 4 p.m. HAT, Hungary, 7.220. HBL, Switzerland, 9.580. Sat., 5:30 to 6:15 p.m. HBP, Switzerland, 7.872. Sat., 5:30 to 6:15 p.m. HBF, Switzeriand, 7.8/2. Sat., 3:30 to 0:13 p.m. HC2JSB, Ecuador, 4.283. 9 to 11 p.m. HC2RL, Ecuador, 6.659. Tues., 9:14 to 11:14 p.m.; Sun., 5:45 to 7:45 p.m. HCJB, Ecuador, 3.998. 8:14 to 10:14 daily, exc. Mon. HCK, Ecuador, 5.694. 8 to 11 p.m. HIX, Santo Domingo, 5.948. Tues. and Frl., 8 to 10 p.m.; Sur. 7:40 p.m. Sun., 7:40 a.m. HIZ, Santo Domingo, 6.379. 5-6 p.m. HI-1-A, Santo Domingo, 6.272. 8-8:30 a.m.; 12:30-1:30 HI-1-A, Gauto 2000 p.m.; 8-9 p.m. *HJB, Colombia, 14.930 *HJY, Colombia, 18.444 HJY, Colombia, 14:300
HJY, Colombia, 14:301
HJY, Colombia, 8:444
HJABB, Colombia, 8:454
HJABB, Colombia, 8:479. 7:30 to 10 p.m.
HJABB, Colombia, 7:402. 9-11:15 p.m. daily
HJABB, Colombia, 7:402. 9-11:15 p.m. daily
HJABB, Colombia, 7:402. 9-11:15 p.m. daily
HJABB, Colombia, 5:000. 7-11 p.m.
HJSABB, Colombia, 8:271
HKN, Colombia, 8:271
HKN, Colombia, 8:271
HKN, Colombia, 14:545.
HSP, Siam, 17:719
HVJ, Vatican City, 15:120. 5 to 5:15 a.m.
IAC Italy, 11:300. 11:30 a.m. to 12:30 p.m.; 1:15 to 6 p.m.
J1AA, Japan, 9:862. 5 to 8 a.m.
KAY, Philippines, 9:900
*KKP, Hawaii, 16:024
LSN, Argentina, 9:869. *K.K.r., Hawaii, 10.024 LSN, Argentina, 9.895 LSX, Argentina, 10.345 LSY, Argentina, 18.116 *OCI, Peru, 18.670 OXY, Denmark, 9.520. 2 to 6:30 p.m. PHI, Holland, 11.725. 7:30 to 10 a.m., except Tues. and ZFS, Bahamas, 4.513. ZGE, Malaya, 5.996. Tues., Fri., 6:30-8:30 s.m. and Sun., 7-9 a.m. Wed PK1WK, Java, 6.116. 4:15-6 a.m.

PLE, Java. 18.820 PLV, Java, 9.410 Pontoise, France, 15.454 Pontoise, France, 15.234. 8-11 a.m. 11.898. 11:15 a.m. to 2:15 p.m.; 3 to 6 p.m. 11.711. 3 to 9 p.m.; 10 p.m. to mld. *PPU, Brazil, 19.270 PRADO, Ecuador, 6.618. Thursday, 9-11 p.m. *PSF, Brazil, 14.682 *PSF, Brazil, 14.682
Rabat, Moroeco, 12.820. Sun, 7:30 to 9 a.m. 8.218. Sun, 2:30 to 5 p.m.
Radio-Taranarive, Madagasear, 6.000. 2:30-4 a.m., Sun. 3-3:45 a.m., daily exc. Sun. and Mon.
RNE, USSR, 11.923. Testing Irregularly
RV15, Siberia, 4.273. 3-9 a.m., daily
RV59. USSR, 5.996. 3-6 p.m., daily
SRI, Poland, 9.488. 1-3 p.m., Tues.; 8-9 a.m., Wed.
TCA Graviannal 4.545. TGA, Guatemala, 14.545 TIN-TIU, Costa Rica, 14.545 T14NRH, Costa Rica, 9.670. UOR2; Austria, 6.072. 8:30-9 a.m.; 10 a.m.-1 p.m. and 24 p.m. on Tuesdays. UOR3. Austria, 11.800 VE9BJ, Canada, 6.090. Irreg. VE9CA, Canada, 6.030. VE9CS, Canada, 6.074. 8-10 p.m. VE9DR, Canada, 6.005. 7:30 a.m. to Midnight; Sun., noon to 11:15 p. m. VE9GW, Canada, 6.092. 3 p.m.-mldnlght VE9HX, Canada, 6.110. 5-11 p.m., daily VE9JR, Canada, 11.720. Irreg., approx. 9:30 a.m.-10-30 p.m. VK2ME, Australia, 10.520. 9.585. Sun., 1 to 3 a.m.; 5 to 11 a.m. VK3ME, Australia, 9.503. Wed., 5-6:30 a.m.; Sat., 5-7 a.m. VK3ME, Austrana, 5.55 VW2, India, 17.533 *WNC, U. S. A., 15.055 W1XAL, U. S. A., 15.242. Sunday, 10 a.m.-1 p.m. 11.780. Sat., 5:30-11 p.m.; Sun., 6:30-8-30 p.m. Wad. Fri., 4-5 p.m. W2XAD, USA, 15.320. Sun., Mon., Wed., W2XAF, USA, 9.530. 7:45 to 11 p.m. W2XE, U. S. A., 15.258. 11 a.m. to 1 p.m. 11.823. 3 to 5 p.m. 6.116. 6 to 1 1 p.m. W3XAL U. S. A., 17.772. 9 a.m.-3 p.m., except Sat. 6.096 3 p.m. to midnight, Saturday W3XAU, USA, 9.585. Noon to 6 p.m. 6.057. 8 p.m. to 1 a.m. W3XL, U. S. A., 6.421. Irregular W8XK, U. S. A., 21.451. 7 a.m. to 2 p.m. WSAK, U. S. A., 21431. 7 a.m. to 2 p.m. 15.204. 10 a.m. to 4:15 p.m. 11.870 4:30-10 p.m. 6.140. 4:30 p.m. to 12:30 a.m.
 WSAA, U. S. A., 6.076. 3 to 6 p.m.
 W9XF, U. S. A., 6.425
 W9XF, U. S. A., 6.100. Silent Sat.; Sun, 1-2:30 p.m.; 4:30 7 p.m.; 9 p.m. to 2 a.m.; other days, 4:30-8 p.m.; 9:30 7 p.m.; 9 p.m. to 2 a.m.; other uays, and p.m. to 2 a.m. XAM, Mexico, 11.187 XDS, Mexico, 11.187 XDS, Mexico, 9.600 2:30-5 p.m.; 6:30 p.1 *YNA, Nicaragua, 14.480. Phones Hialeah. *YVQ, Venezuela, 13.337. Phones Hialeah *YVQ, Venezuela, 12.906 and 9.168 YV1BC, Venezuela, 6.112. 5:15 to 10 p.m. YV2AM, Venezuela, 7.138. Sun., 8-10 a.m. YV3BC, Venezuela, 9.510. 9:30 to 10 p.m. YV3BC, Venezuela, 5.10. 9:30 to 10 p.m. 2:30-5 p.m.; 6:30 p.m. to midnight 80. Phones Hialeah. 6.150. 10:30 a.m. to 1 p.m. and 4:38-9:30 p.m.; Sun., 8:30 a.m. to noon and 3-6:30 p.m. *ZFA, Bermuda, 5.045 *ZFB, Bermuda, 10.060

