





Opinions of Experts on Aerials and Grounds Can a New Zealand Ten-Watter be Received in Brooklyn? The Foreign Short Wave Stations Arranged by Frequencies

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EXPERTS' Ideas of Aerials and Grounds

PERPLEXED radio fans, who desire to get the most out of their receivers, frequenty are confronted by the highly controversial problem: What are the best types of antennas and grounds? Since there is a divergence of views held by many listeners, the following article, including the results of years of research by some of radio's leading minds, will prove appropriate and authentic.

First let us consider the aerial or antenna. Its function is to radiate broadcast waves or electro-magnetic energy from a transmitting station, and to intercept these waves at the point of reception. The broadcasting antenna system is a complex device, and must be mathematically calculated. But a receiving antenna is by far the simplest from an engineer's viewpoint.

Radio waves are emitted in all directions from the transmitter with the speed of light—186,000 miles a second. They are made to vibrate at the frequencies assigned to that particular apparatus. About each broadcasting center there rapidly swings back and forth a far-reaching magnetic field which oscillates from 550,000 to 1,500,000 times a second in the broadcast band. Most of us know that a wire or electrical conductor, when moved rapidly through a magnetic field, will have a slight electric current induced in it. The electric dynamo or generator is such an example, in which a stationary magnetic field is cut by rapidly moving turns of wire on the spinning armature. But in the case of the radio antenna the wire stands still and the magnetic field moves. In both

cases the final effect is the same—generation of electric currents in the wire.

So then, we see that a wire, metal roof, pipe, window screen, bed spring, railroad track, and in fact any metallic conductor of electricity throughout the world, is filled with minute electric impulses, for these objects have alternating currents induced in them by the passage of the broadcast waves which constantly fill the air. Of course we are ignorant of these tiny charges of electricity, but as soon as a sensitive radio receiver is connected to the metallic object there is audible evidence of what is in the air all about us.

Aerial Generates Current

The radio antenna is a horizontal wire used to generate very weak electric currents from the passing radio waves. It carries these extremely low voltages to the sensitive tubes of the radio set for amplification. These currents are often less than one-millionth of the voltage required to light the tiniest light bulb. The receiving antenna is not in a state of resonance like the broadcasting system, and therefore, its length is not critical; it is aperiodic instead, and is filled with different currents flowing at various frequencies in harmony with the many passing broadcast waves. If we should connect an untuned radio set we would hear a great confusion of sounds. It takes a selective receiver to tune out all unwanted radio currents. This is done by tuning the receiver to resonance to one single frequency that is being induced in the antenna. All others cannot get through.

The purpose of the antenna, therefore. is to present a good conductor which will best intercept the passing waves. All such high frequency currents flow only on the surface of the conductor, so it is necessary that wire of considerable surface be used in the antenna. There is an effective limit to the length of the wire, over which no additional energy will be induced. Long waves, swinging at very low frequencies, are not energetic about inducing strong currents in the antenna, and some commercial aerials reach 6,000 feet in length. Short waves swing very rapidly, for their frequencies are intense, and induce relatively strong currents in the antenna. We do not need long aerials for short-wave reception, and broadcast reception, bordering between the short waves and long waves. calls for average length antennas.

Directional Effect

An antenna has a decided directional effect. The magnetic field of the broadcast wave swings back and forth at right angles to the line of advance from the transmitter to the receiver. Therefore,



Ed Wynn, "The Perfect Fool," as "The Chief" of Texaco Program, Tuesdays, 9:30 p.m., EDST.

an aerial hung so as to point toward the broadcaster, will present the greatest possible surface to intercept a great many moving lines of force. An aerial swung at right angles to the former position will be end-on to the magnetic lines of force, and will be cut by so few of them, that the induced current will be very weak.

Opinions of Engineers

A very interesting consensus of radio engineering opinion, taken from the works of outstanding authorities, and statements from leading agencies such as the U. S. Bureau of Standards, the Naval Radio Research Laboratory, the Radio Corporation of America's Engineering Laboratory, and others, indicates complete agreement on what constitutes essential antennas and grounds.

The president of the National Radio Institute, Mr. J. E. Smith, who for years has been teaching radio and has educated thousands of servicemen, states: "Choosing a proper aerial is largely a matter of knowing the characteristics of your radio set. In general, the length should be between 40 and 100 feet, using the shorter for modern sensitive sets and longer lengths for older and less sensitive receivers. The shortest aerial to give best results is the most desirable." That this statement is similar to others from leading authorities is shown by what a Government radio investigator of international repute informally told the writer: "The ideal length of aerial depends upon the design of the particular receiver. For instance, there are two receivers on the market, both very high grade and expensive, yet one is designed for use with an antenna 20 feet in length. and the other for one from 70 to 100 feet long." This, however, puts it up to the set manufacturer to indicate the kind of aerial to use with their receivers. Most of the makers do this.

The engineering laboratory of the Radio Corporation of America, headed by a famous scientist, has, without doubt, had more practical radio experience than any other world organization. "We recommend," they told RADEX, "a horizontal length of about 35 feet in *Continued on page 30*

Checking DX for a Doubting Thomas

PHILADELPHIA reader who asks that we do not use his name. writes as follows: "On page 19 of the May RADEX, you print part of a letter from Richard D. Caddell, Pittsburgh, Pa. In this letter, he states that he has 3GL, Geelong, Australia, with 50 watts power, verified. He also states that he has a verification from PRAX. In the April issue, you also printed one of his letters wherein he stated that he had listened in and experimented with different types of aerials and grounds in many different localities, both in the United States and Canada and also abroad. Those last three words gave him away as it is practically impossible to log such stations as he claims to have heard, in Pittsburgh. Why not, in fairness to your readers, state that this DXer has traveled abroad, when printing such exceptional records?"

Proof From Brazil

Upon receipt of the above letter, we wrote Mr. Caddell and asked him to send us the original verifications from the two stations named. They are now before us. The letter from PRAX is signed by V. A. Borges, Technical Director. It is dated February 13th, 1932, and is addressed to Mr. Caddell in Pittsburgh. It reads in part as follows: "We are in receipt of your letter of the 26th January in which you report having received our transmission of the previous night, at 9:31 EST which checks with our station log on that date. . . . PRAX has a carrier wave on 1360 kcs. of 750 watts with 100% modulated peaks of 3000 watts. It was locally built by the writer and is completely operated from the a. c. mains rectified current, the filaments being all a. c. fed, modulators and master oscillator included. It was, really surprising that the station should have such a reach out to the U.S.A., as our antenna is only 16 meters high located between a sky-scraper 125 meters high and a hill about 50 meters.

"Our time on the air: Weekdays, 10:00 a.m. to 12:00 noon and 8 p.m. to 11 p.m.; Sundays, 10 a.m. to 12 noon.

Can Brooklyn Hear a Ten-watt Zealander?

The time is local and therefore one hour in advance of your EST."

Here's Another One

To give further proof if any were necessary, Mr. Caddell also sends a letter from another Rio de Janeiro station, PRAK, from which we quote. This is dated February 20th, 1932, and is also addressed to Mr. Caddell *in Pittsburgh*. "We herewith duly acknowledge the receipt of and thank you for your letter dated 19th ull. On the night of the 18th January, at 9 o'clock, we were transmitting Brazilian music accompanied by 'violao' and 'cavanquinho,' hence your impression of 'marimba' music.

"Our transmitter is rated at 1154 kcs. using 1000 watts carrier and 2000 peak with 50% modulation. We do not use crystal control.... We are located right in the business center of Rio de Janeiro. Our building is of six stories on top of which is our broadcasting station as you will see on the pictures enclosed. Our schedule of regular broadcasting is: Weekdays, 3 to 4 p.m. and 8 to 11 p.m.; Sundays, noon to 3 p.m., Rio de Janeiro time.

"Our city is not particularly suitable for reception from distant stations, due to surrounding high mountains. Still the following American stations are successfully tuned in: WOR, KDKA, WGY."

Both of the above letters are verifications of the most unquestionable character and it will be noted from both that Mr. Caddell's letter to them was written the next morning after receipt of program. This is important as it excludes any possibility of learning about the program from other sources and then claiming to have verified it. So much for Rio de Janeiro; now for Australia.

Now for Australia

We have before us a letter from 3GL, National Mutual Buildings, Moorabool Street, Geelong, Victoria, Australia,

dated 4th February, 1932, addressed to Mr. Caddell at Pittsburgh. "Please accept our grateful thanks for your report of December 21st which reached us today. We are astonished that you have been able to pick up our transmission at such a distance, but had we not already received a report from Mr. J. L. Heuter. of 1802 Columbia Ave., Philadelphia, we should have been more astonished. We are very gratified indeed to know that our station is received by you at a greater strength than any of the Australian stations because, while we have an aerial output of only 50 watts, there is a station at Corowa. New South Wales. which is broadcasting on 7500 watts and we should have thought they would have come in much stronger."

Thus reception of this 50-watt station in Australia is proven not only possible in Pittsburgh but also in Philadelphia. the home of our "doubting Thomas."

For extra good measure Mr. Caddell sends along some of his latest verifications from other low-power and foreign stations. These verifications are not merely courtesy cards, but refer definitely to the program received, which in nearly every case, was the night before Mr. Caddell's letter was mailed to the station. Among these verifications are those from JOIK, Sapporo, Japan; JOGK. Kumamoto, Japan; JOFK, Hiroshima, Japan; JOAK, Tokyo, Japan (The latter asks: "Is it possible to separate our station over there in Pittsburgh after the sunrising?") Other verifications are from HIX, Santo Domingo; 2YA, Wellington, New Zealand: KZRM. Manila: NRH, Costa Rica; TICR, Costa Rica, (NRH was using but seven and one-half watts power when received.)

A Sharp Criticism

To get back to our critic again, he says further: "Why don't you use some com-

mon sense in printing DX records? You print a letter from Karl Halpern, Brooklyn, N.Y., as hearing 1ZB, an 18-watter in Auckland, N. Z.; 2ZI, a 15-watter in Hastings, N. S.: HRB. Honduras, which hasn't been on the air all winter."

Continued on next page

popular vocalizing trio, who feature the Willys-Overland program Wednesday evenings at 8:15 p.m., EDST. Carl Hoefle, accompanist for the trio, is at the pigno.

"Tom, Dick and Harry, that

At our request Mr. Halpern has submitted his verifications for these three stations. The one from HRB is dated "6 Oct., 1931." That of 1ZB covers reception of November 2nd, 1931 and gives the power of the station as "Input 62, Output 32." It is personally signed by C. H. Pearson, Manager, D. Shepherd, Operator, and Hartley Heising. From 2ZI comes not only a verification card but a personal letter from the Managing Director of Sutcliffe's Limited, Russell Street, Hastings, N. Z. It reads in part as follows: "Your post-card reporting reception of our station to hand, for which we thank you. This surely was a surprise to us, and have no doubt it will be to you when we tell you that the power of our station is only 10 watts.

Distance Record for 2ZI

"We are constantly receiving reports from listeners all over the Dominion of New Zealand at varying distances, from 10 to 700 miles, but the report you have just sent us is easily the record for distance.

"Your report was quite correct. Our announcer was just closing down, the record you heard was 'Good Night Waltz,' a Columbia record and commences with the 'Last Post.'

"If you intend making a press report of this reception, we shall be delighted to have a cutting which will be of great value to our engineer and operator."

Can there be the slightest doubt that Mr. Halpern heard 2ZB and reported it correctly? If then, a ten-watt station in New Zealand can be verified from Brooklyn, New York, just what reception is impossible?

Now for the Two-Tuber

In our April issue we published an article by George Lilley entitled "Girdling the Globe with Two Tubes." Although we did not give his address, Mr. Lilley received letters which, to put it mildly, questioned his veracity. Mr. Lilley, too, makes a practice of sending his report of reception immediately after its receipt. One of the stations he received was LR5, Buenos Aires, Argentine, a 500-watter. The verification reads as follows: "In reply to your letter of the 17th of January, we have much pleasure to confirm that the station picked up by you on the morning of *the same day* was our own station, LR5, Radio Excelsior, which operates on a frequency of 830 kcs.

"We have looked up our records and find that on the day and at the time you mentioned, the musical numbers referred to were placed on the air by LR5.

"It has given us great pleasure to learn that our station should have been heard by you at such a far distant spot, and we shall greatly appreciate it if you will again endeavour to pick us up and let us know accordingly."

Mr. Lilley adds: "Now, Mr. Editor, after a person has received a station, mails the report on the same day as reception, has this fact acknowledged in his verification, and gets a specific letter like the above from the station, what else can he do to prove to the skeptic mob that he is absolutely fair in his claims. It is rather discouraging to DX morning after morning until a good catch is made and then have letters coming like the one I received after making public my reception."

Covering World with 71/2 Watts

We think there must be some DXers who think that any station they never heard, simply cannot be brought in. The little NRH with 7.5 watts has letters from all over the world proving reception of this station. This being a fact, practically any station in the world can be tuned in with this combination of circumstances: an excellent location, a sensitive and selective set, the best of tubes, a perfect aerial-ground, skill in tuning, willingness to work night after night awaiting a break, and patience, patience, patience.

With a record like that of Mr. Caddell, many readers would naturally assume that he possessed the very latest of the dozen-tube receivers, but this is not the case. He is using what he terms a "rejuvenated" R. C. A. 60 superheterodyne, similar to thousands of this model in use all over America. Although his set was an extremely sensitive one originally, he has made changes which have added greatly to the volume. In this regard Mr.

Continued on page 31

PUZZLES MIXED with RADIO

GREAT many of our readers got as far as the No. 1 puzzle in May - and there they stuck. We know they will be interested in the method of working this problem. F is obviously 1 for F times FAN equals FAN. In order to subtract A from A and get A, the figure must be either 0 or 9; it cannot be O for A times FAN equals FZND. A. must be 9 and therefore R must be 3. D is obviously smaller than N and N times N equals X. Subtracting N from (1)D must give the same final figure as N times N. Only the figures 8 and 2 will do this, therefore N is 8, D is 2 and X is 4. Taking D (2) from E leaves N (8) so E must be 0. This makes Y 5 and Z 7. RADEX is 39204 and FAN 198. A very good puzzle.

The No. 2 problem was, of course, solvable only by elimination. So far as we have been able to find the following solution is the only one although our readers may possibly work out some other.

K	
WW	CJAC
KSL	WMBR
CMBC	

The horizontal calls are KSL and CMBC; the verticals are WSM and KWKC and the diagonals, WSB and KWLC.

No. 3 is filled in as above and the calls are CJBR - WJAC - WJAR - WJBC -WMAC - CMAC - CMBC - CMBR -WMBC - WMBR. Fortunately we advised our readers to use the April issue in solving these puzzles for the call CMAC did not appear in May. Our readers found ten calls instead of eight.

No. 4, the cross-call, was not unusually difficult although many experienced some trouble in getting started due to the unusual beginning "1-12 Chicago, Milwaukee and St. Paul," which indicated three calls from these three cities. 1-12 was WSBC; 5-8 WHAD and 9-12 KSTP, all reversed.

The complete solution is as follows:

Four More Hard Ones

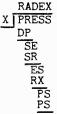
CBSW DAHW PTSK AOK AOVKOH VAS SK Q WLWI N SC K VOW WK WGR J K WOC WOW B CTZ RRWWRL KGW SMBW WAAT WOKO CKWK WAAM WIBR WMC YGWFKD LFC J KOL SIW K Y UGK WW KHH Z CI O KHJT O KB FFX KLOAMK KXL CKCV SMGW ZBAW

The June Problems

As our readers have three months in which to solve the puzzles in this issue, we are giving them some extra hard ones. No. 1 is submitted by Donald McNeil, Hamilton, Ontario. The problem is to fill in eight three letter calls so the name of an important city will appear in the middle line. Only one call is to be used from any one state.

W	W	W	Κ	W	W	W

No. 2 is another mathematical puzzle designed by George Raba, Stevensville, Mich., who gave us the square root problem for April. This one is also in division. Each of the letters stands for a figure and the problem is to change the letters into the figures for which they stand.



In No. 3 we have another palindrome puzzle similar to that in April, the answer to which was given in May. A palindrome, let us repeat, is a word or sentence with the letters in the same order, reading either left to right or right to left. A typical example is the celebrated sentence said to have been used by the first man when he introduced himself to Eve-"Madam, I'm Adam." The problem is to rearrange the letters given below into 13 station calls so that they will be in the same order from left to right and vice versa. No call is used twice, or rather, each call appears only twice.

WCWK CWWK KWWC CMWJ WKWW KCKW CMJA CVCR REAC WAJC JAA RARE CVC.