The ShortWave Stations

(Continued from page 37)

		VCDN D
		KODW Salt Lube City, Utab
		KG7G Day Moines Lown
		KGZT Santa Cruz Calif
		KGZU, Lineoln, Nebr.
		KGPN, Davenport, Iowa KGPW, Salt Lake City, Utah KGZG, Des Moines, Iowa KGZT, Santa Cruz, Calif. KGZU, Lincoln, Nebr. WPDP, Philadelphia, Pa. WPDT, Kokomo, Ind. WPDZ, Fort Wayne, Ind. WPEM, Memphis, Tean. WPEM, Woonsocket, R. I. WPFO, Knoxville, Tenn. WFFO, Swarthmore, Pa.
		WPDT, Kokomo, Ind.
		WPDZ, Fort Wayne, Ind.
		WPEC, Memphis, Tenn.
		WPEM, Woonsocket, R. I.
		WPFO, Knoxville, Tenn.
		WPFQ, Swarthmore, Pa. WPFP, Johnson City, Tenn
		WPFV Pastucket R I
		WRDQ Toledo Obio
		WPFR, Johnson City, Tenn. WPFV, Pawtucket, R. I. WRDQ, Toledo, Ohio Cranston, R. I.
		Las Vegas, Nev. Palo Alto, Calif.
		Palo Alto, Calif.
2.506	119.64	KGZE, San Antonio, Tex., State police Portable in Wash. Seattle, Wash, State police
		Portable in Wash.
2.530	110 51	Snoqualmie Pass, Wash., police
2.000	118.51	KOW, Seattle, Wash., Harbor phone WOX, St. George, N. Y., Harbor phone
0 640	117.04	VIII Cas Francisco Calif Hanhar alegan
$2.542 \\ 2.590$	$117.94 \\ 115.76$	KOU Wilmington Calif. Shin phone
2.050	110.70	KLH, S. George, N. 1., Harbor phone KLH, S. M. Francisco, Calif., Harbor phone KOU, Wilmington, Calif., Ship phone WOVA, Green Harbor, Mass., Ship phone WCVA, KCVB, Longmize, Work, Exerc.
3.387	88.50	KGYA-KGYB, Longmire, Wash., Fores-
0.001	00.00	try station
		try station KGYC, Paradise, Wash., Forestry station
3.410	87.92	WRJ, Poe Reef Lighthouse, Mich.
		WST, Dry Tortugas Lighthouse, Fla.
		WWAJ, Manitou Isl. Lighthouse, Mich.
		WWAL, Passage Isl. Lighthouse, Mich.
		WWAM, Rock of Ages Lighthouse, Mich.
		WWE Fourtoon Foot Should Mich.
		 KGYC, Paradise, Wash., Forestry station WRJ, Poe Reef Lighthouse, Mich. WST, Dry Tortugs Lighthouse, Fla. WWAJ, Manitou Isl. Lighthouse, Fla. WWAJ, Manitou Isl. Lighthouse, Mich. WWA, Rock of Ages Lighthouse, Mich. WWAO, Huron Isl. Lighthouse, Mich. WWE, Cheboygan Range, Mich. WWF, Stannard Rock Lighthouse, Mich. WWH, Stannard Rock Lighthouse, Mich. WWN, Detroit River Lighthouse, Mich. WWN, Detroit River Lighthouse, Mich. WWN, Detroit, Mich., Lighthouse, Mich. WWN, Detroit, Mich., Lighthouse, Mich. WWR, Detroit, Mich., Lighthouse, Mich. WWR, Detroit, Mich., Lighthouse, Mich. WWZ, Key West, Fla., Lighthouse WOZ, New York, N. Y. WKF, Lawrenceville, N. J., phone WOO, Ocean Gate, N. J., Ship phone WOO, Ocean Gate, N. J., Ship phone WOO, Ocean Gate, N. J., Ship phone WTD, St. Thomas, Virgin Islands WTDW, St. Croix, Virgin Islands WQN, Rocky Point, N. Y., Exp.
		WWH, Stannard Rock Lighthouse, Mich.
		WWM, Marquette Lighthouse, Mich.
		WWN, Detroit River Lighthouse, Mich.
		WWR, Detroit, Mich., Lighthouse
0.400		WWZ, Key West, Fla., Lighthouse
3.423	87.59	WUZ, New York, N. Y.
4.253	70.50	WOG Occup Cote, N. J., phone
4 972	70 17	WOO, Ocean Gate, N. J., Ship phone
4.273 4.276	$70.17 \\ 70.11$	WIR Rocky Point N V Exp
4.307	69.60	WTDV St. Thomas Virgin Islands
	00.00	WTDW. St. Croix, Virgin Islands
5.263	56.96	WQN, Rocky Point, N. Y., Exp. WQN, Rocky Point, N. Y., Exp. KZGF, Manila, P. I., Inter-island phone KZGG, Iolio, P. I., Inter-island phone KZGG, Cebu, P. I., Inter-island phone KZGG, Cebu, P. I., Inter-island phone
5.505 5.765 5.795	54.46	WQN, Rocky Point, N. Y., Exp.
5.765	$52.01 \\ 51.74$	KZGF, Manila, P. I., Inter-island phone
5.795	51.74	KZGH, Iloilo, P. I., Inter-island phone
5.825	51.47	KZGG, Cebu, P. I., Inter-Island phone
E 0 / E	E1 20	WQN, Rocky Fold, N. L. Exp.
$5.845 \\ 5.850$	$\frac{51.30}{51.25}$	W3XAU, New York, N. Y. BAP. W3XAU, Philadelphia, Pa. (Byberry) W3XAL, Cincinnati, Ohio (Mason) W3XAL, New York, N. Y. (Boundbrook, N. J.)
6.057	49.50	W3XAU Philadelphia Pa (Byberry)
6.060	49.48	W8XAL, Cincinnati, Ohio (Mason)
6.096	49.17	W3XAL, New York, N. Y. (Boundbrook,
6.100	49.15	W9XF-W9XQ, Chicago Ill. (Downers
6.116	49.02	W2XE, New York, N. Y. (Wayne, N. J.)
6.140	48.83	WSAR, Pittsburg, Pa. (Saxonburg)
6.425	46.66	WOXE Downers Grove III Fra
6.425 6.610	$46.66 \\ 45.36$	WMEP Akron Ohio Airway Evo
6.618	45.36 45.30	WVD, Scattle, Wash., phone
6.650	45.09	KFY, Forward Base, Little America
		W2XE, New York, N. Y. (Wayne, N. J.) W2XE, New York, N. J., Exp. W3XL, Boundbrook, N. J., Exp. W9XF, Downers Grove, Ill., Exp. WMEP, Akron, Ohio, Airway Exp. WVD, Scattle, Wash., phone KFY, Forward Base, Little America KFZ, Main Base, Little America
6.660	45.02	KFY, Forward Base, Little America
6.662	45.00	KFY, Forward Base, Little America KFZ, Main Base, Little America WXH, Ketchikan, Alaska, phone
0.004	10.00	mana, menanan, maska, phone

6.670	44.95	KFY, Forward Base, Little America KFZ, Main Base, Little America WDB, Roeky Point, N. Y., Exp. WQO, Roeky Point, N. Y., Exp. KEQ, Kahuku, Hawaii, phone WEJ, Roeky Point, N. Y., Exp. WOA, Lawrenceville, N. J., phone KEL, Bolinas, Calif., Exp. WEZ, Rocky Point, N. Y., Exp. WEB, Rocky Point, N. Y., Exp. WED, Rocky Point, N. Y., Exp. KEB, Bolinas, Calif., Exp. WJN, Rocky Point, N. Y., Exp.
6 710	44.00	WDD Dealer Daint M. V. Frank
$6.718 \\ 6.725$	44.62	WDB, Rocky Foint, N. 1., Exp.
6.725	44.57	WQO, Rocky Point, N. Y., Exp.
6.733	44.53	KEQ, Kahuku, Hawan, phone
$6.740 \\ 6.755$	44.48	WEJ, Rocky Point, N. Y., Exp.
6.755	44.38	WOA, Lawrenceville, N. J., phone
6.860	44.48 44.38 43.71 43.27	KEL, Bolinas, Calif., Exp.
6.928	43.27	WEZ, Rocky Point, N. Y., Exp.
6.935	43.23	WEB, Rocky Point, N. Y., Exp.
6 950	43.13 43.09	WKP, Rocky Point, N. Y., Exp.
6.958 7.370	43.09	WEO, Rocky Point, N. Y., Exp.
7.370	40.67	KEB, Bolinas, Calif., Exp.
		WJN, Rocky Point, N. Y., Exp.
7.400	40.51	WEM, Rocky Point, N. Y., Exp.
7.400 7.415	40.43	WEG, Rocky Point, N. Y., Exp.
7 520	39.87	KDK-KKH, Kahuku, Hawaii, phone
7,610 7.715 8.630	39.40	KWX, Dixon, Calif., phone
7,715	38.86	KEE, Bolinas, Calif., Exp.
8.630	34.74	WOO, Ocean Gate, N. J., Ship phone
8.820	33.99	KFY, Forward Base, Little America
		W.J.N., Rocky Point, N. Y., Exp. WEM, Rocky Point, N. Y., Exp. KDK-KKH, Kahuku, Hawaii, phone KWX, Dixon, Calif., phone KEE, Bolinas, Calif., Exp. WOO, Occun Gate, N. J. Ship phone KFY, Forward Base, Little America KFZ, Main Base, Little America KFY, Forward Base, Little America KFY, Forward Base, Little America KFY, Main Base, Little America KFZ, Main Base, Little A
8.840	33.92	KEV Forward Base Little America
0.010	00.32	KFZ Main Boso Little America
0.000	00.77	NID, Main Dase, Dittle America
8.930	$33.57 \\ 33.54$	WAD-WEC, Rocky Point, N. 1., Exp.
8.940	33.94	KZGG, Cebu, P. I., Inter-Island phone
		WEL, ROCKY Point, N. Y., Exp.
8.950	33.50	WEL, Rocky Point, N. Y., Exp.
9.010	$33.28 \\ 32.70$	KFJ, Bolinas, Calif., Exp.
9.170	32.70	KZGF, Manila, P. I., Inter-island phone
		WNA, Lawrenceville, N. J., phone
9.448	31.74	WES, Rocky Point, N. Y., Exp.
9.460	31.79	WKJ, New Brunswick, N. J., phone
9,470	$31.74 \\ 31.79 \\ 31.66$	WET, Rocky Point, N. Y., Exp.
9.480	31.62	WDA, Rocky Point, N. Y., Exp.
9.490	31.59	KZGH, Iloilo, P. I., Inter-island phone
		WEF, Rocky Point, N. Y., Exp.
$9.530 \\ 9.585$	$31.46 \\ 31.28$	W2XAF, Schenectady, N. Y.
9.585	31.28	W3XAU, Philadelphia, Pa. (Byberry)
9.750	30.75	WOF, Lawrenceville, N. J., phone
9.870	30.38	WON, Lawrenceville, N. J., phone
9.990	30.01	 McL, Main Base, Little America KPZ, Main Base, Little America KPZ, Main Base, Little America KPZ, Main Base, Little America KACH, Rocky Point, N. Y., Exp. KZGG, Cebu, P. I., Inter-island phone WKL, Rocky Point, N. Y., Exp. KPJ, Bolinas, Calif, Exp. KZF, Bolinas, Calif, Exp. KZGF, Manila, P. I., Inter-island phone WNA, Lawrenceville, N. J., phone WKJ, Iew Bruaswick, N. J., phone WES, Rocky Point, N. Y., Exp. KZGH, Hoilo, P. I., Inter-island phone WE, Rocky