The Cross-Call, No. 4, is designed by Daniel C. Looby, of Philadelphia. Following is the key:

Across

- A channel to itself
- 500 watts on 700 5
- Western broadcasting company 0
- 14 Frequency is the same as power
- 18 NBČ
- 2300 watts 21
- Smallest in Washington 24
- 27 In K-21
- First two of key station 31
- Last two of 5000 watt Columbia 33
- 35 Four stations share time
- 5000 watt Canadian 39
- First two of Carleton College 42
- Last two of Bellingham 44
- 46 In X-31
- Last three stand for city (Jumbled) 49
- Second and four of station on 1310 53
- Last two of smallest in state 55
- 57 On 1500
- 61 A state university
- 100 watts sharing with 50 watter 64 67
- Ten k.w. on 1166
- 70 Recently exchanged waves with another 100-watter (Jumbled)
- 75 Purdue
- Queen City Broadcasting 79
- 83 On 1370

Daws

- J. W. B. Browne
- 2 A palindrome

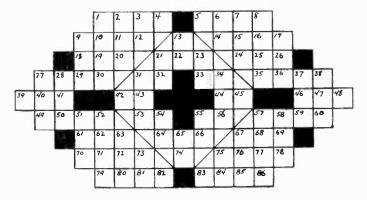
1

- First two of Detroit 3
- Last two of station in Q-14 6
- A CBS in the NW 7
- Educational broadcasting corp. 8
- 0 In Canton
- Last two of Lincoln 13 On 1200 17
- 21 Last two of 61
- 23 Last two of Joliet
- A radiophone company 27
- 28 National using same transmitter as sister station
- 31 Department store on Red
- 1000-watt daylight 34
- Last three of Alabama 37
- 38 First three of New York
- 51 Time
- 52Odd frequency
- Second and fourth of 200-watter 54
- 55 Last two of station on 1310
- 57 Police
- First three of Courier Journal 58
- 63 Uses two calls
- 65 Middle two of four
- 67
- In Goteborg First two of Sweden
- First two of 24

In this puzzle Mr. Looby has used a few calls from the list of world stations published in the April and May issues. Five or six calls have been reversed, but these are not indicated. So watch out for these.

Get the correct solutions to these four problems to us by August 20th and receive a copy of the September RADEX free.

Puzzlers who desire to submit crosscalls of their own composition are invited to try their hand, using any of the blanks that have been used in previous issues of this magazine.



GOOD NEWS and NEW GOODS

TN our February issue we printed a letter from Boyd Erlbeck, Lodi, Calif., in which he stated that he had added a G. M. Converter to his Majestic TRF receiver and secured an increase in volume of at least 25% and extreme selectivity. Mr. Erlbeck said that with the converter he had tuned in a station on every channel from 540 to 1500 without a miss and with no interference from stations on adjoining channels even those like XER which is but five kcs. from WSB. This letter brought us many inquiries in regard to this converter. Now W. A. Edwards, 329 Favette St., Portsmouth, Va., writes us of his experience with the same device. The full name is The G. M. R. Super-Heterodyne Converter with Remote Control, and it is made by the General Motors Radio Corp., Dayton, Ohio. It is said to convert any tuned radio frequency set into a superheterodyne with remote control. It does not have the appearance of a radio set but is mounted upon an attractive pedestal with an ash-tray at the top. The Converter adds two tubes to TRF sets, thus accounting for the increase in power. It has a 30-foot cable attached which goes to the set, thus enabling one to place the converter next to his easy chair and control his set without leaving his chair.

Says Mr. Edwards: "The dial of the regular receiver is placed at 550 kcs. and the cable of converter attached to the set which is then controlled entirely from the converter. Before I got this converter I got from three to five stations at a single point on my Freshman Equaphase G-5, but now I can pick a station on every line with no interference from the station on either side. Our local station, WTAR, Norfolk, Va., is only four miles from me and I can cut it off on 780 kcs. and get WJZ on 760 and WGY on 790." This device is not a short-wave converter, as many assumed. but is for use with the regular b. c. receiver giving superheterodyne results with a TRF set.

New Developments in Radio Field

The Crosley "Litlfella"

There have been many references in letters from our readers to the Crosley "Litlfella" Superheterodyne and here it is. It incorporates the Crosley five-tube Pentode, variable-mu, superheterodyne chassis with continuous static and tone control, illuminated hairline shadow dial with vernier drive, combined volume control and on-off switch and the Crosley seven-inch full floating moving coil dynamic speaker.



The front panel is of figured walnut veneer. The top and sides are finished in Adam brown. The edges of the speaker grille are covered and finished in a darker shade and the entire grille is backed by shimmering gold cloth. The dimensions are 17 inches high, 13 inches wide and $8\frac{1}{2}$ inches deep. It lists at \$36.36. The maker: The Crosley Radio Corp., Cincinnati. Full information regarding the "Litlfella" may be secured from R. Dods, Advertising department.

Improving the Tubes

A radio set is no better than its tubes,

TRIPLE-TWIN



Engineers are constantly at work to improve the performance of tubes which is evidenced by the new types appearing on the market. Here is the "Triple-Twin" Type 239, developed by the Cable Radio Tube Corp, 230-240 North Ninth St., Brooklyn, N. Y. This variable mu frequency pentode, while designed principally for use in automobile and d. c. sets, is finding wide employment in the new a. c. receivers.

What Set is the "Best?"

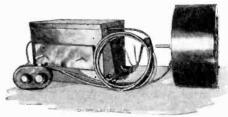
We receive hundreds of requests from our readers as to the "best" receivers for the short waves. We can no more assume the responsibility for naming the best radio set than we can for choosing the best automobile. The "best" is a matter of individual opinion. We will, however, from time to time, present in these columns information regarding sets which are worthy of consideration for this title. This month we give you the Royal Short Wave Receiver, manufactured by the Harrison Radio Co., 142 Liberty St., New York City. Unfortunately the price is not given us but it is said to be extremely low priced, whatever that means. Using only two tubes, a -32 screen-grid detector and a -33 power pentode output tube, it is claimed to have the sensitivity and volume of an ordinary four-tube set. This receiver is battery-operated in order to eliminate all hum and other noise inherent in a. c. sets. However it is claimed that the use of the new two-volt tubes gives a set of batteries with ordinary use, a life of six months.

The Royal receiver is available in two types, the "Regular" and the "Band Spread." The latter has the 20, 40 and 80 meter bands widely spread for ease in tuning. This type, however, is not designed to cover the rest of the shortwave spectrum. The "Regular" covers a band from 14 to 200 meters and a special coil will extend its range to 550 meters. Both sets are housed in attractive, crackle-finished metal cabinets completely eliminating all hand capacity effects.

Radio for Motor Cars

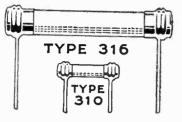
And here is a radio for the automobile. Thousands are now equipping their cars with sets in order that they may "radio as they go." This one is made by the J-M-P Manufacturing Co., of Milwaukee, Wis. The price is \$40.00. The "Auto-Dial" Receiver, as it is called, is one of the most compact auto receivers on the market and is readily installed under the cowl or the engine hood. The tuning is at the finger tips with the remote control mounted on the steeringpost. Only two holes are required for bolting the set to the car. The set uses two -24 tubes, one -35, one -27 and one -47 for power output. Either B batteries or a B eliminator may be used. Consumption of B current is said to be very low, giving a set of batteries a six-month life. An aerial may be installed in the roof of the car or under the running-





boards, although many of the new cars are now coming wired for radio.

Resistances and Controls



The Central Radio Laboratories, 900 E. Keefe Ave., Milwaukee, Wis., are manufacturers of many radio devices. Among them are volume controls, potentiometers. rheostats. resistors. and controls for a series of headphones or speakers as in hotels or hospitals. We illustrate their "Centralab" Fixed Resistor. These are made from a carefully calibrated resistance material which is forced under tons of pressure through double dies and baked for hours in ovens and then fired at over 2500° F. They look like stone and are said to be just as permanent. It is claimed that no moisture can possibly penetrate these resistors so age cannot change the resistance value.

Adjusting Meters

Our service-men readers will be interested in this description of the "Readrite" Oscillator for adjusting all receivers. This is manufactured by the Readrite Meter Works, Bluffton, Ohio. The price is \$18.00 to dealers. It is completely shielded, self modulated. Furnished with batteries and one -30 type tube. Covers entire broadast and intermediate bands. This instrument is used to align r. f. gang condensers, locate defective r. f. transformers, adjust i. f. transformers,



compare gain in tubes, check the efficiency of the radio set oscillator circuit in the b. c. band and determine the sensitivity of the receiver. The manufacturer makes many other instruments for the service-man's use.

Cutting Out the "Blurbs"

Have you ever wished you could touch a button and cut out the speaker when the ballyhoo starts about "twenty words, no more, no less" or "see your dentist twice a year?" Well, the Alden Products Co., Brockton, Mans., are making it possible with their "Na-ald" Fade Out. A push-button attaches to the receiver by a cable. This can be placed at your easy chair, at the dining-table, at the ironing-board or at the telephone. If you are reading, and talking annovs you, if the radio interferes with the use of the phone, just press the button and presto, the annoying "these are the terms of the contest" fades out to a whisper. The price is one dollar. Just as simple and lots more effective than cussing the announcer.

A Late Superheterodyne

The whole radio field seems to be going superheterodyne and that sensitive and selective circuit is attracting evergrowing interest among listeners. Here is the Midwest 11-tube, a high-powered but low-priced receiver, made by the Midwest Radio Corporation, 909-911 Broadway, Cincinnati. It is not sold through dealers but direct from factory to user. Their catalog RI will be sent upon request.

The Midwest "11" has two pentode output power amplifier tubes in pushpull, variable-mu screen-grid, full-vision dial, built-in aerial, pre-selector, tone control, static modulator and automatic volume control. It is a completely balanced superheterodyne unit with ten tuned circuits. Users testify that the Midwest "11" has better tone, sharper selectivity and greater sensitivity than many superhets costing twice and three times as much. Other features of this receiver are the covering of the short wave police band, a built-in extra light socket and a phonograph connection. An outside aerial may be used if desired, although most users find that the built-in

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TAKING It Up with the EDITOR

R VEN if weather conditions are months for distant reception (as they sometimes are), most of the thrill and edge of DXing will be taken away without the familiar monthly issue of RADEX on top of my set." This letter from our friend, Richard D. Caddell, 605 Ridge Ave., Pittsburgh, Pa., is typical of many we receive at this season of the year. While we always heave a sigh of relief when the June issue is "put to bed" as the newspaper boys term it, and we think gleefully of the two months' relief from editorial worries, yet we miss the monthly visits with our readers. We would gladly go on with our work in July and August if our readers would do their share, but the competition of vacations and golf and motoring and baseball and what not are too great and the drop in sales during these two months would be too great to warrant.

But we shall not be idle. The summer will be spent in getting ready for an even bigger and better RADEX beginning with September. There is much to be done. We want to send out a questionnaire to all broadcasting stations for fresh data, particularly in regard to their policy respecting verifications and their time on the air. We do not know yet how we can best present the latter feature for the convenience of our readers, but there is a widespread demand for data showing the hours of each day of the week that stations are on the air. This may appear in regular issues of RADEX or perhaps in a separate publication combined with a new and up-to-date map.

New S-W Department

Then your Editor is purchasing one of the best of the new all-wave receivers in anticipation of a new department devoted to reception on the short waves. So many of our readers are now exploring these higher frequencies with their cargoes of foreign programs, that we realize that this magazine must give attention to this important and intriguing field.

Another new department is that of

Interesting Chats With Our Readers

"Good News and New Goods" which begins in this issue. Under this or a similar heading, we will describe the good things of radio particularly the new developments.

So, while you will not hear from your favorite magazine for two months, it will be hard at work preparing new material for your enjoyment and assistance. We hope our readers will have a most enjoyable summer and return to their radios in September with new interest and enthusiasm.

A New Zealand Amateur

Continuing with Mr. Caddell's letter we find: "How is this for a record? After years of DXing, I have finally pulled in my first foreign amateur station—that is an amateur station in the broadcast band, 9000 miles away. On the morning of April 30th, at 2:02 a.m. EST, I picked up VJN, an amateur in Sydney, Australia, on 1500 kcs. He was calling another amateur, VJNS, at Perth, Australia. I would like very much to find out VJN's address in Sydney." Mr. Caddell reports a new Australian—The



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Adele Ronson who has achieved a wide popularily through her work on "Radio Guild," "Moonshine and Honeysuckle," Collier's Hour, and other NBC programs.

Reverina Regional Station, 2CO, located at Corowa, New South Wales, on 560 kcs. with a power of 7500 watts, making it the most powerful station in Australia. The new station is on a chain with 3LO and 3AR. Their schedule is from 7:30 a.m. to 11:00 p.m. weekdays and from 11:00 a.m. to 10:30 p.m. Sundays, Melbourne time. (Noon EST is 3:00 a.m. tomorrow in Melbourne.) Programs of Melbourne, Sydney, Brisbane and Hobart stations, Mr. Caddell points out, are on Eastern Australia or Melbourne time: Adelaide is half an hour behind Melbourne time and Perth is two hours behind.

Here's one that picked up the new 2CO: "Have you any information on an Aussie on 560 kcs?" asks Stanley Savage, Route 4, Spokane, Wash. "They come in fairly well. Also one on 635 kcs. The latter comes in fine and according to his time which I've heard several times, he is six and a half hours west of here (PST)." Mr. Savage wonders why the Hawaiian stations do not come in as well as those in the Antipodes so much farther away.

News from Japan

"Here is a bit of news from Japan," informs Mr. Caddell. "The Japanese Government has just issued a permit to the Japan Central Broadcasting Corporation to erect seven new broadcasting stations in areas not provided with sufficient service with the sixteen radio stations now in use. Here is the regular broadcasting schedule of the seven J. B. C. 10 kw. stations on the chain which I wish you could find room to insert in an early issue of RADEX, as many RADEX DX fans have been writing to me for this schedule: Time schedule: Evenings, J. S. T. (135 E) 6:00, music. talk for children; 6:30, lecture, talk, music; 7:00, news, weather forecast, information; 7:30, music; 9:40, time signals, news, weather report, information, etc.; 10:00, sign off the air. This schedule is for JOAK, BK, CK, FK, GK, HK, and JOIK, and is copied from the above named station's verification cards. All Japanese stations are on the air from 6 a.m. until 10 p.m. Japan Standard Time."



Irma Glen is becoming one of Radio's most popular organists. She may be heard on several NBC programs including "Beautiful Thoughts," Daily, except Sunday, 9:30 a.m., EDST.

Did They Hear 4RK?

"Several DXers have reported hearing 4RK on 395 meters. It is not broadcasting there and never has been. It broadcasts on 329 meters," criticizes Don Townsend, 1421 Arch St., Berkeley, Calif. "4RK relays 4QG's programs, but occasionally 4RK provides a local program which it broadcasts and relays to 4QG. Then a listener hearing 4QG would hear them announce as 4RK and think they were getting 4RK direct. The above information was taken from the Queensland Radio News. Also several DXers have given lists on airport stations which they say broadcast on the b. c. band. These stations actually operate on a low-frequency and only their harmonic is heard on the b. c. band. The airport stations are supposed to have special harmonic-suppressor devices, but they don't seem to work so good, as KCV comes in very loud on 1000 kcys. and their real frequency is 332 kcys. This from KCV's verification."

Some Tips on Australia

Ralph H. Schiller, Hawthorne, N. J.,

sends the following interesting info regarding some Aussies:

"Have just received a letter from Australia this date and same contains some information concerning two new radio stations. Herewith is information on two new stations of Australia:

"VK2CH, Sydney, Australia; 1210 kcys. Hours of broadcast in eastern standard time are as follows: Mondays to Sundays: 7:00 to 9:30 p.m., 11:00 p.m. to 1:30 a.m., and 2:15 to 7:00 a.m. Owned and operated by Council of Churches, 147 York Street, Sydney, New South Wales, Australia.

"VK2SM, Sydney, Australia; 1270 kcys. Hours of broadcast in eastern standard time are as follows: Daily except Saturdays and Sundays: 4:30 to 5:30 p.m., 7:00 to 9:00 p.m., 2:45 to 7:00 a.m. On Saturdays from 4:30 to 9:00 p.m., 2:45 to 7:30 a.m. On Sundays from 7:00 to 8:30 p.m., and 2:45 to 7:30 a.m. Owned and operated by Catholic Broadcasting Co., Australia House, Wynyard Square, Sydney, New South Wales, Australia.

"Here also is authentic schedule of 4ZO as received from owner and operator of this station.

"4ZO Dunedin, New Zealand, 1080 kcys, 250 watts. Daily except Saturdays and Sundays from 12:30 to 1:30 a.m. This schedule of 4ZO is given in the hours best suitable for reception in this country. It is in eastern standard time."

A Dependable Station

"On page 30 of your May RADEX I read: 'Has there been an increase in power for KFPM, Greenville, Texas? asks John R. Carter, 1119 West 9th St., Erie, Pa. I picked them up this morning and they came in altogether too loud, it seemed to me, for 15 watts'. If you will permit me to answer that," replies Rudolph Kure, 3633 Vine St., Cincinnati. Ohio, "I would like to say I do not think that there has been any increase in power for KFPM. Their power output to the final amplifier stage in the transmitter is 30 watts, which, according to the Commission's method of figuring, means an output of 15 watts. Its output is excellently modulated, which means as much as more power. The New Orleans monitor station has recently

measured its frequency. The measurement was: 1310.048 kilocycles. Only 48 cycles off-high; one of the finest transmitters in the country, I believe. I heard KFPM as early as 8:15 p.m. EST, coming in nicely through that crowd of high-powered stations on only 15 watts of power. It is beyond me, cannot figure it out myself, yet it does it once in a while. According to my experience with KFPM I am therefore pretty sure that the 'too loud for a 15-watter' signal Mr. Carter has picked up was on only 15 watts. KFPM's signal strength on 15 watts compares well with many of the 100-watters."

Some Misinformation

Somebody got spoofed last month; was it RADEX or the Newark News Club? Says Daniel C. Looby, 5249 Oakland Street, Philadelphia: "On page 28 of the May issue you print a clipping from the Newark News stating there will probably be new stations in Tilton, N. H., Providence, R. I., etc. Some member must have procured an 'up-to-date' log about three years old and, seeing these stations listed, surmised that they were new stations. If you will look in a back issue of RADEX of about 1929, you will see these stations listed. They were on the air at one time but have been long deleted."

And to this Karl J. Halpern, 1435 Coney Island Ave., Brooklyn, N. Y., adds: "Louis Alexander, Jr., must have been reading a log which was some six years old. WBRL, Tifton, N. H., has been deleted some two years ago; WCOT was WPAW's old call; WINR was deleted during the reallocation of 1928; WMBL only had a license; WQBZ left left the air in 1929. He must have been looking at some very old clippings."

The U.S. Ground Again

Calls are still being received with reference to the U. S. Standard ground although the description of this ground has twice appeared in our pages. Now comes Edwin F. Dreher, P. O. Box C-1, Hayward, Calif., with the statement that the U. S. Bureau of Standards disclaims being the parent of this particular ground. In the Bureau's book, "Principles Underlying Radio Communica-Continued on page 28

"SINGIN' SAM" and Other STARS

Betty Introduces "Joe Palooka"

JUST a year ago an old trouper of minstrel days came to New York to make his network radio debut over Columbia as the feature of the Barbasol program. In that time the newcomer, Harry Frankel in real life, has become one of the headliners of the air as Singin' Sam, the Barbasol Man. In doing so he has shaken off a jinx which has pursued many of his fellows. for there are few "old timers" of the stage who have been able to adapt themselves to the technique of radio.

Began as a Boy

Sam well qualifies as a theatrical veteran, for in 26 years of show business he has played in every state in the country, as well as widely through Canada. He was born in Danville, Ky., but moved at the age of eight to Richmond, Ind., where he grew up and where he first displayed his instincts for showmanship by acting in what he calls "kiddie shows." As a schoolboy he sang in a boys' quartet that entertained informally in Richmond. One day they were heard by a vaudeville actor who arranged bookings for them in Southern theatres during their summer vacation. This first professional appearance was disastrous, however, for they became stranded in a small town far from home and had to wire home for their return carfare.

During high school Sam decided to desert his texts and learn a trade. To that purpose he obtained a job in a piano factory, but he was destined for the footlights, and it was not long before he joined J. A. Coburn's Greater Minstrels, featured at 17 as the "boy basso."

In this engagement he was partnered with Frank Tinney, an outstanding figure in minstrelsy. Later he was featured as comedian with the Al G. Fields' Minstrels.

Besides his minstrel shows, Sam has performed extensively in vaudeville. For eight years he toured as a member

of a quartet, aptly named "The Big Four," as each member weighed more than 200 pounds. During this long association their harmony was not only musical, for they had but one fight, and that arose over a game of "Hearts." A later vaudeville series was "The Two

Black Birds," of which he and Joe

Dunlevy were co-creators.



Less than two years ago Sam made his radio debut over a Cincinnati station. when a friend asked him to go on the air to advertise his lawn-mower business. Success was immediate, and when the company found that it was getting more orders than it could fill, another sponsor readily engaged him to continue on the air. His local broadcasts attracted wide attention, and he set something of a record when he received 25,000 letters for a week's broadcasting in Cleveland. The Barbasol Company brought him to New York last July, after he offered but one song for them at his audition. and he has been delighting radio audiences ever since then with his informal programs of song. He has an intimate, homelike voice, which embodies a fortunate combination of depth, tone and feeling, and he ad libs all the announcements, which he makes himself.

Sam himself is a constant radio listener —and herein lies a large part of the secret of his success. He listens for his own enjoyment, but he does so also to

know what others are doing and what is going over with the public. "When in Rome, you have to shoot off Roman candles." he says, in regard to his radio success. He fully realizes the differences in technique between the stage and radio, and he has studied the new medium in order to adapt his offerings to its limitations. He sings largely the old-time songs, but insists on numbers of several different types on each program, with the idea of making each one appeal to at least one member of the family. Another of his theories is that a smile, provoked by a radio performer, is ten times as valuable as a laugh, which is a distraction, rather than a sign of satisfaction. One conversation with him about radio and you will know that his success is far from haphazard.

Side glances: He is typically a man of the outdoors and prefers the country to the city. Is fond of all sports, both as spectator or participant. . . . In school he starred at football and basketball (then a new sport and popularly considered a game for girls).... Now he goes in for golf, hunting, and fishing. ... With a friend, he owns a hunting lodge in Michigan. . . . His radio success has brought more vaudeville engagements. but he has discarded blackface to appear informally at a microphone, as he does in the WABC studios. . . . It has also brought him a contract to sing for phonograph records.

He spends little time in rehearsals, for he feels that over-rehearsal spoils the informality of the programs. . . . Only rehearses an unknown song, and then runs over it but once or twice with his pianist. . . . He transposes his songs at sight, for none are written in a key low enough for his voice. . . . He has never taken a music lesson, and cannot play the piano, despite his work in the piano factory. . . . His musical library, housed in a specially built trunk, contains thousands of numbers, and he makes up his programs without a duplication, except when specially requested, over a period of several months. . . . Most of his selections are based on requests. He occasionally broadcasts a one-man minstrel show, in which he takes all parts. singing both baritone and bass. . . . Is considered the leading exponent of the Bert Williams type of song, and he often includes such numbers on his programs, in response to the requests of many other old troupers.

Singin' Sam can be heard every Monday, Wednesday and Friday, at 8:15 p.m. EDST, over the Columbia network.

Those Stebbins Boys

Throughout the country household routines are adjusted so families may follow the simple adventures of Esley Stebbins (Arthur Allen) and John Stebbins (Parker Fennelly). John and Esley are the proprietors of a combined hotel and general merchandise store in Bucksport Point on the coast of Maine.

John and Esley Stebbins are bachelors. Neither has ever roamed far from the little Maine village, in contrast to the third brother, Captain Bill who is on the other side of the world as skipper of an old schooner. The boys are supposed to be in their late fifties and, as most bachelors of that age, somewhat fastidious and temperamental. They settled the problem of who should be boss by alternating. One day Esley gives the orders and John takes them, next day the order is reversed. The two men quarrel almost continuously, whether it be regarding their store, local politics



or the frequent love affairs of Virginia Pennypacker (Adelina Thomason) who tried vainly to marry each of the boys.

For fourteen years John and Esley did not speak to each other as a result of a misunderstanding, Finally, after many attempts to reconcile them, blustering brother Bill tricked John and Esley into a free-for-all fight in which they joined forces against him. In the heat of combat they forgot their long standing differences and became friends again. Then Bill, satisfied that all was well, sailed away on his vessel.

John and Esley possess contrasted temperaments. John is quiet, levelheaded and patient. Esley is quarrelsome, sharp-tongued and sometimes guilty of acting without mature consideration. But in spite of their quarrels, the boys always pull together in emergencies.

The role of Esley is played by Arthur Allen, veteran character actor of stage and radio. He was born and spent his boyhood in Gowanda, N. Y. Turned to amateur theatricals at an early age. He attended Oberlin College, studied at a music conservatory and then joined a dramatic stock company. Later to Broadway, where he played character roles on the legitimate stage, and then transferred his activities from the footlights to the microphone at the instigation of the late Gerald Stopp, one of the leading directors of rural drama on the air. He has forsaken the stage completely, in favor of radio.

Allen's partner of the air is Parker Fennelly, who plays John Stebbins and is truly a Down-Easter. Fennelly was born on Mount Desert Island in Northeast Harbor, just off the coast of Maine near Bar Harbor. Now a summer resort, the island was for many generations a fishing center, populated by typical New Englanders. Fennelly grew up there, seeing little of the outside world until as he reached manhood he moved to Boston and attended a dramatic school. He began his professional career with a Shakespearian company and trouped with stock companies for fifteen years. He has appeared in plays with Nance O'Neill, Walter Huston, Roland Young, and others, whose names today are as well known on stage and screen as his on the air.

The Stebbins boys are heard daily, except Saturday and Sunday, at 7:30 p.m. EDST, over the NBC-WJZ network.

Here is Jane Froman

Because radio programs reach such far away places Jane Froman felt she should sing as loudly as possible the first time she faced a microphone. Of course, she knows better now, but at the time she admits she did feel just a little bit silly—and frightened.

Her first radio opportunity came in



Cincinnati following a party in the home of Powell Crosley, Jr., who heard her sing and suggested she join the WLW staff. It was there that Paul Whiteman heard her and induced her to go to the NBC Chicago studios, where she made an instant hit on network programs.

Miss Froman, who is Ellen Jane to her family, is slender in build, has blue eyes and brown hair. She has that poise that most girls hope to attain, and she doesn't have any qualms about herself in event she's drafted for television programs. She doesn't have to.

Movies provide her with an enjoyable

relaxation. Swimming, horseback riding and driving are other diversions that rank equally in favor. Dogs and cats she likes and stoops to pet any that cross her path. But she won't walk under ladders and never fails to toss a good-sized handful of salt over her left shoulder when she knocks over the shaker.

Jane was born in St. Louis in 1907, attended the grade and high schools there, and graduated from the University of Missouri in 1928 with two degrees—an A.B. in music and a B.S. in journalism. She wanted to be a newspaper women. While in college she was active in musical shows, sang in the glee club, university sextet and journalism school shows. Her first professional job was singing with an orchestra in the Grand Central theatre in St. Louis. That was when her desire to be a journalist wavered.

Miss Froman sings and heads her own orchestra on the Iodent program on Sundays at 4:00 p.m. EDST, over an NBC-WEAF network.

And Joe Palooka

Ted Bergman, who portrays the big, dumb, but lovable Joe Palooka, has wrestled with life both on and off the stage ever since he played "Shylock" in grammar school and his beard was caught in the stage door. Ted came to radio drama after seeing life in alternate roles as an athlete and actor, scholar and seafarer, candy merchant and stage manager. He still can't get near a punching bag without "seeing red."

Ted was born on August 20, 1907, the son of a New York merchant. His adventurous theatrical roles as a youth were matched by vacation wanderings as a deckhand on transatlantic vessels. There he picked up a knowledge of characteristics which later were to stand him in good stead as a versatile actor. Later he joined a stock company. His first job took him to Oklahoma City, where he portrayed "Pierre of the Plains," in a house of melodrama. The adventure lasted three weeks and Ted came home. Appearances with the Provincetown Players followed. He later managed and directed productions of the Playwright's Theatre. He also toured



vaudeville with his cousin, Harry Green, the comedian.

Between theatricals, Ted managed to save his first \$2800 which was invested in a confection which he merchandized to the city's candy stands. Business was excellent until hot weather came, causing the sugar to crystal in the confections and bankrupting Ted.

Again he took to the road in stock companies, touring with "What Price Glory," "Road to Rome," and others. Times became slack and during the lull Ted put his big bulk to work as physical instructor and manager of a Manhattan gym club. There he taught S. L. (Roxy) Rothafel how to play handball, etc.

Ted came to the Columbia network in early detective thrillers. Here he met Frank Readick 130-pound actor, who today plays the part of Knobby Walsh, diminutive and wise-cracking manager of Joe Palooka. They swapped stories over the luncheon table, became roommates and teamed in many radio acts together. Their bachelor partnershipended recently, when Ted met Finette Walker, concert soprano, in the CBS television studio, and won her as an April bride.

Ted weighs 200 pounds and looks like a prize fighter. His hobby outside the *Continued on page 31*

The TECHNICAL Editor ADVISES

Separating Crowded Stations

I have purchased a second-hand Majestic 70-A receiver, but I found that the 550 kilocycle stations came in at 74 on the dial instead of at 100, and the 1400 k. c. stations at zero. I then turned the plates of the tuning condensers on the shaft so the 550 k. c. stations would come in at 94 and the 1500 k. c. stations at 9. The high frequency stations are still crowded. How can I spread them out for better selectivity?

It is natural for stations to appear crowded down in the lower wave lengths. Until someone invents a compensating tuning coil and condenser arrangement which will spread stations over the entire wave-band, radio will continue to suffer from this trouble. If a change is made so that the stations between 1000 and 1500 kilocycles are separated more, there will be a loss of stations at the high end of the dial, or between about 650 and 550 kilocycles.

Try removing about six turns of wire from the secondaries of each of the radio-frequency transformers. Then connect a small adjustable trimming condenser across each tuning condenser. The capacity should be about 30 to 50 mmfds. Adjust each of these new condensers so that a 1500 k. c. station will come in at zero on the tuning dial. Then rebalance the permanent trimming condensers for selective tuning but not touching the newly placed condensers. This will increase the spreading of congested stations, but will have little or no effect on stations below 1000 kilocvcles.

All-Wave Set Gives Trouble

My Lincoln all-wave receiver sw-31 does not give satisfaction; the broadcast end works perfectly, but I can get only a few amateur and coastal code stations on the short-wave end. I have been disappointed because I thought I would get the foreign short-wave stations too.

The fact that the broadcast end works perfectly indicates that none of the trouble can be due to that portion of the set, and will most likely be found in the short-wave converter circuits. Check

Problems in Set Operation

the tubes and all connections, especially those leading to the first tube of the broadcast receiver. These output wires from the converter must be short and well separated from other wiring. Use a good aerial, and try disconnecting the ground wire for short-wave reception. A small fixed condenser in series with the aerial might be of benefit.

Short-wave tuning is quite a problem; it calls for much slow manipulation of the dials and patience. The stations will be found to be very sharp in location. We regret that we have no comparative data in regard to the performance of this particular set, and therefore cannot say just what you should expect from foreign reception.

A Mysterious Control on Majestic

What is the third control on my Majestic; it resembles a dash-pot? This set tends to sputter when stations from 1060



Here's Joe Palooka's sweetheart, Ann Howe! Columbia, Tuesdays and Thursdays, 6:45 p.m., EDST.

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to 1500 kilocycles are tuned in, but if I increase the volume the noise stops except above 1200 kilocycles, and above that only by working the unknown third control on this set.

The sputtering you complain of seems rather unusual, and may be traced to undesirable stray capacities coupling with the antenna coil. The third control is an antenna compensator for the purpose of compensating for the varying effects of different frequencies in the antenna circuit. Your problem seems to limit itself to a local one affecting the antenna coil. When the volume control is at full strength the coil is not so free to pick up strays as it is when minimum volume is indicated. It may be that the electrical constants of the antenna coil and tuning characteristics of this receiver may account for the introduction of noise above 1200 kilocycles. Examine the aerial and ground for perfect connections and proximity to other electrical circuits which may produce some of this interference.

Set Chokes Up

My set will be playing nicely when all at once it will pop or crackle and then choke up. You can hear the music faintly, but in a minute or two it will let go and the music will come back with full volume. But by turning up the volume control the trouble ceases, for the trouble comes oftener when the volume is turned down. On faint stations where more volume is needed, the trouble is not so marked.

If your set is a. c. operated a filter or power supply condenser will sometimes develop intermittent punctures or corona discharges within, causing sharp voltage fluctuations of the power supply and a temporary reduced average voltage. If vou have a high d. c. voltage test made. the defective condenser will be disclosed, and should be replaced. A slider on a wire-wound volume control will very often cause this trouble. It may be remedied by applying a small bit of pure white vaseline along the resistance over which the slider passes. Carbon type volume control resistors become packed and are subject to variations in resistance and noises; they must then be replaced by new ones. If there is a lack or failure of the audio frequency grid bias voltage, such choking will be noticed. In d. c. or battery sets this latter is a frequent cause, as well as irregularities in the A battery voltage.

Noisy After Warming Up

As soon as I turn on my Silvertone set it begins to crackle, but after getting warmed it then seems to make scratching noises when the volume control is on. If I jar the cabinet the noise is also heard.