Point, N. Y., Exp. KZGH, Hoilo, P. I., Inter-island phone WE, Rocky Point, N. Y., Exp. KZGH, Hoilo, P. I., Inter-island phone WE, Rocky Point, N. Y., Exp. KZGH, Hoilo, P. I., Inter-island phone WE, Rocky Point, N. Y., Exp. KZGH, Hoilo, P. I., Inter-island phone WE, Rocky Point, N. Y., Exp. KZGH, Hoilo, P. I., Inter-island phone WO, Lawrenceville, N. J., phone KAZ, Marila, P. J., phone WOK, Lawrenceville, N. J., phone WOK, Lawrenceville, N. J., phone WCK, Awrenceville, N. J., Stap. WCK, Boston, Mass. WIXAL, Boston, Mass. WIXAL, Boston, Mass. WIXAL, Boston, Mass. WXKK, Pittsburg, Pa. (Saxonburg) KKQ, Bolinas, Calif., Exp. WOX, Gaina, Base, Little America KFY, Forward B
$10.317 \\ 10.370$	28.09	WNB, Lawrenceville, N. J., phone
10.370	28.91	WCG, Rocky Point, N. Y., Exp.
10.400	28.83	KEZ, Bolinas, Calif. Exp.
$10.410 \\ 10.550$	28.80	KES, Bolinas, Calif., Exp.
10.550	28.42	WOK, Lawrenceville, N. J., phone
10.610	28.25	WEA, Rocky Point, N. Y., Exp.
10.630	28.20	WED, Rocky Point, N. Y., Exp.
10.830	27.68	KWV, Dixon, Calif., phone
11.680	25.67	KIO, Kahuku, Hawaii, Exp.
11.780	25 45	W1XAL, Boston, Mass.
11.823	$25.36 \\ 25.25$	W2XE, New York, N. Y. (Wayne, N. J.
11.870	25.25	W8XK, Pittsburg, Pa. (Saxonburg)
11.950	25.08	KKQ, Bolinas, Calif., Exp.
12.840	23.35	WOO, Ocean Gate, N. J., Ship phone
12.930	$23.18 \\ 22.74$	WAW, Hialeah, Fla., phone
13.185	22.74	KFY, Forward Base, Little America
		KFZ, Main Base, Little America
13.200	22.71	KFY, Forward Base, Little America
		KFZ, Main Base, Little America
13.245	22.64	KFY, Forward Base, Little America KFZ, Main Base, Little America KFY, Forward Base, Little America KFZ, Main Base, Little America
		KFZ, Main Base, Little America
13.260	22.61	KFY, Forward Base, Little America
		KFZ Main Base Little America
13.390	22.30	WMA Lawrenceville N L phone
13.420	$\begin{array}{c} 22.39\\ 22.34 \end{array}$	WHR Rocky Point N V Fyp
13.435	99 31	WED Rocky Point N. V. Exp.
13,450	22.28	WEX Bocky Point, N. Y. Exp.
13.465	22.28 22.26 22.24	WKC Bocky Point N Y Exp
13.480	22 94	WAL Rocky Point, N. V. Evn
13.690	21.90	KKZ Bolinas Calif Ern
13 780	21.75	KKW, Bolinas, Calif Exp
13.840	21.66	WPE, Rocky Point N Y Exp
13.840 13.855 13.870	$\begin{array}{c} 21.66\\ 21.63\end{array}$	WOU Rocky Point N V Exp
13.870	21.61	WIY Bocky Point N Y Evo
13.900	21.57	WOP Rocky Point N Y Exp
13 915	21.54	WOS Bocky Point N V Exp
$\begin{array}{c} 13.915\\ 14.470\end{array}$	$\begin{array}{c} 21.54 \\ 20.72 \end{array}$	WMF Lawrenceville N. I. phone
14.590	20.55	WMN Lawrenceville N J phone
14.800	20.35 20.26	WOV Bocky Point N V Exp
14.815	20.23	 KPZ, Main Base, Little America WMA, Lawrenceville, N. J., phone WHR, Rocky Point, N. Y., Exp. WKD, Rocky Point, N. Y., Exp. WKZ, Rocky Point, N. Y., Exp. WKZ, Rocky Point, N. Y., Exp. WKZ, Rocky Point, N. Y., Exp. KKZ, Bolinas, Calif., Exp. KKW, Bolinas, Calif., Exp. WYE, Rocky Point, N. Y., Exp. WQU, Rocky Point, N. Y., Exp. WQU, Rocky Point, N. Y., Exp. WQP, Rocky Point, N. J., phone WMM, Lawrenceville, N. J., phone WQN, Rocky Point, N. Y., Exp. WQL, Rocky Point, N. Y., Exp.
	20.20	

14.830	20.21	WKU, Rocky Point, N. Y., Exp.	01.000	14.10	WRIT Dealers Datast M. W. F
14.980	20.01	WAV Month D I about	21.260	14.10	WBU, Rocky Point, N. Y., Exp.
		KAY, Manila, P. I., phone	21.300	14.07	WQW, Rocky Point, N. Y., Exp.
15.040	19.93	WQG, Rocky Point, N. Y., Exp.	21.410	14.00	WKK, Lawrenceville, N. J., phone
15.055	19.91	WNC, Hialeah, Fla., phone	21.451	13.93	W8XK, Pittsburg, Pa. (Saxonburg)
15.204	19.72	W8XK, Pittsburg, Pa. (Saxonburg)	21.575	13.89	KFY, Forward Base, Little America
15.242	19.67	W1XAL, Boston, Mass.			KFZ, Main Base, Little America
15.258	19.65	W2XE, New York, N. Y. (Wayne, N. J.	21.600	13.88	KFY, Forward Base, Little America
15.320	19.57	W2XAD, Schenectady, N. Y.			KFZ, Main Base, Little America
15.410	19.46	KWO, Dixon, Calif., phone	21.625	13.86	KFY, Forward Base, Little America
15.445	19.41	WKW, Rocky Point, N. Y., Exp.	21.020	10.00	KEZ Main Dase, Little America
15.970	18.77	WKO, Rocky Point, N. Y., Exp.	35.200	0 50	KFZ, Main Base, Little America
16.015	18.72	WIND, ROCKY FOIRT, N. T., EXP.		0.04	High frequency inter-island phones of the
		WQR, Rocky Point, N. Y., Exp.	to and to		Mutual Telephone Co., Hawaii
16.030	18.71	KKP, Kahuku, Hawaii, phone	54.000	5.55	Call letters as follows:
16.260	18.44	WLK, Lawrenceville, N. J., phone	M	lanawah	ua, Island of Oahu, KGXA-B-C-D-E-F-G
17.120	17.51	WOO, Ocean Gate, N. J., Ship phone			ia, Island of Maui, KGXH-I-J
17.600	17.04	KFY, Forward Base, Little America	W	aikii, Is	land of Hawaii, KGXK-L-M
		KFZ, Main Base, Little America	K	aunakal	ci, Island of Molokai, KGXN
17.620	17.01	KFY, Forward Base, Little America	K	alepa, I	sland of Kauai, KGXO
		KFZ, Main Base, Little America			and, KGXP
17.772	16.87	W3XAL, New Yotk, N. Y. (Boundbrook			CANADA
		N.J.)	Megs.	Metera	
17.860	16.78	WQC, Rocky Point, N. Y., Exp.	1.710		CFN, Grande Prairie, Alta., Police
17.880	16.76	WQI, Rocky Point, N. Y., Exp.		110.00	CFO, Lethbridge, Alta.
17.900	16.75	WLL, Rocky Point, N. Y., Exp.			CFU, Peace River, Alta.
17.920	16.73	WQF, Rocky Point, N. Y., Exp.			CGJ, Edmonton, Alta.
17.940	16.71	WQB, Rocky Point, N. Y., Exp.			UYR, Montreal, P. Q.
18.020	16.64	KQJ, Bolinas, Calif., Exp.			
18.350	16.34	NGJ, Domas, Cam, Exp.			UZE, Victoria, B. C.
		WLA, Lawrenceville, N. J., phone			UZF, Vancouver, B. C.
18.860	15.89	WKM, Rocky Point, N. Y., Exp.			UZG, Prince Rupert, B. C.
18.880	15.88	WQH, Rocky Point, N. Y., Exp.			UZH, Kamloops, B. C.
18.900	15.86	WDS, Rocky Point, N. Y., Exp.			UZI, Nelson, B. C.
18.920	15.84	WQE, Rocky Point, N. Y., Exp. WTT, Rocky Point, N. Y., Exp.			UZM, Prince George, B. C.
18.940	15.83	WTT, Rocky Point, N. Y., Exp.			UZN, Cranbrook, B. C.
18.960	15.81	WQD, Rocky Point, N. Y., Exp.	2.414	124.17	CFN, Grande Prairie, Alta., Police
18.980	15.79	WFX, Rocky Point, N. Y., Exp.			CFO, Lethbridge, Alta.
19.220	15.60	WKF, Lawrenceville, N. J., phone			CFU, Peace River, Alta.
19.816	15.14	WKN, Lawrenceville, N. J., phone			CGJ, Edmonton, Alta.
19.980	15.01	KAX, Manila, P. I., phone			CGS, Calgary, Alta.
20.100	14.91	WQY, Rocky Point, N. Y., Exp.			CJW, St. John, N. B.
20.180	14.85	WQX, Rocky Point, N. Y., Exp.			CKT, Penticton, B. C.
20.260	14.79	WQQ, Rocky Point, N. Y., Exp.			UYW, Winnipeg, Man.
21.054	14.24	WKA, Lawrenceville, N. J., phone			UZE, Victoria, B. C.
21.060	14.24	KWN, Dixon, Calif., phone			UZF, Vancouver, B. C.
21.220	14.13	WQA, Rocky Point, N. Y., Exp.			UZG, Prince Rupert, B. C.
21.220	14.12	WQJ, Rocky Point, N. Y., Exp.			UZH, Kamloops, B. C.
41.410	17.14	www.itooky rount, 14. r., 12xp.			OZII, haimoops, B. C.