This appears to be some loose connection. A tube may not fit snugly into its socket, or be defective within. When a set or tube gets warmed up the loose parts expand and cause much noise. A defective volume control will be noisy. and suggestions for this trouble will be found in the foregoing question and answer. Disconnect the aerial and ground to see whether the noise persists with volume on full and shaking or jarring the cabinet. If not, the aerial and ground should be carefully examined for looseness and foreign contacts.

Voltage Regulator

I am anxious to procure a good voltage regulator that will build subnormal voltages up to normal as well as keep abnormal voltages down to the proper levet. I am told that regulators are simply fixed resistances for holding high voltages down, but I wish to keep low voltages up since I understand they prevent good radio reception.

Voltage regulators cannot "step up" low voltages to normal levels. Only a transformer can do that. Regulators will prevent too high voltages from entering the receiver by choking the potential down to a steady and fixed amount. When the voltage drops too far the regulator must go to the same level. Try a ballast tube in the a. c. line to your set as it will tend to steady the fluctuations in the power supply. These are sold by type number -76.

Set Whistles on Higher Frequencies

My Atwater Kent 55 receiver brings in stations with nice volume between 1000 and 1500 kilocycles, but as soon as I try to increase the volume the set has a peculiar whistling sound and I sometimes cannot even hear the station. Stations that come in from 550 to 1000 kilocycles do not whistle when the volume is turned up too high. How can I correct this annoyance?

Excessive screen-grid voltages on types -24 and -35 tubes will break into selfoscillation at times. Volume is controlled on this set by means of the screen-grid voltage, and indicates the cause of the trouble. We suggest that you connect a 50,000 ohm resistor from the common screen terminal of the tubes to ground to act as a bleeder, and this should reduce the maximum screen-grid voltage sufficiently to stop the whistling. A 10,000 ohm series resistor in the common screen lead might also remedy the trouble.

Stations are considerably crowded in the frequency limits you mention and there is always present much local heterodyning which tends to cause whistling and mushy sounding broadcasts. If this is your trouble there is little liklihood of obtaining relief within the receiver.

Mixing Tubes

I would like to know whether I can use the -32 two-volt tube in my Pilot Super-Wasp receiver instead of the -22 I am now using with the -30 types.

We do not see how you are connecting a -22 screen grid 6-volt tube in with additional -30 2-volt tubes in your set, unless it is wired especially for that purpose. Certainly you can, and should, use the -32 screen-grid two-volt tube in connection with other two-volt tubes of the -30 type. Approximately the same B battery and C grid bias is used. We assume, however, that your set is d. c. or battery operated, and you will use the Air-Cell or equivalent battery on the filaments of the -30 series tubes.

Locating Tubes in Radiola 60

Having purchased a converter to use with my Radiola 60 superheterodyne receiver I find from the instructions that the first radio-frequency tube and first detector tubes must be located. Can you assist me?

Looking down on the set from the front the row of tubes reads, from left to right: audio frequency -71A, second detector -27, oscillator -27, second intermediate frequency -27, first intermediate frequency -27, first detector -27, and second radio frequency -27. At the right, in a separate group, the line tube in front is the first radio-frequency -27.

Not knowing the type of converter you propose to use, we cannot give much advice. However, most converters connect directly to the antenna and ground connections on the chassis of the superheterodyne receiver and it is not necessary to know the different tubes. In your case be careful in making connections that plate voltages do not conflict and cause serious damage within the set.

Microphone with Philco 70

I have connected a microphone to my Philco 70 receiver, but after removing a cap from the top of a tube and connecting



This is Myrt's lawyer, "Jack Arnold," otherwise Vinton Harworth, leading man for Myrt and Marge, Columbia feature.

the mike the set hums and the microphone does not work. What is the best way to make the connection?

The hum was caused when you broke the grid connection to the tube. Replace the connection cap and remove the microphone. In the first place a microphone cannot be used without an output audio frequency transformer. Procure one and connect the microphone in series with the primary winding with about two dry cells to provide the exciting voltage that is necessary. The two wires leading from the secondary of the a. f. transformer should be connected to the grid of the -47 pentode tube *after* the existing connection is removed or opened electrically, and to the ground. A C bias from a temporary $22\frac{1}{2}$ volt C battery may be necessary.

Battery Operated Short Wave Converter

My radio set is a R. C. A. Victor R-43 and is operated on the 2-volt Air-Cell battery. Can I use a short-wave converter on this set, and what is the best one to purchase for the purpose?

Most of the best short-wave converters for use in connection with superheterodyne receivers are a. c. operated, and we are not familiar with suitable devices for battery operation. So, in this connection, we suggest you correspond with some of the well-known makers, listed in a recent issue of RADEX, or write to the Pilot Manufacturing Company. Mass., who specialize in Lawrence, short-wave work. It may be they can easily rebuild an a. c. converter for use with 2-volt tubes at no extra cost to you. The converter can be used with your set and should give good results for the usual a. c. noise that is present in the superheterodyne and converter is absent. Short wave reception on battery sets is far and away the best.

Realigning Tuning Condensers of Receiver

I bought a General Electric model H-31 receiver second-hand but it was out of alignment. When I turn in small set screws in the plates of small adjustments beside the large tuning condensers it brings in different stations. How can I make the proper adjustments and get all the stations I should be hearing?

The gang condenser in this set has four large tuning units on a shaft, and connected across each is a tiny compensating or trimming condenser for adjusting critically the irregularities in the large condensers. If possible tune your set to a station that is broadcasting on 1500 kilocycles so that the dial can be set at zero or 1500 depending upon the scale used. In this case the rotor plates of the gang condenser should be out as far as possible. With a wooden stick shaped like a screw-driver turn the adjusting screws in the trimmer condensers until the faint distant station being heard comes in loudest, and its tuning is sharp and selective. Turn the condensers full way in and tune to another station around 500 k. c. if possible. The dial should read 100 or almost 550 according to the scale. Readjust the trimmers for the final test.

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	for which send me postpaid my choice of your	offers
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🗇 Leatherette Cover		.50
	Write Name Plainly	
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60	City and State	

FINAL MEETING of the DXERS

BEFORE this Department goes into moth-balls for the summer, we will look over some of the last-minute reports. Then we will begin to get ready for a bigger and better season next fall. With the improvement in sets and tubes and the introduction of all wave receivers and short-wave converters, the next season ought to be a corker. Let us have some of your best records of the summer for the September issue which, bear in mind, goes to press on August 5th.

And remember our new short wave department and send in some good chatty letters about your experiences in the high frequencies.

From Two Tubes to Eleven

"I've been playing around with radio about eight years (off and on) and while I haven't set the world on fire by catching all stations on the air, I have managed to log 385 stations to date," reports A. O. Young, Box 506 Heights Station, Houston, Texas. "I hunted DX with a two-tube, home-made, three-circuit receiver from 1925 to 1927. With said receiver I logged 225 stations in that time. CNRV, at Vancouver, was my best catch on that receiver. Until about six months ago I practically quit listening to anything but local programs. I was away from home so much that I did not have time to do any radioing. However, at that time I regained my interest and bought a Midwest 11-tube superheterodyne. My best catches with it have been KPCB, KGCX, KXRO and KFXD. I was able to verify all of those except KXRO. I have not confined all of my time to the broadcast band or I might have had a larger log and more verifications. In the past six months I have passed the amateur examination and put my own amateur station on the air under the call of W5BDI. The real fun in hunting DX is when you can talk to the party on the other end."

From Newfoundland

"I have stations in nearly every state of the U. S. A., California, New Mexico, Texas, Kansas, and everything worth-

Last Reports for the Summer

while in the central and eastern states. also Cuba and Mexico. I also received regularly during the past winter four stations in England, two in France, one in Germany and one in Rome," reports A. L. Hynes, Clarenville, Newfoundland, "I don't know if any readers can better a list all the way from California to Italy. I think that about all the stations. I get, except two or three locals, some readers would call DX stations, if they had to cover the distance I have to get them in. I have a perfect locality for radio. The nearest receiver or electric power of any kind is a half mile from me. I use a 2-volt battery set (superheterodyne) and nothing to interfere except static."

Gets Moose Jaw in St. Louis

"In reply to Mr. J. J. Barlow, Berkeley, Calif.," writes R. E. Von Doersten,



A former newspaper reporter, Jean Sargeant is now a star herself. With Ziegfeld on the Columbia, Sundays at 10:30 p.m., EDST.

5431 Goethe Ave., St. Louis, Mo., "I also have an Apex 6-tube and rectifier neutrodyne set, which I purchased about three years ago, and it also tunes quite broad. But despite this trouble, I have managed to log 347 stations, including 33 west coast; a 100-watter in Washington; KGU, Honolulu; VAS, Nova Scotia; WKAQ, Porto Rico; 10AB, Moose Jaw; a 25-watt, from which I have verifications, besides I have logged 13 other Canadians, 7 Cubans and 17 Mexicans, which I think is a pretty good record for this type set."

Some Good Reports

received another Australian "I've since my last letter," reports Earl R. Roberts, 712 South 9th St., Cambridge, Ohio, "It's 2FC, Sydney, on exactly 665 kcs. On the morning of February 15th, static was hardly noticeable and I could tune in 4QG on 765 at any time from 5:15 to 6:30 a.m. My verification from RUS finally came after waiting ten weeks. A card from KZRM, Manila, state they use 50 kw. not 1000 watts. Last Tuesday I logged KDFN, completing my 48 states. I got them on a tenminute frequency check. Is there a German station that broadcasts on exactly 854 or 855 kcs.? At 4:15 this a.m. I had a station with a fairly good signal."

"I have been DXing for eight years," writes W. J. Ray, 5811 College Ave., Oakland, Calif. "Up until last summer I used a one-tube job of my own build. To date I have logged 103 station on it The set I use the most now is a Model 62, 6-tube Jackson-Bell midget. My total log to date is 172 stations, with six unidentified. I have 80 stations verified. Here's how it runs: 166 stations, on 87 channels, in 32 states, from 7 countries, and with 29 foreign stations. This is through 17 locals. The foreigners include 10 in Japan, one in Australia, 9 in Canada, 6 in Mexico, 2 in Hawaii, and on in Haiti."

DXing in Hawaii

"Greetings from Hawaii," writes Miss Goldie Charlock, P. O. Box 804, Hilo, Hawaii. "I have been a steady reader of RADEX for the past six months and find it a great help in my DXing. I have a log of 141 stations, with 74 of them verified. I own a Model 50 RCA receiver and use a copper plate, buried in the ground about four feet, for my ground. My antenna is about 100 feet long and 50 feet high, running north and south. For the benefit of those interested, KGU and KGMB are on the air every day until 11 p.m. Hawaiian time."

"Five weeks ago I purchased a 5-tube Echophone (Marconi) and in that space of time have logged 180 stations in every part of the country, California, Oregon, Mexico, Cuba, etc.," reports K. P., Williamson, 1610 Sherbrooke St., West, Montreal, Que., Can. "My best catch is CMAB, Pinar Del Rio, Cuba, a 20watter. Following a suggestion given in your April issue, I have been operating with just a ground wire attached to my aerial post and have had remarkable results."

"My log up to date is 400 stations, which I logged in the past two years," writes Fred Wageman, 6141 Logan Ave., Havelock, Neb. "My radio is a 9-tube Sparton. My best and longest catch is Ketchikan, Alaska, and I have fifty 50-watters, of which the two best are Vancouver and Birmingham, Ala. I have 42 states and every frequency but one. My aerial is 410 feet long and I have three grounds, one a well pipe 42 feet deep."

New Zealand in North Dakota

"To date I have received 482 stations, having verifications from 50-watt stations from Cuba to Vancouver, B. C.," reports Trygre Njaa, Box 67. Hillsboro, No. Dak. "I DX with a one-tube and have been using it since January 2, 1931. It is very sensitive and have received 2YA, New Zealand, with it. I was the most distant listener on two broadcasts from WHBC, the 10-watt station of Canton, Ohio. These DX broadcasts were on March 7th and 25th, 1932."

"Since December 12th, when I bought a ten-tube Crosley 'Tenstrike,' I have received 181 stations," writes Wilson Forbes, 100 Ashley Road, Santa Barbara, Calif. "My radio has wonderful selectivity. I can tune in WSM, Nashville, on 650 kcs., with little trace of KFI on 640 kcs. and only 90 miles away. I have also received CMK when XER was on the air; also WSB. During the winter JOIK and JOHK came in with good volume."

A Bunch of Reports

Says Sidney Fuller, 1600 Queen St., West, Toronto. Ont.:"I haven't had much chance at DXing so that so far I have only 171 stations. In the last week I got three stations below the 1500 band —two of these are police, WRDS and WKDT, but the last is an experimental station with two calls, W3XK and W3XJ. Can anyone give me the location of the last named?" These calls are assigned to the Jenkins Laboratories at Silver Springs, Maryland.

"Well, my list is climbing upward," reports Joseph H. Ronzone, 1847 Narragansett Ave., Bronx Heights, N. Y. "I have now logged 347 stations, which include 83 of 100 watts power and under, 12 West Coast stations, 43 states, 10 stations in Mexico, and 19 stations in Cuba. Practically all stations are verified to date, that is, with the exception of stations within a radius of 50 miles from my home."

"My log now consists of 293 stations in nine months of DXing." writes R. C. Heyd, 1244 East 146th St., East Cleveland, Ohio. "These have been brought in over a loudspeaker with a Radiotrope 9-tube Neutrodyne set (no pentode tubes either). My log includes 22 Canadian, 5 Cuban, 11 Mexican, and 15 California stations. I recently caught CHGS, Summerside, P. E. I., which is a 100watter."

"We have an old Radiola 18 which our dealer said might bring in 75 stations, but which has brought in 170 to date. This includes JOGK, CMK, CFCN, WTIC, and four New York stations. We would like to hear from anyone with a similar set who has been getting as good or better results." This is the report of Frank W. Edlin and R. R. Miller, The Deane School, Santa Barbara, Calif.

"I am now using a Philco Model 90, and am having a great time DXing with a good set," comments John J. Barlow, 2803 Woolsey St., Berkeley, Calif. "Here are my records: I have had my new Philco exactly four weeks and have only once DXed in the arly morning. I have a total of 138 stations; 4 of these are in Canada, 5 in Japan, and 6 in Mexico; the rest are from 34 states."

Frank Wheeler, 406 Eagle Point, Lakeside, Erie, Pa., now has a total of 354 stations including several Cubans, Mexicans and VAS. He quotes time on the air for CHGS, P. E. I., as follows: Daily, 10 a.m. to 2 p.m. and 3:45 to 9 p.m.; Sundays 11 a.m. to 12:15 p.m. and 2:30 p.m. to 8:15 p.m, Special DX 2:30 a.m. to 3:30 a.m. the first Sunday morning of each month. All time given in Eastern Daylight.

"Five weeks ago I got a Crosley fivetube 'Litlfella' and using the set in Jacksonville, Florida, I have logged 175 stations," reorts George H. Baldwin, Jr., of the Taft School, Watertown, Conn.



"A small town boy who made good in the city," Don Ameche, of Kenosha, Wis., "Beau Bachelor," on the Columbia, Fridays, 10 p.m., EDST.

"I brought in the ten-watter WNBW, Carbondale, Pa., twice at about 3:00 a.m. KELW, 500 watts, Burbank, Calif., comes in well any night after 11:00 p.m. I have at least one station on every one of the bands."

"My trans-Pacific record reads: All Japanese on long wave but two, with JOAK coming in twice; KERM,[§]Manila, P. I.; KGU and KGMB, in Honolulu; 2XA in New Zealand; 2AR, 4QG and 3LO in Australia," reports R. M. Ballard, Visolia, Calif. "My set is a Majestic Model 52."

"Using a 9-tube Atwater Kent superheterodyne, I have logged 502 stations since November 18, 1931. Have 14 verifications over 2000 miles; TJW, 7.5 watts, two 10-watters, 15 50-watters and 113 100-watters, every state except Wyoming and Nevada," comments Chester W. Sinclair, 8 Swan St., Beverly, Mass.

76 on the Short Waves

"In about four months, with a Philco 9-tube Baby Grand, I have pulled in 350 stations, DXing just Saturday and Sunday mornings," says J. Kenneth Loudon, P. O. Box 523, Orangeville, Ont. "For one week I had a Philco short-wave hooked up with the receiver, and with the combination pulled in 76 short-wave stations."

"My log to date consists of 610 stations, verified specifically by card or letter," writes S. R. Lewis, Rt. 3, Box 688-A, Toledo, Ohio. "77 of these are west coast stations. About 250 are 100 watts or less. I have 26 states completely verified. I have every state, with some stations verified, and every province in Canada."

"I often read of the number of stations some fans secure and from some of them I feel that my record is not bad, although I am after more. Since Christmas last I tuned in 186 stations. My best catch so far is KPCB, a 100-watter at Seattle," says L. J. Schilling, 2717 DeKalb St., St. Louis, Mo.

"I am a Dx fan of five years' standing," reports Frank Garton, Ridgetown, Ont., "and in the last three I have logged 613 stations." Mr. Garton urges readers to go after 10AB, Moose Jaw, Sask., which is officially listed at 1200 kcys., but uses 1190 on DX and may be found anywhere between these two channels.

"My log is now at 358 but if I added the results of the family radio, I would have over 500," comments George B. Holland, Jr., 1340 Baker Ave., Schenectady, N. Y. "KFOX comes in great at 6:00 a.m. KGPL, the Los Angeles police station, 500 watts on 1712, comes in good until 6:30 in the morning." "I now have 312 stations with 165 verifications including XEN, XEW, CMX and many Canadian and West Coast," reports James N. Adams, 1118 W. Illinois St., Urbana, Ill. "My DXing is limited to vacations as I am attending the University of Illinois here in Urbana."

Jos. Nuszkowski, 2319 South Sacremento Ave., Chicago, Ill., sends us his log of 306 stations from 39 states and five foreign countries. His goal is 500 stations. This is mighty fine work for Chicago with all the locals they have going in that town. Joseph has a Kennedy 8-tube set and uses 150 feet of inside antenna.

"Perhaps you might be interested in my list of stations obtained on a onetube (peanut) set which I built myself," suggests Bill McPherson, 134 Murray St., Peterborough, Ont. "I have received 82 stations, which includes eight amateur and five police stations. It isn't much, but serves as a foundation to build on."

Getting East in the West

"I've noticed listings of West Coast 100-watters received by listeners on the East Coast," says Stanley Savage, Route 4, Spokane, Wash. "I've logged a few East Coast 100-watters. The best one is WMBR, Tampa, Fla., received two weeks ago. Also WJTL, Atlanta, Ga.; WKBC, Birmingham, Ala.; WLBX, New York, and CMBG in Havana, 150 watts."

"I have a 5-tube battery set, Atwater Kent Model 20, and have logged 338 stations," says Joseph Walters, Highland Park, Tenn. "I listened to XED one morning from 7 to 8 CST, and to KFI at 7:45 p.m. CST."

"I operate an 11-tube Philco superheterodyne and have succeeded in pulling in a total of 230 stations so far and going strong for more," says H. A. Hefflefinger, 44 Parker St., Carlisle, Pa. Mr. Hefflefinger would like to hear from some of the DXers.

"I have a log of 512 stations, including 22 on the Pacific coast, 13 in Mexico, 18 in Cuba and 32 in Canada, along with HHK and WKAQ. Not so bad, not so good?" says H. R. Hosking, 181 No. 17th St., East Orange, N. J.

This report comes from Walter W.

Oschmann, 838 Willow St., Scranton, Pa.: "I own an 8-tube Lafayette and have had it just one year; have logged 378 stations with all doubtful ones verified. Some of my best are KFXD, CMBR, XEG, KRMD and KFVD."

Edwin F. Dreher, P. O. Box C-1, Hayward, Calif., expects to move to San Diego next Autumn and is anxious to hear from DXers in that city as to radio conditions there. Will some of our readers in San Diego communicate with Mr. Dreher?

F. Martyn, 695 Nassau St., Winnipeg, Man., has a total of 300 stations with 115 verified including six from Europe, all on a b. c. receiver.

Some DX Tips

A tip and a query from R. V. Heinzelmann, 880 Grosvenor Ave., Winnipeg. Man.: "Station WEXL says they are on Sunday nights, midnight to 2:00 a.m. EST. Address letters to Harvey Morrison, Pastor of the Tabernacle, Hazel Park, Royal Oak, Mich. Can you help me with this one? On Wednesday, March 23, between 11:00 and 11:30 p.m. CST. I heard a station on 1220 broadcasting code signals. Every little while this would stop and a man would make a little speech. Once he spelled something. I think he was giving lessons in Morse code. Although it was quite loud, I couldn't hear what he said because of WREN."

"Well here's a little dope," reports John M. Lennon, 122 Linden St., Camden, N. J. "According to a verification sent to me by WOPI they will broadcast their next DX program on June 15, 1932, from 2 to 6 a.m. EST. They said they had been received as far as British Columbia. Has anyone received a verification from WFAB, New York? I have not received any reply to my letter yet. CKNC, Toronto, is on from 8 a.m. to 11:15 p.m., EST, daily. WINS, Nèw York, may be heard at 6:45 a.m., EST, by the early birds."

Santo Domingo and South Africa

"Here's a bit of information from station HIX, Santo Domingo," informs Chas. A. Perdicaro, 75 Berry St., Brooklyn, N. Y. They broadcast on 475 meters, power 1 kw., regular concerts on Tuesdays and Fridays, from 8:10 p.m. EST. WFAB operates from 12 to 3 p.m. daily; returns to the air at 9 p.m., except Fridays and Sundays. Polish hour, 12 to 1 p.m.; Jewish, 1-2 p.m.; German, 2-3 p.m."

"Here's an official schedule of a real DX station: ZTD, Durban, South Africa, 731 kcys., 1500 watts: Daily from 5:30 7:30 a.m.; 9-10:45 a.m., and 12-3 p.m., EST." reports Ralph H. Schiller, Transcontinental DX Club, Hawthorne, N. J. "One of our members has tuned in ZTD and received verification from them, and schedule as listed is from the letter they sent."

"In the May issue, Miss M. Stannard asked where the 'Four Horsemen' were coming from." says Mrs. Robert Mc-Grath. 14488 Faircrest St., Detroit. "They are a daily feature known as the 'Sunshine Express' from WXYZ, 1240 kcs., Detroit. Their time is 5 p.m. EST. They are not on a network." Mrs. Mc-Grath adds: "My husband is a DXer, having logged over 300 stations in the year and a half we have had our Majestic Superheterodyne No. 52 and a Philco short-wave converter. May 1st at 4:15 EST, we had a station at 13,300 kcs. whose program was in German, and we understood the call letters to be DIQ. Can any other readers identify this for us?" While the letter D is assigned to Germany, few if any of the German stations use their call letters but only the name of the city. We do not find any stations in that country with a frequency as high as 13,000, but perhaps some of our DXers can identify it. Mrs. McGrath does not state whether this station was received in the a.m. or p.m.

Another German

"At 1:45 p.m. EDST, Thursday, April 28th, I heard a station broadcasting on (or near) 8800 kcys. (in 30 m. band)," reports Chester B. Lovering, Jr., Box 304, Duxbury, Mass. "The announcer at first was a woman speaking German. Then, at 1:50 p.m. a man spoke for a few minutes in German also. A friend who speaks some German, translated the following: '- perfect if it were not so noisy.' Following that, I made out the German equivalent of 'frequency.' Finally, with 'Auf Wiedersein,' the carrier was turned off. Time 1:55 p.m. EDST. Can you help me in locating the station call, positive, frequency (exact), and operating hours? The set I used at the time was a new '32 Pilot Dragon 6-tube super-het. Antenna 60 feet."

What Jap was This?

"In this afternoon's mail I received one of my verifications from Japan, JOCK, in Nagoya, pronounced Chuo-Hoso Kyoku, according to the verification. The station is owned by the Nagoya Central Broadcasting Company," reports Glenn Anderson, 5640 So. Jay St., Tacoma, Wash. "On March 26th I received another Japanese station. This one was coming in fine on 800 kcys. I listened to their program from 1:15 a.m. until 1:50 a.m. PST. All they did was talk. According to the April RADEX there is no such Japanese station. I would like to know what this station is."

And One from Mexico

"I wonder whether you could identify a station for me," inquires Harold S. Rubens, 235 Atlantic Ave., Winnipeg, Man. "On the morning of February 7, 1932. on 630 kcvs., at 1:45 CST I picked up a program which ran as follows: A woman was singing in what seemed to be Mexican, accompanied by a piano. Then the announcer spelled out a word, part of which seemed to be d-i-e-n-s-t. Then mentioned the word in English, 'everybody.' Then made an announcement in Mexican, then signed off at 1:50 a.m. I thought it might be XETF, but they sent me a card saying they signed off at 11 p.m. CST. So please, who was it?"

"For the last four Sundays I've been listening to a very weak station on or about 1280 kcys., with a program from the Silver Slipper Cafe, also mentioned 110 Market Street. Listened from 3:13 a.m. EST, April 3rd, till 3:55 a.m., when they signed off. Can you give me any help in identifying this station?" asks John C. Streiter, 66 Montague Place, Montclair, N. J.

"At 3 a.m. EST Wednesday, April 13th, I received a station announced as WLAC, Louisville, Ky., operating on 1010 kcys., by authority of the Federal Radio Commission," reports Edward L.

Walters, 3325 Grove St., Roanoke, Va. "WLAC is supposed to be in Nashville, Tenn., and operate on 1470 kcys. How did this station get the same call letters?"

"Here's a cry for help," SOS's John M. Lennon, 122 Linden St., Camden, N. J. "Can anyone tell me what station I heard on Sunday, May 1, 1932, at about 6:07 a.m. EDST, playing 'Drifting and Dreaming,' on 845 or 850 kcys.? Thanks. RADEX is getting better (if it's possible) with every issue."

"This morning about 10:30," writes Harvey Reid, 371 Willard Ave., Toronto, Ont., "I received 3AB, Toronto, testing on a wave length of about 1190 kcys. I was told it is an amateur phone station, but I thought they only used shortwaves? Could you tell me its owner, power and where the owner lives?"

Who can tell us whether KGEF, 1300 kcs., Los Angeles and KGMP, 1210 kcs., Elk City, Okla., are still on the air or not? Another question, do WENR and WLS use the same transmitter?

"Auf Wiedersehn, my dear."

With the Editor

Continued from page 14

tion," methods of making ground connections are described and it may be this ground was thus given. Be that as it may, many readers of this magazine have installed this ground with most satisfactory results and the description is given again in answer to many requests: Dig a hole in the ground one foot deep and one foot square, away from all buried pipes; place in that hole five pounds of rock salt; turn a hose on it until it dissolves; drive an eight-foot rod or pipe through the center of the hole. In sections where there is little moisture in the earth, use four of these grounds six feet apart and connect all together.

Some Answers to Queries

"Eugene Martin is correct about the difference in power of WBAP and WFAA," confirms W. B. Payne, 511 N. 28th St., Richmond, Va. "I have checked his statement of changeover and strength of signals. . . If W. B. Brown, of Washington, D. C., will write to XED and address his letters to Station XED, International Broadcasting Co., American Office, Hidalgo, Texas, I am sure he will receive a reply. . . As American stations do not announce in Spanish, F. Rouse of Albany, ought not to expect Mexican and Cubans to announce in English. . . . Two or three months ago an NBC program was broadcast from WSM-a Saturday night barn-dance. Perhaps it was this program Mr. Rouse heard and hence the announcement of WSM on 1070 and 1460. . . . D. G. Powers probably picked up WRUF on 820 or CKGW on 840, for I heard CKGW with a Columbia program in either February or March."

Offers Help with WODA

"About WODA-there is something queer there," comments Roy Cattell. R. F. D. 2, Paterson, N. J. "Everybody connected with the station is very nice and they have never failed to fill out verification requests for me. If any of your large body of readers need a WODA verification, tell him to send the most recent data he can get together with return postage or ten cents for a stamp to me and I will be pleased to help anyone I can. I just recently received verification from KGFL, KGIX and JOBK and 10AB in Moose Jaw. JOBK is my fourth Jap verie-two are out yet. Every state verified now. It is said that WHEB in New Hampshire will come on about June 15th. I have found that in summer it is possible to get stations verified easily that were consistent holdouts in winter. One reason is the greatly reduced mail which gives the clerical force more time for answering."

"Having received a total of 451 stations, including 3 South American, 23 Cuban, 15 Mexican, 1 Porto Rican, and 1 Hawaiian, I feel entitled to express my views concerning the aerial problem of radio reception," writes Frank E. Switalski, 2819 Victoria Ave., Cincinnati, Ohio. "I find that my 5-tube Webber midget works best without a ground and with an indoor aerial. The latter consists of shielded-insultated wire running 35 feet across the attic. The wire runs directly to the aerial post and has no splices. The shielding is ungrounded and does not touch the aerial. This hookup gives plenty of volume with less static, and it separates the stations considerably. With a 100-foot outside aerial, the set has more volume, but the separation is poor and static is terrific."

Defends CMCY

"I note in the DX department of April RADEX (DXers Bible) that Mr. P. E. Donnelly, of Los Angeles, warns readers of RADEX not to send recention reports to CMCY, Havana, Cuba," writes Murray C. Hanlan, 212 Bird Lane. Clarksburg, W. Va., "I am sure that Mr. Donnelly is mistaken in this. I reported the program named by Mr. Donnelly and received a very nice personal letter of verification from the station's owner. Mr. M. D. Autran, Calle G. No. 215, Vedado, Havana, Cuba. I am sure Mr. Autran will send a verification to all who send in correct reports of reception of CMCY."

"The only station in this country which has failed to verify for me, even when postage was sent, is KGHL, at Billings, Mont.," states F. L. Pendell, 321 Schenectady St., Schenectady, N. Y. "I find some stations are very slow in answering, some taking more than a month to reply, but I think if the DXer will exercise as much patience in waiting for replies as he does in angling for distant programs, he will finally be rewarded by receiving the desired verifications. I note particularly on early morning and special DX programs, verifications are much slower in coming due, undoubtedly to the great numbers who receive these special tests."

"How's this for selectivity?" asks Harold M. Wheeler, 410 Marston Ave., Madison, Wis. "I use a Philco Model 112 (11 tubes). I pick up CKAC, Montreal, XER, Villa Acuna, and WSB, Atlanta, all five kilocycles apart every night. But better yet KFI, Los Angeles, 640 kcys., CKCR, Waterloo, Ont., 645 kcys., and KPCB, Seattle, 650 kcys., at the same time, and have verifications from all three. The latter two use only 100 watts."

"Radio is a funny thing, as we all know," comments Karl B. Huben, 936 Phoenix St., St. Haven, Mich., "I have had 535 stations, still it took me all winter to bring in a 1000-watter on the coast, namely, KFAC, the Auburn distributor's station at Los Angeles. Many 500 and 1000-watt stations in Oregon and Washington simply cannot be brought in, at least by me, and yet KPCB at Seattle, at times, comes in like it was shooting with at least 5000 watts. Well, that's DXing, and just what makes it so much fun, just the same uncertainty which makes baseball our national pastime."

Aerials and Grounds

Continued from page 3

congested city locations and about 75 feet in the open or rural sections. Lengths up to 150 feet are not recommended for a single receiver. The antenna should swing clear of the roof by not less than 10 feet. These lengths will be found also adequate for short wave reception." The Jenkins Laboratory, a leader in the field of television, stated: "An antenna from 70 to 100 feet in length is sufficient for any radio reception, including television, but we had some good results on an aerial about 200 feet long. Television needs the maximum signal energy, and no small aerial will do this. The ground is not essential, however, and a tiny condenser can be used in series with the aerial."

Now let us consider the ground connection, for it is of prime importance. The broadcasting station emits two waves. The sky wave is propagated aloft until it strikes the distant Heaviside ionized regions and is reflected back to earth. This wave travels farther at night than it does in daylight. The ground wave runs along the earth but soon dies out. But it sometimes travels farther during daylight than the associated sky wave. Radio sets, therefore, need both a ground and aerial during daylight hours. and often the former will bring in more stations than the aerial. After dark, however, the aerial is of greater importance, and frequently functions perfectly without a ground connection. Long wave and broadcast band reception require a good ground, but short wave reception can be carried on without a ground connection.

In general, the use of a ground to a cold-water pipe is universally recommended. There may be some slight objection to this on account of the fact that other electrical appliances may be connected to the same pipe. The Radio Corporation engineers report they have never found any large amount of trouble which they could trace directly to such a source. They advise that the coldwater pipe is the easiest source of ground connection and is likely to be in perfect contact with the earth. It is more important that a good solid connection be made to the pipe itself than that some special form of ground other than a pipe be used.

Recommends Separate Ground

On the other hand, one high official scientist recommends a separate ground when possible. Unfortunately, in most cases the only ground available is the cold-water pipe. This recommendation is that since any ground connection of considerable length is apt to pick up annoying disturbances in congested areas and apartment houses, it is best to run a separate ground wire in a shielded and grounded covering to some individual grounded object. It will be safe, in this case, to connect to the cold-water pipe at the point where it immediately enters the house or cellar. This will be better than connecting to the pipe on some upper floor. The general recommendation, however, is to ground always to a cold-water pipe instead of a radiator or steam main, gas line, or electric wiring conduit. Scrape and clean the pipe and use a regulation ground clamp to which is soldered a No. 14 copper wire.

When water pipes are not available it will be necessary to bury large sheets of copper plate on edge at least six feet beneath the surface in a moist spot. Or several new pipes may be driven down six or eight feet and all soldered together with a copper wire. In dry and arid regions an antenna counterpoise consisting of three or four lengths of copper wire may be laid out on the ground radiating like spokes of a wheel about 75 feet from a central point.