POSTSCRIPTS from Our Readers

"I get radio magazines from all parts of the world but I can truly say that I have never seen one that can compare with RA-DEX in any respect. The information contained between its covers is exactly what a radio magazine should give to its readers." S. H. Crowe, 157 Catharine St., N., Hamilton. Ont.

"Want to congratulate you on the Novem-ber RADEX. It's the best magazine I have seen for any radio fan." D. D. Campbell, Station KUOA, Fayette-

ville. Ark.

"I have been a reader of RADEX since 1930. I think it is one of the best of radio magazines. It is edited in a way that it can be easily understood by the non-technical radio fan such as myself." Hubert H. Davis, 214 N. Green Street,

Henderson, Ky.

4

"I am looking forward to the next issue and will certainly count the days till its arrival."

Robert M. Pybus, 4 Highfield Rd., Chorlton-cum-Hardy, Manchester, England,

"We have always considered your publica-

tion as filling one field of the radio industry and will cooperate with you to the best of

our ability." J. E. Roberts, Engineer in Charge, Station CRCS, Chicouti mi, Que.

"I have been a reader of your excellent radio magazine for the past three years and enjoy it very much. I know of no other that contains as much usable information."

Everett R. Clark, Box 313, Goodwell, Okla.

"I think RADEX is the best magazine on the market and I have a standing order for it at the newsstand. Why don't you issue, it at least twice a month or possibly oftener?" Harold Gasper, RFD 7, St. Joseph, Mo.

"I have just discovered your valuable publication and, believe me, it fills a long-felt yearning on my part for a radio magazine that a layman is able to understand."

Charles Aloysius Steele, 3119 Seventh St., Port Arthur, Tex.

"As an old-timer who has subscribed to fourteen radio publications, I declare that your magazine is the one I would take if I were, somehow, restricted to only one."

Dr. Donald M. Gildersleeve, 2518 Webb Ave., Bronx, New York.

2.481	120.80	UYM, Ft. Rae, N. W. T., Airway UYN, Ft. McMurray, Alta., Airway	4.942 6.005 6.015 6.030 6.070 6.090	62.70 49.93 49.85 49.72 49.39 49.23	CZA, Drummondville, P. Q., Ship phone VE9DR, Montreal, P. Q. VE9CX, Wolfville, N. S. VE9CA, Calgary, Alta. VE9CS, Vancouver, B. C. VE9BJ, St. John, N. B.
2.735	109.62	UYO, Echo Bay, N. W. T., Airway VE9Cl, London, Ont., Broadcast	6.092 6.110	49.22 49.07	VE9GW, Toronto, Ont. (Bowmanville) VE9HX, Halifax, N. S.
3.068	97.70	CJU, Winnipeg, Man., Airway	6.150	48.75	VE9CL, Winnipeg, Man.
3.331	90.00	VE9AA, Montreal, P. Q., Exp.	6.335	47.35	VE9AP, Drummondville, P. Q., Exp.
3.450	86.90	CGK, Ft. Chipweyan, Alta., Airway	6.420	46.70	CFN, Grande Prairie, Alta., Police
		CJU, Winnipeg, Man., Airway UYM, Ft. Rae, N. W. T., Airway			CFO, Lethbridge, Alta. CFU, Peace River, Alta.
		UYN, Ft. McMurray, Alta., Airway			CGJ, Edmonton, Alta.
		UYO, Echo Bay, N. W. T., Airway			CGS, Calgary, Alta.
3.458	8 6.7 0	CFN, Grande Prairie, Alta., Police			CKT, Penticton, B. C.
		CFO, Lethbridge, Alta. CFU, Peace River, Alta.			UZE, Victoria, B. C.
		CGJ, Edmonton, Alta.			UZF, Vancouver, B. C. UZG, Prince Rupert, B. C.
		CGS, Calgary, Alta			UZH, Kamloops, B. C.
		CKT, Penticton, B. C.			UZI, Nelson, B. C.
		UZE, Victoria, B. C. UZF, Vancouver, B. C.			UZM, Prince George, B. C.
		UZG, Prince Rupert, B. C.	6.840	43.82	UZN, Cranbrook, B. C. CFA, Drummondville, P. Q., phone
		UZH, Kamloops, B. C.	7.456	40.21	CKT, Penticton, B. C., Police
		UZI, Nelson, B. C.			UZE, Victoria, B. C.
		UZM, Prince George, B. C.			UZF, Vancouver, B. C.
4.751	63.10	UZN, Cranbrook, B. C. CGK, Ft. Chipweyan, Alta., Airway			UZG, Prince Rupert, B. C. UZH, Kamloops, B. C.
1.101	00.10	UYM, Ft. Rae, N. W. T., Airway			UZI, Nelson, B. C.
		UYN, Ft. McMurray, Alta., Airway			UZM, Prince George, B. C.
4 770	60.00	UYO, Echo Bay, N. W. T., Airway			UZN, Cranbrook, B. C.
4.772	62.82	CFN, Grande Prairie, Alta., Police CFO, Lethbridge, Alta.	8.353	35.89	CGK, Ft. Chipweyan, Alta., Airway
		CFU, Peace River, Alta.			UYM, Ft. Rae, N. W. T., Airway UYN, Ft. McMurray, Alta., Airway
		CGJ, Edmonton, Alta.			UYO, Echo Bay, N. W. T., Airway
		CGS, Calgary, Alta.	9.340	32.10	CGA, Drummondville, P. Q., phone
		CKT, Pentieton, B. C.	11.720	25.58	VE9JR, Winnipeg, Man. (Middlechurch)
		UZE, Victoria, B. C. UZF, Vancouver, B. C.	12.951	23.15	CGK, Ft. Chipweyan, Alta., Airway UYM, Ft. Rae, N. W. T., Airway
		UZG, Prince Rupert, B. C.			UYN, Ft. McMurray, Alta., Airway
		UZH, Kamloops, B. C.			UYO, Echo Bay, N. W. T., Airway
		UZI, Nelson, B. C.	13.296	22.55	
		UZM, Prince George, B. C. UZN, Cranbrook, B. C.	13.740 17.330	21.82	CGA, Drummondville, P. Q., phone
		ODIT, OTABOIOOK, D. C.	11.330	17.30	CGS, Calgary, Alta., Police