Frequently the marked difference of opinion on the subject of antenna and

ground connections for radio reception is very likely due to the fact that different local conditions and reception requirements make very considerable differences in the actions of antenna and ground systems. If a definite standard were to be adopted it would be found that the results obtained in two separate localities might vary considerably. But these variations are largely due to the external conditions over which man has little or no control.

A Doubting Thomas

Continued from page 6

Caddell writes: "Incidentally I owe my success to RADEX for it was in the February, 1931, edition, on page 11, that I learned of the simple wrinkle of changing the wiring of the R. C. A. 60 to use 245 power tube in place of the 171-A. Then to use a pentode tube all I had to do was to buy an adapter and I now have, I think, one of the most sensitive sets in the country-thanks to RADEX. I have had many fancy offers from local DXers for my set but I have had it so long that I kind of hate to part with the 'old heap.' "

"Another feature of my set is the astounding 5 kc. selectivity I get even on KDKA and other local stations, even when I switch on my 600-foot aerial."

So, cheer up, DXers. If you haven't the very latest model, for so far as sets are concerned, you can see that with even some of the old-timers, it is possible to bring in the whole world.

Joe Palooka

Continued from page 18

theatre is a summer camp on an island in the middle of a twelve-mile lake in the Berkshires. The script of "Joe Palooka," produced by Ham Fisher, the comicstrip creator, and Georgia Backus, is unusual in radio episodes in that each act creates a complete situation and builds up to a separate climax.

The 15-minute sketch can be heard Tuesdays and Thursdays at 6:45 p.m. EDST over the Columbia system, and for far western audiences, at 11 p.m. EDST.

Classified Index to Programs

Time in Eastern Daylight Standard

CHILDREN

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

CONCERTS

- Artists' Service Musicale, 10:30 p.m., Wednesday, R.
- Howard Barlow, 11:15 p.m., Tuesday and Thursday, C. Major Bowes, 11:30 a.m., Sunday, R.
- Cities Service, 8 p.m., Friday, R.

Civic Concerts Service, 8:15 p.m., Saturday, R.

Gauchos, 11 p.m., Sunday, C. Gay Vienna, 9:00 p.m., Tuesday, R. L'Heure Exquise, 9:45 p.m., Sunday, R. Little Musicale, 8:30 p.m., Tuesday, B.

- Little Musicale, 8:30 p.m., Tuceday, B. Walter Logan, 1:30 p.m., Sunday, R. Mobiloil, 9:30 p.m., Wednesday, R. Orchestra Gems, 7:30 p.m., Sunday, R. Pastorale, 5 p.m., Sunday, C. Quiet Harmonies, 6 p.m., Sunday, C. Road to Romany, 5:30 p.m., Sunday, B. Rochester Civic Orchestra, 11:15 p.m., Wednesday, B.

DANCE BANDS

- Gus Arnheim, 12 mid., Friday, C.
- Ben Bernie, 9 p.m., Tuesday, C. Cab Calloway, 11:30 p.m., Tuesday, R; 12 m., Wednesday and Friday, B.
- Ted Cook, 11:30 p.m., Sunday, B. Coon-Sanders, 12 mid., Sunday, C
- Countess d'Orsay, 8:30 p.m., Saturday, B.

- Jack Denny, 9 p.m., Sunday, C. Eddie Duchin, 11:30 p.m., Sunday, C. Snooks Friedman, 6:30 p.m., Friday, C. Larry, Funk, 12:30 a.m., Sunday and Monday; 6:45 p.m.,
- Friday, R. Geo. Hall, 6:30 p.m., Monday, C.

- Geo. Hall, 6:30 p.m., Monday, C. Hal Komp, 11:30 p.m., Thursday, B. Wayne King, 3 p.m., Sunday; 5:30 p.m., Wed., R. Guy Lombardo, 9 p.m., Wednesday, C. Vincent Lopez, 11:15 p.m., Mon., Wed. and Fri., R. Abe Lyman, 8:15 p.m., Mon., Wed, and Fri., R. George Olsen, 9:30 p.m., Monday and Wednesday, B. Jack Pettis, 12:05 a.m., Tues., Thur. and Fri.; 11:30 p.m., Saturday, B. Saturday, R.
- Don Redman, 12 mid., Mon. and Thurs., 11:45 p.m., Friday, C. Harry Reser, 11:15 p.m., Thursday, R.; 11:30 p.m., Rriday
- Harry Reser, 11:15 p.m., 11ursuay, R., 11:00 p.m., and Saturday, B. Buddy Rogers, 12 mid., Mon., Wed. and Sat., R. B. A. Rolfe, 8:30 p.m., Thursday and Friday, B. Noble Sissie, 11:45 p.m., Monday and Thursday, C. Paul Speeht, 12 mid., Saturday, C. Wm. Stoeses, 12 mid., Sunday, B. Rudy Vallee, 8 p.m., Thursday, R. Paul Whiteman, 10 n.m., Friday, B.

- Paul Whiteman, 10 p.m., Friday, B.

DIALOG

- Amos 'n' Andy, 7 and 11 p.m., Daily, except Sunday, B. Big Time, 8 p.m., Wednesday, R. Burns and Allen, 9 p.m., Wednesday, C. Clara, Lu and Em, 10:15 a.m., Daily, ex. Sat. and Sun., B. Easy Aces, 7:30 p.m., Monday, Wednesday and Friday, C. Gene and Glenn, 8 a.m., Daily, except Sunday, R. Goldbergs, 7:45 p.m., Daily, except Sunday, R. Jones and Hare, 7:45 p.m., and 12:30 a.m., Daily, except Saturday and Sunday, B. Making Movies, 9:45 p.m., Sunday, B.
- Myrt and Marge, 7 and 10:45 p.m., Daily, except Saturday Myrt and Marge, 7 and 10:45 p.m., Dany, except Satur and Sunday, C. Opry House, 11:15 p.m., Tuesday, R. Joe Palooka, 6:45 and 11 p.m., Tues, and Thurs., C. Ray Perkins, 6:30 p.m., Tuesday, B. Ries & Dunn, 6:15 p.m., Tuesday and Thursday, C. Sisters of Skillet, 8:45 p.m., Tues, Thurs, and Fri., B. Snoop and Peep. 10:15 p.m., Saturday, B. Standing Room Only, 8:15 p.m., Sunday, B.

Stebbins Boys, 7:30 p.m., Daily, except Sat. and Sun., B. Col. Stoopnagle and Budd, 8:45 p.m., Sunday, Monday and ▶ Wednesday, C.

Tastyyeast Jesters, 7:15 p.m., Monday and Saturday, B. Ward Wilson, 6:30 p.m., Mon., Wed. and Fri., B.

DRAMA

- Careless Love, 12 noon, Sunday, B.

- Careless Love, 12 noon, Sunday, B. Danger Fighters, 8 p.m., Saturday, B. Death Valley Days, 8:30 p.m., Monday, B. Eno Crime Club, 9:30 p.m., Tuesday and Wednesday, C. First Nighter, 9:30 p.m., Saturday, B. Friendship Town, 9 p.m., Friday, B. O. Henry Stories, 9 p.m., Wednesday, B. Sherlock Holmes, 12 mid., Monday; 9:30 p.m., Thursday, R. K-7 9 p.m. Saturday R.

- Sherlock Holmes, 12 mid., Monday; 9:30 p.m., Thursc K-7, 9 p.m., Saturday, R.
 Love Story, 9:30 p.m., Thursday, C.
 Moonshine and Honeysuckle, 2:30 p.m., Sunday, R.
 Photoplay, 8:30 p.m., Saturday, C.
 Rin-Tin-Tin, 8:15 p.m., Thursday, B.
 Roses and Drums, 6:30 p.m., Stunday, R.
 Soconyland Sketches, 8 p.m., Monday, R.
 Thompkins Corners, 9:30 p.m., Thursday, B.
 Today and Yesterday, 8:30 p.m., Friday, C.
 True Story, 8:30 p.m., Tuesday, R.

ORGAN

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

PIANO

Pray-Braggiotti, 8 p.m., Saturday, C. Ernest Hutcheson, 10 p.m., Sun.; 11 p.m., Mon., C. Lee Sims, 11:30 p.m., Monday and Tuesday, B. Twenty Fingers of Harmony, 10:30 p.m., Saturday, B. Willys Overland, 8:15 p.m., Wednesday, B.

POPULAR PROGRAMS

- POPULAR PROGRAMS A & P Gypsies, 9 p.m., Monday, R; 10 p.m., Thursday, B. Album of Familiar Music, 9:15 p.m., Sunday, R. Armour Program, 9:30 p.m., Friday, B. Bath Club, 8 p.m., Daily, except Sat. and Sun., C. Beau Bachelor, 10 p.m., Friday, C. Big Six, 9 p.m., Thursday, R. Chase & Sanborn, 8 p.m., Sunday, R. Clicquot Club, 9 p.m., Friday, R. Coac-Cola Program, 10 p.m., Wednesday, R. Edgeworth Program, 9 p.m., Sunday, B. Eugene Revue, 9 p.m., Monday, C. Evening in Paris, 9:30 p.m., Monday, C. Farm and Home, 1:30 p.m., Monday, C. Farm and Home, 1:30 p.m., Monday, C. Fiddle and 1, 7:15 p.m., Sunday, B. Jack Frost Melody, 8:30 p.m., Wednesday, B. Great Personalities, 9:30 p.m., Tuesday, B. Hollywood Nights, 10:30 p.m., Tuesday, B. Iodent Program, 4 p.m., Sunday, R. Just Willie, 7:15 p.m., Tuesday, B. Kodak Week-End, 9 p.m., Friday, C. Lucky Strike, 10 p.m., Thurs, A. Maxwell House, 7:15 and 11:15 p.m., Mond, Wed. and Fri, C. Mello 'Cello, 11:15 p.m., Sunday, B.

- Fri. C. Mello 'Cello, 11:15 p.m., Sunday, B. Musical Fast Freight, 10:15 p.m., Tues. and Thurs., C.

- Musical Fast Freight, 10:15 p.m., Iues, and I nur Nestle's Program, 8 p.m., Friday, B. Paria Night Life, 10:30 p.m., Yuesday, B. Pennzoil Parade, 9:30 and 11:30 p.m., Sunday, R. Piendilly Circus, 4:30 p.m., Sunday, B. Pond's Program, 9:30 p.m., Friday, R. San Felice, 10 p.m., Monday and Wednesday, B. Shaeffer Revue, 10:15 p.m., Sunday, R. Silver Flute, 12:30 p.m., Sunday, R. Silver Flute, 12:30 p.m., Sunday, R.

- Silver Fute, 12:30 p.m., Sunday R. Sinchair Guardsmen, 5:30 p.m., Sunday, B. Sinchair Wiener Minstrele, 9 p.m., Monday, B. Slow River, 5:30 p.m., Sunday, R. Society's Playboy, 10:30 p.m., Wednesday, C. Songs of Home, 4 p.m., Sunday, B. Three Bakers, 7:30 p.m., Sunday, B.

Club Valspar, 9:30 p.m., Saturday, R. Violin Twins, 10:45 p.m., Sunday, B. Waves of Melody, 10:30 p.m., Wednesday, B. Ed Wynn, 9:30 p.m. Tuesday, R. Yeast Foamers, 2:30 p.m., Sunday, B. Ziegfeld Show, 10:30 p.m., Sunday, C.

OUARTETS

Bayuk Stags, 9:15 p.m., Sunday, B. Bayus Stags, 9.16 p.m., volutay, D. Carnation Contented, 8 p.m., Monday, B. Mills Bros., 7:15 p.m., Tues., 9:15 p.m., Thurs., C. Regimentalists, 10 p.m., Tuesday, B. Sylvanians, 7:45 p.m., Sunday, C.

RELIGIOUS

Cathedral Hour, 3:30 p.m., Sunday, C. Catholic Hour, 6 p.m., Sunday, R. Church of the Air, 2:30 p.m., Sunday, C. Hymn Sing, 7 p.m., Tuesday, R. National Sunday Forum, 3:30 p.m., Sunday, R. Seth Parker, 10:45 p.m., Sunday, R. Sabbath Reveries, 5:00 p.m., Sunday, B.

SINGERS

SINGERS Belle Baker, 9 p.m., Sunday, C. Connie Boswell, 6 p.m., Wed.; 5:45 p.m., Sat., C. Boswell Sisters, 10:30 p.m., Mon.; 10 p.m., Thurs., C. Russ Columbo, 11:15 p.m., Sunday; 11 p.m., Daily, except Sunday and Wednesday, R. Bing Crosby, 11:45 p.m., Non. and Fri.; 9 p.m., Sat., C Kay Donna, 10:30 p.m., Monday, R. Do Re Me, 7:30 p.m., Saturday, C. Ruth Etting, 10 p.m., Wednesday and Saturday, C. John Fogarty, 4:15 p.m., Sunday, R. Sylvia Froos, 7:30 p.m., Tuesday and Friday, C. Funnyboners, 10:45 p.m., Tuesday and Friday, C. Alex Gray, 10:30 p.m., Tuesday and Friday, C. cyvira rroos, (:30 p.m., 1uesday and Filday, C. Funnyboners, 10:45 p.m., Tuesday and Friday, C. Alex Gray, 10:30 p.m., Tuesday and Friday, C. Tito Guizar, 9:30 p.m., Friday, C. Wm. Vincent Hall, 7:15 p.m., Saturday, C. Arthur Jarrett, 10:45 p.m., Monday and Thursday, C. McCravy Bros., 10:45 p.m., Monday and Tuesday, B. Jack Miller, 6:30 p.m., Tues, Thurs. and Sat., C. Modern Male Chorus, 8:45 p.m., Tuesday, C. Grace Moore, 9 p.m., Wednesday, R. Frank Munn, 9:15 p.m., Sunday, R.; 10:30 p.m., Monday and Friday, B. Old Singing Master, 10:15 p.m., Sunday, B. Pickens Sisters, 10:45 p.m., Med., Thurs. and Fri., B. June Pursell, 6:45 p.m., Mon., Thur, and Sat, R. Sanderson-Crumit, 8 p.m., Tues, R.; 9 p.m., Thurs., B. Singing Sam, 8:15 p.m., Mon., Tues, and Wed., C. Kate Smith, 8:30 p.m., Mon., Tues, and Wed., C. Street Singer, 12:45 p.m., Sunday, C. Lawrence Tibbett, 8:30 and 11:30 p.m., Monday, R.

- Lawrence Tibbett, 8:30 and 11:30 p.m., Monday, R. Gus Van, 9:45 p.m., Friday, C. Voice 1000 Shades, 10 p.m., Tuesday, C.

TALKS

- Adventures in Health, 10:15 p.m., Wed. and Fri., C.
- Back of News, 6:45 p.m., Tuesday, R. Belicve I tor Not, Ripley, 7:15 p.m., Wed, and Fri., B. Builders of America, 1:00 p.m., Sunday, C. Cheerio, 8:30 a.m., Daily, except Sunday, R.

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- Ely Culbertson, 4:30 p.m., July, except Sunday, A. Ely Culbertson, 4:30 p.m., Mon. and Wed.; 8 p.m., Sat., R. Friendly Hour, 3:00 p.m., Sunday, B. International Broadcast, 12:30 p.m., Sunday, C.; and 4:30
- p.m., Sunday, R. Kaltenborn, 6 p.m., Monday and Friday, C. Kaltenborn, 6 p.m., Monday and Friday, C. David Lawrence, 9 p.m., Sunday, R. Laws Safeguard, 7:15 p.m., Saturday, R. Angelo Patri, 8:45 p.m., Sunday and Thursday, C. Public Affairs, 10:15 p.m., Saturday, C Nellie Revell, 11 p.m., Wednesday, R. Taxpayers' League, 8 p.m., Wednesday, B. Lowell Thomas, 6:45 p.m., Daily, except Sat. and Sun., B. Frederick William Wile, 7 p.m., Saturday, C. World Today, 6:30 p.m., Thursday, R. World's Business, 7:00 p.m., Sunday, C. You and Your Government, 8:00 p.m., Tuesday, B.

WHAT'S ON THE AIR TONIGHT?

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

COLUMBIA (C) WABC NATIONAL, Red (R).....WEAF NATIONAL, Blue (B) WJZ

Call	Dial	Call	Dial
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Call	Dial	Call	Dial
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Call	Dial	Call	Dial

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

MONDAY

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

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

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

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

B — Clara, Lu and Em KDKA KFYR KOA KSL KVOO KWK KOIL KPRC WAPI WBAL WBAP WBZA WCKY WDAY WEBC WBAP WBAA WCRY WDAY WEBC WFLA WGAR WHAM WHAS WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WMC WOAI WPTF WREEN WRVA WSB WSM WSMB WTMJ WWNC

ED 12:00 n., E-11:00, C-10:00, M-9:00 R - G.E. Circle

KFI KFSD KFYR KGHL KGIR KGO KGW KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTHS KVOO WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WENR WFBR WGY WHO WIBA WKY WLIT WOAI WOC WJAR WSAI WTAG WTAM WTIC WTMJ WWJ WRC

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

B — National Farm and Home Hour KDKA KFYR KOA KOIL KPRC KSTP KTBS KTHS KVOO KWK KYW WAPI WBAL WCKY WDAF WDAY WEBC WFLA WGAR WHAM WHAS WHO WIBA WIOD WIS WJAX WJDX WH WJZ WKY WKC WOAI WDCA WSW WSM WSMR WSMC WRVA WSB WSM WSMB WWNC

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

ED-2:00 p.m., E-1:00, C-12:00, M-11:00 C — Ann Leaf at Organ CFRB WAAB WABC WADC WBCM WBRC WBT WCAO WCAU WDAE WDBJ WDOD WDRC WDSU WFBL WFEA WGR WHP WLAC WLBW WMAL WNOX WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSPD WTAR WTOC WXYZ

 $\begin{array}{c} \textbf{H}_{12} = \textbf{W}_{11} \textbf{H}_{12} \textbf{W}_{11} \textbf{H}_{12} \textbf{W}_{11} \textbf{H}_{12} \textbf{W}_{11} \textbf{H}_{12} \textbf{W}_{12} \textbf{W}_{1$ WW.I

ED-4:45 p.m., E-3:45, C-2:45, M-1:45 ED-7:00 p.m., E-6:00, C-5:00, M-4:00 R-Lady Next Door C-Myrt and Marge R - Lady Next Door WCSH WEAF WIAR WTAG WTAM

WWJ ED-5:15 p.m., E-4:15, C-3:15, M-2:15

WERN WCAE WCSH WEAF WEEI WFBR WGY WJAR WLIT WRC WSAI WTAG WTAM WTIC -WWJ

ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B — Little Orphan Annie KDKA WBAL WBZA WCKY WGAR

WHAM WJZ

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C — Current Events, Kaltenborn

KDYL KFAB KLRA KLZ KMBC KMOX KOH KRLD KSCJ KTRH KVOR WAAB WABC WACO WBRC WBT WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBL WFEA WFIW WIBW WIP WISN WFLA WFIW WIBW WIP WISN WKBH WLAC WLAP WLBW WMAL WMT WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA WHP

ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C -- George Hall and Orchestra KDYL KFAB KFH KFJF KGB KLRA KLZ KMBC KMOX KOH KSCJ KTRH KTSA KVOR WAAB WABC WBIG WBRC WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDAU WDJ WDD WDAU WDAL WDBJ WDBO WDOD WDBC WDSU WFBL WGR WGST WHAS WHEC WHP WISN WKBH WKBN WLAC WLBW WLBZ WNOX WOKO WORC WQAM WREC WSBT WSFA WTAQ WTOC WXYZ

WIAQ WIOC WATE B - Royal Vagabonds, Ward Wilson KOLL KWK WAPI WBAL WBZA WCKY WFAA WGAR WHAM WJZ WMAQ WOAI WREN WRVA WSB WTMJ

ED-6:45 p m., E-5:45, C-4:45, M-3:45 C -- Vaughn De Leath

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

R -- June Pursell, Ballads

KOA KSD WCAE WEAF WFI WIOD B — Literary Digest, Lowell Thomas KDKA WBAL WBZA WHAM WJZ WLW WMAQ

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

KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGR WJAS WKRC WMAL WNAC WOKO WSPD WWVA

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

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

WJAS WNAC WOKO **B** — Tastyeast Jesters

KDKA KOIL WBAL WBZA WCKY WENR WJZ WREN

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

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

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

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

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

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

CFRB KMBC KMOX WABC WADC WBCM WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGN WGR WHK WISN WJAS WKRC WMAL WNAC WOKO WSPD WXYZ R --- Soconyland Sketches

WEEI WGY WBEN WCSH WEAF WJAR WTAG WTIC

WJAR WIAG WIAG B- Carnation Contented Program CFCF CKGW KDKA KOLL KPRC KSTP KVOO KWK WBAL WCKY WDAY WEBC WFAA WFLA WHAM WHAS WIOD WJAX WJR WJZ WKY WIS WAO WOAL WDFE WDFN WLS WMC WOAI WPTF WREN WRVA WSB WSM WTMJ

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

Monday-Continued

WKRC WMAL WNAC WOKO WSPD WXYZ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C - La Palina, Kate Smith KMBC KMOX WABC WADC WBCM WCAH WCAO WCAU WCOWFBL WFBM WGN WGR WHEC WHK WISN WJAS WKRC WLAP WMAL WSPD WXYZ

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

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

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

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

R-A. & P. Gypsies KSD WBEN WCAE WCSH WDAF WEAF WEEI WGY WHO WJAR WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ B — Sinclair Wiener Minstrels KDKA KFYR KPRC KSTP KTBS KTHS KVOO KWK WBAL WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WLS WMC WOAI WPTF WREN WRVA WSM WSMB WTMJ WWNC

ED-9:15 p.m., E-8:15, C-7:15, M-6:15

C-Street Singer KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WGN WHK WJAS WKBW WKRC WMAL WNAC WOKO WOWO WSPD WXYZ

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

C-Evening in Paris KMBC WABC WADC WBT WCAO WCAU WEAN WFBL WGN WHEC WHK WJAS WKBW WKRC WMAL WMT WNAC WOWO WSPD WXYZ R - Parade of the States KFT KFWD WOO WOW WXYZ

R — Parade of the States KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP WBEN WCAE WCSH WDAF WEAF WEEI WFAA WFBR WGY WHAS WHO WJAR WJAX WKY WLIT WMC WOAI WOC WOW WRC WSAI WSB WSM WTAG WTAM WTIC WTMJ WWJ

WSAI WSB WSM WIAG WIAM WTIC WTMJ WWJ B — Jack Benny; George Olsen CFCF CKGW KDKA KOIL KWCR KWK WBAL WBAZ WGAR WHAM WJR WJZ WLW WMAQ WREN

K – National Radio Forum KFYR KSD KTBS WCSH WDAY WEAF WEBC WENR WFBR WFLA WIBA WIOD WIS WJAR WJDX WIBA WIOD WIS WJAR WJDX WMC WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC R. - San Felician Serenade

KDKA KOIL KWCR KWK WBAL WGAR WJR WJZ WMAQ WREN ED-10:30 p.m., E-9:30, C-8:30, M-7:30

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

WTOC WAYZ R-Kay Donna, Contraito KFYR KSTP KTBS WBEN WCAE WCSH WDAF WEAF WENR WFLA WGY WHO WIOD WIS WJAR WJDX WKY WLIT WOAI WOC WRC WSAI WSB WSMB WTAG WWJ WWNC B - Love Songs; Frank Munn

WEAL WBZA WCKY WGAR WHAM WJR WJZ WREN

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

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

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

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

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C — Ernest Hutcheson, Pianist

KDYL KFAB KFBK KFJF KFPY KDYL KFAB KFBK KFJF KFJF KHJ KLRA KLZ KMBC KOH KOL KSCJ KTRH KTSA KVI KVOR WAAB WABC WBCM WBIG WBRC WCAH WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDBU WEAN WFBM WFEA |WHAS WHEC WHK WHP WIBW WIP WJAS WKBH WKBW WLBW WLBZ WMAL WMBD WMT WNAX WNOX WOKO WORC WPG WQAM WREC WSFA WSPD WTAR WTOC WXYZ

R — Russ Columbo and Orchestra WEAF WFI WIOD WJAR WRC WTIC WWJ WWNC WOW

WRC WITE WAR **B** — Amos'n' Andy KFI KFSD KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP WHAP WDAF WEBC WENR WGAR WHAS WIBA WJDX WJR WKY WMAQ WMC WOAI WREN WSB WSM WSMB WTMJ

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C — Maxwell House Blenders KFAB KFH KFJF KLRA KMBC KMOX KTRH KTSA WABC WACO

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 WBRC WBT WCAO WCCO WDAE R — National Radio Forum WDBJ WDB0 WDD0D WFBL WFIW KFYR KSD KTBS WCSH WDAY WGN WGST WHK WKRC WLAC WEAF WEBC WENR WFBR WFLA WLAP WMAL WNOX WOWO WQAM WREC WRR WSPD WTAR WTOC WXYZ

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

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

B — Piano Moods KPRC KTBS WBAL WJZ WLW WMAQ WREN

ED-11:45 p.m., E-10:45, C-9:45, M-8:45 C — Noble Sissle and Orchestra

C-- Noble Sissle and Urchestra CFRB KDVL KFAB KFPY KLRA KLZ KMBC KOH KOL KRLD KSCJ KTRH KVOR WAAB WABC WACO WADC WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WDB0 WD0D WDRC WDS0 WEAN WFBL WFBM WFEA WFIW WHEC WHP WISN WKBH WKBN WKBW WLAC WLAP WLBW WMAL WMBD WMT WNAX WNOX WOKO WORC WOWO WPG WOAM WREC WSBT WSFA WSPD WTAR WTOC WXYZ R — Vincent Lopez and Orchestra KOA WCKY WEAF WENR WJAR WLIT WSM WTAM

ED-12:00 m., E-11:00, C-10:00, M-9:00 C - Don Redman and Orchestra

C-Don Redman and Orchestra KDYL KFAB KFH KFYY KLRA KLZ KMBC KOH KOL KRLD KSCJ KTRH KVOR WABC WACO WADC WBBM WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDDD WDSU WEAN WFBL WFBM WFEA WFIW WHEC WHK WHP WIBW WISN WKBO WFBC WHAP WLBW WMAL WMBD WMT WNAC WNOX WOKO WOWO WQAM WTEC WSBT WSFA WSPD WTAR WTOC WXYZ WNAX R - Sherlor Holmes

R — Sherlock Holmes KFI KFSD KGO KGW KHQ KOA KOMO KSL KTAR

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

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

B - Billy Jones and Ernis that Hare KFI KFSD KGO KGW KHQ KOA KOMO KSL KTAR

R -- Larry Funk and Orchestra KOA KSD WCAE WEAF WENR WKY WRC WSM WTAM

TUESDAY

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

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

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

ED-12:00 n., E-11:00, C-10:00, M-9:00 R - G.E. Circle, See Monday

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

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

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

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

Tuesdav—Continued

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

C - Keis and Dunn GFRB KDYL KFH KLRA KLZ KMBC KOH KRLD KSCJ KTRH KVOR WAAB WABC WACO WBRC WBT WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBL WFIW WGR WHP WIBW WISN WFOV WYDW WYDW WIBW WKBH WKBN WLAC WLAP WLBW WMT WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA

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

C — Jack Miller and Urchestra KDYL KFAB KFH KLRA KLZ KMBC KMOX KOH KSCI KTRH KVOR WAAB WABC WACO WBBM WBRC WCAH WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFEA WFIW WGR WHEC WHP WISN WKBH WKBN WLAC WLAP WLBW WJT WNOY WOKO WORO WMT WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ

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

How works p.m., E-5:45, C-4:45, M-3:45 C – Joe Palooka KFAB KSCJ KTRH WAAB WABC WADC WBBM WCAH WCAO WCAU WDAE WDBO WDRC WDSU WEAN WFBL WGST WHP WISN WJAS WKBW WKRC WLAC WLAP WMT WNOX WOKO WOWO WQAM WREC WRR WSPD WTAR WTOC WXYZ B – Back of New in Wachieter R — Back of News in Washington KFI KFSD KGW KOA KTAR WDAF WEAF WFBR WFI WGY WIOD WIS WPTF WRC WSAI WTAG WTIC

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

B. Storad Annie, eer Monday
 B. — Annie Annie, eer Annie, eer Monday
 B. — Annie, annie, eer An

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

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

KDKA KOIL WBZA WENR WJZ WREN

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

B — Stebbins Boys, See Monday

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

B - Jones and Hare, See Monday

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

R — Blackstone, Sanderson-Crumit KSD KSTP KYW WCAE WCSH WDAF WEAF WEBC WEEI WFI WGY WHO WJAR WOC WOW

 $\mathbf{B} \rightarrow \mathbf{Fou}$ and four Government KECA KEX KFSD KGA KGHL KGIR KJR KOA KOIL KPO KSL KTAR KTBS KVOO KWCR KWK KYA WBAP WCKY WFLA WGAR WIOD WIS WJDX WJZ WLS WMC WPTF WREN WSM WSMB WWNC

ED-3:15 p.m., E-7:15, C-6:15, M-5:15 C — Abe Lyman and Orchestra KMBC KMOX WABC WADC WBCM WCAH WCAO WCAU WCCO WFBL WFBM WGN WGR WHEC WHK WISN WJAS WKBN WKRC WLAP WMAL WSPD WXYZ

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

C — Kate Smith, See Monday R — True Story KSD KYW WBEN WCSH WDAF WEAF WEEI WFBR WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WTIC WWJ B - Little Musicale

KFI KFSD KGW KHQ KOA KOIL KOMO KPO KSL KTAR KWK WBZA WHAM WJZ WLS WREN

ED-8:45 p.m., E-7:45, C-6:45, M-5:45 C — Modern Male Chorus

C — Modern Male Chorus KFAB KFBK KFH KFFF KFPY KHJ KLRA KMBC KMOX KOH KOY KRLD KSCJ KTRH KVI KVOR WABC WACO WADC WBIG WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WDBU WLAS WFBL WFBM WGN WGR WHAS WHK WIBW WISN WJAS WKBH WKRC WMAL WMT WNAC WNAX WOOX WODX WOWO WQAM WNOX WODX WOWO WQAM WREC WSPD WTAQ WTAR WTOC WXYZ

B - Sisters of the Skillet KDKA KFYR KOIL KPRC KSTP KTBS KVOO KWK WBAP WBZA WDAY WEBC WGAR WHAM WIBA WJZ WKY WLS WLW WOAI WREN WTMJ

WINJ ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Ben Bernie and Orchestra KDYL KFBK KFH KFPY KFRC KHJ KLZ KMBC KMJ KOIN KOL KRLD KTRH KVI WABC WADC WBRC WBT WCAO WCAO WDRC WDSU WEAN WFBL WGN WHK WJAS WKBW WKRC WLAC WMAL WNAC WNAX WORC WORC WMAL WNAC WNAX WORC WORC WOWO WSPD WXYZ $\mathbf{R} - \mathbf{Gar}$ Vienna: Erge Rance

WOWO WSPD WAR R — Gay Vienna; Erno Rapee VECA KEX KFSD K — Gay Vienna; Erno Kapee CKGW KECA KEX KFSD KGA KGHL KJR KOA KSL KSTP KTAR WBEN WCAE WCSH WDAF WEAF WEEI WFI WFLA WGY WIOD WIS WJAR WLS WOW WRC WRCA WSAT WISAT WIGY WTAC WTAW WUTC WSAI WSMB WTAG WTAM WTIC

B — Great Personalities

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

R—Ed Wynn; Don Voorhees KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTBS KVOO WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIBA

WRC WSAI WTAG WTAM WTIC WIOD WIS WJAR WJAX WJDX WWJ WBEN B-You and Your Government KECA KEX KFSD KGA KGHL WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C - Voice of 1000 Shades CFRB CKAC KDB KDYL KERN KFBK KFRC KHJ KLZ KMBC KMJ KMOX KOIN KOL KSCJ KFBK KFRC KHJ KLZ KMBC KMJ KMOX KOIN KOL KSCJ KTRH KWG WAAB WABC WBBM WBT WCAH WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGST WHEC WHK WHP WISN WJAS WKBW WKRC WLAP WMAL WMT WOKO WXYZ

R - Lucky Strike Dance Hour KFSD KFYR KGO KG KGW KHO KOA KOMO KPRC KSD KSL KSTP KOA KOMO KPRC KSD KSL KSTP KTAR KTBS WAPI WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WENR WFAA WFBR WFI WFLA WGY WHAS WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WKC WOAI WOC WPTF WRC WRVA WSAI WSB WSM WSMB WTAC WTAU WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC KFI

B — Regimentalists, Male Chorus CFCF CKGW KDKA KOIL KWCR KWK WBZA WCKY WGAR WHAM WJR WJZ WREN

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

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

KDKA KOIL KWK KYW WBAL WBZA WCKY WGAR WHAM WJR WJZ WREN

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

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

C — Myrt and Marge See Monday B — McCravy Bros. See Monday

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

KDB KDYL KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KMOX KOIN KOL KVI KWG WBRC WCCO WFBM WMAL

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

ED-11:15 p.m. E-10:15 C-9:15 M-8:15 - Howard Barlow and Orchestra C—Howard Barlow and Orchesita KDYL KFAB KFBK KFH KFPY KLRA KLZ KMBC KMOX KOH KOIN KSCJ KTRH KVOR WAAB WABC WADC WBCM WBRC WBJ WDB0 WDOD WDRC WDSU WEAN WCAH WCAO WCCO WDAE WDBJ WDB0 WDOD WDRC WDSU WEAN WFBL WFBM WFEA WFIW WHEC WHK WHP WIBW WKBH WKBN WKBW WLAC WLAP WLBW WMAL WMBD WMT WNAX WNOX WOKO WORC WOWO WQAM WREC WSFA WSPD WTAR WTOC WXYZ R - Opry HouseС