INSURE YOUR RADIO ENJOYMENT SEND THIS BLANK TODAY

The Radex Press, Inc. Hanna Building Cleveland, Ohio. Enclosed find \$......for which send me postpaid my choice of your offers as checked below: Program "Slates" 1 for 10c □ 2 for 15c □ 4 for 25c One Radio World Map and Time Converter..... 25c Write Name plainly..... Street and Number..... 76 City and State..... No extra charge outside the U.S.A.

February DX Calendar 2:00-3:00-XES, Tampico, 1020 (.5)

(Continued from second cover)

FRIDAY MORNINGS

Feb. 2

2:30-4:00-CHWK, Chilliwack, 780 (.1)

Feb. 23 4:00-5:00-KPOF, Denver, 880 (.5)

Feb. 2-9-16-23

Feb. 2-9-16-23 12:00-1:00--KOIL, Council Bluffs, 1260 (1) 12:00-2:00--CFCN, Calgary, 1030 (10) 12:00-6:00--WJAX, *Jacksonville, 900 (1) 1:00-1:30--WRAM, Willimitgton, 1370 (1) 1:00-2:00--WBBX, New Orleans, 1200 (.1)

*Prizes to most distant listeners.

SATURDAY MORNINGS

Feb. 3

4:00-5:00-WIS, Columbia, 1010 (.5) 4:15-4:45-WGNY, Chester, 1210 (.1)

Feb. 10

2:30-4:00-10-BQ, Brantford, 1200 (.005) 3:00-4:00-WJEJ, Hagerstown, 1210 (.1) 3:15-4:15-WMBQ, Brooklyn, 1500 (.1) 4:30-6:00-10-BP, Wingham, 1200 (.015)

Feb. 10-17-24

1:00-3:00-CMCW, Havana, 965 (.15) 2:00-3:00-WGLC, Hudson Falls, 1370 (.1)

Feb. 17

2:00-3:00-WHA, Madison, 940 (1) 2:00-3:00-WOQ, Kansas City, 1300 (1) 3:00-9:00-KPPC, Pasadena, 1210 (.05)

Feb. 24

1:00-2:00—CMHJ, Cienfuegos, 1125 (.06) 4:00-5:00—CFQC, Saskatoon, 1250 (.5)

Feb. 3-10-17-24

CRCV Vancouver, B. C., 500 to 1000

1:00-2:00 -- WGN Y Chester, 1210 (.1) 2:00-3:00 -- CMBS, Havana, 765 (.2) 4:00-5:00 -- XEAO, Mexicali, 560 (.1)

THE MONTH'S CHANGES

1100

FREQUENCIES

		Incquenter	1120	CHGS	Summerside, P. E. I., 100 to 50
595	CMW	Havana, Cuba, from 590	1120	CKOC	Hamilton, Ont., 1000 to 500
600	CJOR	Vancouver, B. C., from 1210	1200	CJAT	Trail, B. C., 25 to 50
765	CMBS	Havana, Cuba, from 780	1200	10-BQ	Brantford, Ont., 5 to 15
775	CMCQ	Havana, Cuba, from 780	1210	CKBI	Prince Albert, Sask., 25 to 100
800	TIGP	San Jose, C. R., from 666	1210	CKMC	Cobalt, Ont., 100 to 50
835	CMC	Hayana, Cuba, from 840	1210	CKOV	Kelowna, B. C., 100 to 50
873	CMCF	Havana, Cuba, from 890	1310	CHCK	Charlottetown, P. E. I., 100 to 59
875	CMX	Havana, Cuba, from 890	1910	onon	Charlottelown, 1, 1, 1, 100 to so
910	ĊMJF	Camaguey, Cuba, from 930			NEW
915	CMCD	Havana, Cuba, from 925	1290		San Juan, P. R.
945.5	CMHD	Caibarien, Cuba, from 950	1310	CJKL	Kirkland Lake, Ont.
950	VOGY	St. John's, Nfid., from 1400	1310	CJLS	Yarmouth, N. S.
971.5		Matanzas, Cuba, from 977	1370	CHPR	St. John, N. B.
985	XEFE	Nuevo Laredo, Tams., from 1000	1390	CJRC	Middlechurch, Man.
.005	CMBZ	Havana, Cuba, from 1010	1420	CKGB	Timmins, Ont.
052	CMBG	Havana, Cuba, from 1070	1500		Chelsea, Mass.
052	CMCB	Havana, Cuba, from 1070	1500		Hot Springs, Ark.
120	CFTP	Edmonton, Alta, from 580	1000		
170	CMJE	Camaguey, Cuba, from 1175			CALLS
180	CMCJ	Havana, Cuba, from 1185	560	KTWO	Springfield, Mo., formerly KGIZ
200	CJAT	Trail, B. C., from 1155	580	CFTP	Edmonton, Alta, formerly CHMA
210	CKBI	Prince Albert, Sask., from 1200	1200	CJAT	Trail, B. C., formerly 10-AT
370	WHET	Dothan, Ala., from 1210	1210	CKBI	Prince Albert, Sask., formerly 10-BI
450	CFCT	Victoria, B. C., from 1430	1250	WNEW	Newark, N. J., formerly WAAM-WODA
500	WKBB	E. Dubuque, Ill., from 1310			
510	CFRC	Kingston, Ont., from 915			LOCATION
510	CKCR	Kitchener, Ont., from 645	930	CKPC	Brantford, Ont., from Preston, Ont.
010	011011		1200	KBTM	Jonesboro, Ark., from Paragould, Ark.
		POWER	1370	WHET	Dothan, Ala., from Troy, Ala.
540	CJRM	Moose Jaw, Sask., 500 to 1000			UT TO OUTNOT LOCATION
580	WOBU	Charleston, W. Va., 500 to 750			IT TO CHANGE LOCATION
580	WTAG	Worcester, Mass., 500 to 750	1370	WMBR	Tampa, Fla., to Jacksonville, Fla.
600	CFCO	Chatham, Ont., 100 to 50	1420	WENC	Americus, Ga., to Albany, Ga.
690	CJCJ	Calgary, Alta., 500 to 100			REINSTATED
730	CJCA	Edmonton, Alta., 500 to 1000			
780	CKPR	Fort William, Ont., 100 to 50	630	XEZ	Merida, Yuc.
930	CFAC	Calgary, Alta., 500 to 100	1200	CHAB	Moose Jaw, Sask.

Where one uses RADEX frequently, one of those Leatherette slip covers adds greatly to appearance and convenience. It protects the magazine from wear and provides a stiff backing for making entries. Beautifully embossed in gold with silk string for holding copy securely. Price 50c postpaid.



EFORE 370U buy radio. any Bruike you buy any radio, write for this big new FREE in four colors. It has helped thou-sands of satisfied customers save from ½ to ½ on their radio. by buying direct from the Midwest by buying direct from the Midwest Laboratories. You, too, can make a positive saving of 30% to 50% by buying a Midwest 16-tube de luxe ALL-VAVE radio at sensationally low direct-from-laboratory prices. You'll be amazed and delighted with "the sume nerformance! Broadcasts

length coverage of 9 to

length coverage of 9 to 2,000 meters (33 mego-cycles to 150 KC). Now you can enjoy the new DXing hobby ... and secure verifications from world's most distant stations. These bigger, better, more powerful, clear-er-toned, super-selective radios have FIVE distinct wave bands: ultra-short, short, medium, broadcast and long ... putting the whole world of radio at your finger tips. Now listen in on all U. S. pro-grams ... chadlan, police, ama-teur, commercial, airplane and ship broadcasts ... and programs from the four corners of the earth. broadcasts ... and programs from the four corners of the earth.

VE TO

City_

···· 40 NEW 1934 FEATURES ····

Try this Midwest radio . . . in your own home . . for thirty days be-fore you decide. See for yourself the 40 new 1933 features that insure amazing performance. Other features include: Automatic Select-O-Band, Amplified Automatic Volume Control, 16 New Type Tubes, Balanced Unit Superheterodyne Circuit, Super-Power Class "A" Amplifier, 29 Tuned Circuits, No-Image Heterodynes, Variable Tone Blender, Centralized Tuning. 7 KC Selectivity, New Thermionic Rectifier, Automatic Tone Compensation, Auditorium Type Speaker, etc. These features are usually found only in sets selling from \$100 to \$150.

DEAL DIRECT WITH LABORATORIES



AMAZING FOREIGN RECEPTION

Established 1920

MIDWEST RADIO

RECEPTION Midwest-18 in an 205 stations on require volume 205 stations of the volume 1 stations are station of the volume 1 stations are station of the volume 1 stations are station of the volume 1 stations of the vo

Increasing costs are sure to result in higher radio prices soon. Buy NOW, while you can take advantage of Midwest's amazingly low prices. You save from 30% low prices. to 50% when you buy direct from

ABC 5th Edition

Midwest Laboratories . . . you get 30 days FREE trial as little as \$5.00 down puts a Midwest radio in your home

DEPT. 198 - CINCINNATI, OHIO, U. S.

Cable Address Miraco.

AIL COUPON TODAY THATING 30-DAY FREETRIA OFFER AND NEW 1934 CATALOC MIDWEST RADIO CORP., Dept. 483 AGENTSI Make Easy Extra Money Cincinnati Ohle. Without obligation on my part send me your new FREE 1934 catalog, and com-plete details of your liberal 30-day FREE trial offer. This is NOT an order. Check Here for Details Name CORP. Addrois

WORLD'S GREATEST RADIO VALUE

Deluxe Auditorium Type

SPEAKER TERMS NEW STYLE CONSOLES

AS LOWAS Source of the new Midwast catalog. It pictures are complete lines of besuits an order your Midwast radio from thore the new Midwast catalog. It pictures are complete lines of besuits and order your Midwast radio from thore the new Midwast radio from the new Midwast

State

with

New