R – Opry House KEX KGA KGHL KGIR KJR KOA KPO WCAE WENR WFI WJAR WRC WTAM WTIC WEAF

Tuesday-Continued

ED-11:30 n.m. E-10:30 C-9:30 M-8:30 B — Piano Moods See Monday R — Cab Calloway and Orchestra WCAE WEAF WEEI WJAR WRC WCAE WEAF WTAM WTIC ED-11:45 p.m., E-10:45, C-9:45, M-8:45 C — Bing Crosby CFRB KDYL KFAB KFH KFJF CFRB KDYL KFAB KFH KFJF KFPY KLRA KLZ KMBC KOH KRLD KSCJ KTRH KTSA KVOR WAAB WABC WBCM WBIG WBRC WCAO WCAU WCCO WDAŁ WDBJ WDB0 WDOD WDRC WDSU WFBJ WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WISN WKBH WKBW W14C WIBW WISN WHE WHP WISW WISN WABH WKBN WKBW WLAC WLBW WLBZ WMAL WMBD WMT WNAX WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSPD WTAR WTOC WXYZ ED-12:05 a.m., E-11:05, C-10:05, M-9:05 R — Jack Pettis and Orchestra KSD KTHS WBEN WEAF WOAI WRC WSM WTIC WGY WWJ

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

VEDNESDAY

ED-8:09 a.m. E-7:00 C-6:00 M-5:00 R — Gene and Glenn See Monday ED-8:30 a.m. E-7:30 C-6:30 M-5:30 R - Cheerio See Monday

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

ED-12:00 n., E-11:00, C-10:00, M-9:00 R — G.E. Circle, See Tuesday

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

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

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

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

R — SKIPP, SEE MOIDLAY ED-5330 p.m., E-4330, C-3:30, M-2:30 R — Wayne King and Orchestra KFI KFYR KGO KGW KHQ KOA KOMO KSD KSL KSTP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WENR WFBR WGY WHO WIBA WJAR WLIT WOC WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ

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

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

C-Connie Boswell CFRB KDYL KFAB KFBK KFJF KLRA KLZ KMBC KMOX KOH KRLD KSCJ KTRH KVI WAAB WABC WACO WBIG WBRC WBT WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFEA WFIW WHP WIBW WIP WISN WKBH WLAC WLAP WLBW WMAL WMT WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WTAQ WTAR WTOC WWVA KVOR

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

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

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

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C — Maxwell House, See Monday

B -- Esso Program, Robert Ripley KDKA KTBS WBAL WBZA WJZ WMC WPTF WRVA WSMB WWNC WIS WSM

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

B - Stebbins Boys, See Monday

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

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

R — Big Time KSD WBEN WCSH WEAF WEEI WFBR WGY WHO WJAR WLIT WLS WOC WOW WRC WSAI WTAM WWJ

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

WOAI WP1F WREN WWNC ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C — Singing Sam See Monday B — Willys Overland Program KDKA KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KTBS KVOO KWOR KWK WAPI WBAL WBZA WCKY WDAY WEBC WFAA WGAR WHAM WHAS WIBA WJDX WJR WJZ WKY WMAQ WMC WOAI WREN WSB WSM WSMB WTMJ DA 20 C 5 2 0 C 2 0 K 2 0 C 2 0 K 2 0 C 2 0 K 2 0 C 2 0 K 2 0 C 2 0 K 2 0 C 2 0 K 2 0

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

C – Kate Smin, see Monday R – Halsey Stuart Program KSD KSTP WBEN WCAE WCSH WEAF WEEI WFBR WGY WHO WJAR WLT WHAQ WOC WOW WRC WSAI WTAG WTAM WTMJ WWJ

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

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

C--Cu. Stopmagte, des Michael ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C--Guy Lombardo and Orchestra KDYL KFJF KFPY KFRC KHJ KRLZ KMBC KMOX KOIN KOL KRLD KTRH KTSA WABC WADC WEBM WCAO WCAU WCCO WDRC WEBM WCAO WCAU WCCO WDRC WEBW WKRC WMAL WNAC WOKO WOWO WSPD WXYZ

WOWO WOFD WALL R-Goodyser, Grace Moore KFYR KPRC KSD KSTP KTHS KVOO KYW WBEN WCAE WCSH WDAY WEAF WEBC WEEI WFAA WFDR WFLA WGY WHAS WHO WIBR WFLA WGI WHAS WHA WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMC WOAI WOC WOW WRC WRVA WSAI WOC WOW WRC WRVA WOAL WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

HAN WIT Stories KDKA KWK WBAL WBZA WGAR WHAM WJR WJZ WLW WMAQ WREN

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

KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI

WENR WFAA WFBR WFLA WGY WHAS WHO WIBA WIOD WIS WJAR WJDX WKY WLIT WMC WOAI WOC WOW WRC WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC WJAX WTMJ

B - Jack Benny, See Monday

 $\begin{array}{l} \textbf{B} - \textbf{Jack Benny, See Monday} \\ \hline \textbf{ED-10:00} p.m., \textbf{E9:00}, \textbf{C-8:00}, \textbf{M-7:00} \\ \textbf{C} - \textbf{Music That Satisfies, Ruth Etting} \\ \textbf{KDB KDYL KERN KFBK KFH \\ \textbf{KTJF KFPY KFRC KGB KHJ KLRA \\ \textbf{KLZ KMBC KMJ KMOX KOH \\ KOIN KOL KOY KHD KSCJ KTRH \\ KOIN KOL KOY KHD KSCJ KTRH \\ KOW ADC WADC WBBM WBCM WBIG \\ WBT WCAH WCAO WCAU WCCO \\ WDAE WDBJ WDBO WDRC WEAN \\ WFBL WFBM WFIW WGST WHEC \\ WHK WHP WIBW WISN WJAS \\ WKBH WKBW WKRC WLAP WLBW \\ WLBZ WMAL WMBD WMBG WMT \\ WNAC WNAX WOKO WORC WOWO \\ WFG WQAM WSPD WTAR WTOC \\ \end{array}$ WPG WQAM WSPD WTAR WTOC WXYZ

WXYZ R -- Coca-Cola Program KFI KFSD KGO KGU KGW KHQ KOA KOMO KPRC KSD KSL KSTP WCSH WDAF WEAF WEBC WEEL WENR WFBR WFLA WGY WHAS WHO WIDD WIS WJAR WJAX WJDX WKY WLIT WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC R -- San Falician Sce Monday

B — San Felician, See Monday

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

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

WAYZ ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C – Society's Playboy CFRB CKAC KDB KDYL KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KTRH KVI KWG WAAB WABC WADC WBBM WBT WCAO WCAU WCCO WDRC WFBL WFBM WGST WHK WJAS WKBW WKRC WLAP WMAL WMT WOKO WOWO WSPD WXYZ R - NBC Artists' Service Musicale

R – NBC Artists' Service Musicale KGO KOA KSD KSTP KTBS WBEN WCAE WCSH WEAF WENR WHO WIS WJAR WOAI WOC WOW WRC

WSB WSMB WTAG WTAM WWJ WWNC WGY B - Waves of Melody

B — Waves of Mielody KDKA KOIL KWCR KWK KYW WBAL WBZA WCKY WGAR WHAM WJR WJZ WREN

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

EU-10:45 p.m., E-9:45, C-8:45, M-7:45 C-Street Singer OFRB KLRA WAAB WABC WBIG WBRC WBT WCAO WCAU WDAE WDBJ WDOD WDRC WDSU WEAN WFBL WFEA WFIW WHEC WHP WKBW WLAC WLBW WMAL WNOX WOKO WORC WPG WQAM WNEC WTAR WTOC WADC C- Myr and Mark Ser Mondar

C - Myrt and Marge, See Monday

B — Pickens Sisters

KDKA KOIL WBAL WGAR WHAM WJR WJZ

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

R - Nelie Revell KSD WCSH WEAF WGY WJAR WOW WRC WTAM WWJ B - Amos 'n' Andy, See Monday

Wednesday—Continued

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C - Maxwell House, See Monday Vincent Lopez, See Monday R

Rochester Civic Orchestra R

KFYR KTBS KWCR WAPI WCKY WHAM WIS WJR WFLA WGAR WJZ WREN WSM

ED-11:45 p.m., E-10:45, C-9:45, M-8:45 - Don Redman and Orchestra

KDYL KFAB KFJF KFPY KLRA KLZ KMBC KOH KOL KRLD KSCJ KLRA KTRH KVOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBM WFEA WFIW WHEC WHP WISN WKBH WKBW WLAC WLAP WLBW WMAL WMBD WMT WNAX WNOX WOKO WORC WOWO WPG WQAM WSBT WSFA WSPD WTAR WTOC WXYZ

ED-12:00 m., E-11:00, C-10:00, M-9:00 B — Cab Calloway and Orchestra KDKA KOIL WGAR WJZ WREN

ED-12:05 a.m., E11:05, C-10:05, M-9:05 R - Buddy Rogers, See Monday

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

B - Jones and Hare, See Monday

THURSDAY

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

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

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

ED-12:00 n., E-11:00, C-10:00, M-9:00 R — G.E. Circle, See Tuesday

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

B - Farm and Home, See Monday

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

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

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

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

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

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

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

- Lowell Thomas, See Monday R - Orphan Annie, See Monday Ř -

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

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

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

R - Goldbergs, See Monday B - Jones and Hare, See Monday

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

R - Fleischmann, Rudy Valle CFCF CKGW KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR WAPI WBAP WBEN WCAE WCSH WDAF WDAY

WEAF WEBC WEEI WFBR WFI WFLA WGY WHAS WHO WIOD WEAR WEDG THAS WHO WIGD WFLA WGY WHAS WHO WIGD WJAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WPTF WPC WRVA WSAI WSB WSM WTC WWJ WSMB WTAG WTAM WTIC WWJ B - Edgeworth Program

KDKA KOIL KWK WBAL WBZA WCKY WGAR WHAM WJZ WLS WREN

ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C -- Abe Lyman, See Tuesday B -- Rin-Tin-Tin Thriller

KDKA KOIL KWK WGAR WHAM WJZ WLS WLW WREN WBZA WLS WLW

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 B — B. A. Rolie and Orchestra KDKA KOIL KWK WBZA WJZ KDKA

WLS WLW WREN

ED-8:45 p.m., E-7:45, C-6:45, M-5:45 C - Angelo Patri, See Sunday Ř

Sisters of Skillet, See Tuesday

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

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

B — Blackstone, Sanderson-Crumit KDKA WBAL WBZA WCKY WHAM WJZ

ED-9:15 p.m., E-8:15, C-7:15, M-6:15 Mills Brothers C

KMBC KMOX WABC WADC WBBM MARC AMON WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WGR WHK WJAS WKRC WMAL WNAC WOKO WOWO WSPD

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

C - Love Story Hour KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHK WJAS WKBW WKRC WMAL WHAC WOWO WSPD WXYZ B – Thompkins' Corners KDKA KFI KFSD KGO KGW KHQ

KOA KOLL KOMO KPRC KSL KSTP KTAR KWCR KWK KYW WAPI WBAL WBAP WBZA WEBC WFLA WGAR WHAM WHAS WIOD WJAX WJDX WJR WJZ WKY WLW WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

Sherlock Holmes CFCF+CKGWI KSD WBEN WCAE WCSH*WDAF WEAF WEEI WENR WFI WGY WHO WJAR WOC WOW WSAI WTAG WTAM WTIC WRC WW.I

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

B — A. & P. Dance Gypsies KDKA KWK WBAL WBZA WGAR WHAM WJR WJZ WLW WMAQ WREN

C - Music Satisfies, See Wednesday

ED-10:15 p.m., E-9:15, C-8:15, M-7:15 C — Musical Fast Freight, See Tuesday ED-10:30 p.m., E-9:30, C-8:30, M-7:30

B - Hollywood Nights KDKA KOIL KWK KYW WBAL WBZA WCKY WGAR WHAM WJR WIZ WREN

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

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

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

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

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C - Howard Barlow, See Tuesday R - Harry Reser and Orchestra

KSD WBEN WCKY WDAF WEAF WENR WFBR WFI WHO WJAR WOC WRC WTIC

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

B — Hal Kemp's Orchestra KDKA KFYR KOLL KTBS KWCR WBAL WENR WHAM WJR WJZ WSB WSM

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

ED-12:00 m., E-11:00, C-10:00, M-9:00 C - Don Redman, See Monday

ED-12:05 a.m., E-11:05, C-10:05, M-9:05 R -- Jack Pettis, See Tuesday

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

FRIDAY

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

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

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

ED-12:00 n., E-11:00, C-10:00, M-9:00 R - G.E. Circle, See Tuesday

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

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

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

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

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

ED-6:30 p.m., E-5:30, C-4:30, M-3:30 B --- Royal Vagahonds, See Monday

- Snooks Friedman and Orchestra C-Snooks Friedman and Orchestra CFRB KDYL KFAB KFH KFJF KLRA KLZ KMBC KOH KSCJ KTRH KTSA KVOR WAAB WABC WBIG WERC WCAH WCAO WDBJ WDBO WDOD WDRC WDSU WFEA WGR WGST WHAS WHEC WHP WISN WKBH WLAC WLBW WLBZ WMAL WMT WNOX WORO WORC WQAM WREC WSBT WSFA WTAR WTOC WXYZ TAR WTOC WXYZ C

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 Vaughn DeLeath, See Monday

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

R — Larry Funk and Orchestra KGO KOA WCAE WCSH WEAF WFI WRC WTAG WWJ

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C — Maxwell House, See Monday

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

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

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

B --- Robt. Ripley, See Wednesday

B - Jones and Hare, See Monday

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ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C - Bath Club, See Monday R - Cities Service Concert

CKGW KFI KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTBS KTHS KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WJAR WLIT WOAI WOC WOW WLIT WKY WRC WSAI WTAG WTAM WTIC

B — Nestle's Program

KDKA KOIL KWK WBAL WBZA WCKY WGAR WHAM WJZ WLS WREN

ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C - Singing Sam, See Monday

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Today and Yesterday

KFJF KMBC KMOX KTRH WABC WADC WBT WCAO WCAU WCCO WDRC WEAN WFBL WGN WGR WGST WHK WJAS WKRC WMAL WMAC WOKO WOWO WREC WRR WSPD WXYZ

B - B. A. Rolfe, See Thursday

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

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Kodak Week-End Hour

WCAO WCAU WCCO WDRC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WHEC WHK WJAS WKBW WKRC WMAL WNAC WOKO WSPD WXYZ

R-Cliqued Club KSD WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WLIT WLS WOC WOW WRC WSAI WTAG WTIC WWJ

B — Friendship Town CFCF CKGW KD

B — Friendship Town CFCF CKGW KDKA KFI KFSD KFYR KGO KGW KIIQ KOA KOIL KOMO KPRC KSL KSTP KTAR KTHS KWK KYW WAPI WBAL WBZA WDAY WEBC WFIA WGAR WHAM WHAS WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

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

C – To the Ladies, Tilo Guizar KMBC KMOX KRLD WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGO WHK WJAS WKBW WKRC WMAI, WNAC WOKO WOWO WSPD WXYZ

WOWO WOLD THE REPORT OF THE RE WJAR WLIT WOC WSAI WTAG WTAM

B - Armour Program

KDKA KFI KGO KGW KHQ KOA KOMO KPRC KSL KSTP WAPI WBAL WBZA WEBC WFAA WGAR WHAM WHAS WIOD WJAX WJZ WKY WMAQ WMC WOAI WRVA WSB WSM WSMB WWNC

ED-9:45 p.m., E-8:45, C-7:45, M-6:45 C — Van Heusen, Gus Van KMBC KMOX KRLD WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WHK WJAS WKBW WKRC WMAL WNAC WOKO WSPD WXYZ

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

KFPY KHJ KLZ KMJ KMOX KOIN KOL KRLD KWG WAAB WABC WADC WBBM WBT WCAO WCAU WCCO WDRC WEAN WFBL WHK WJAS WKBW WKRC WMAL WOKO WOWO WREC WSPD WXYZ KFRC

B — Paul Whiteman's Chieftains KDKA KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KVOO KWK WBAL WBAP WBZA WCKY WDAY WEBC WENR WFLA WGAR WHAM WHAS WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC R - National Oratorio

KFSD KFYR KGO KGW KOA KOMO KSD KSL KTAR KTBS KTHS WBEN WCSH WDAY WEAF WEEJ WENR WFBR WFLA WGY WIBA WIOD WJAR WJAX WJDX WKY WLIT WMC WOAI WOW WRC WRVA WSAI WSB WSMB WTAG WTAM WTMJ WWJ

ED-10:15 p.m., E-9:15, C-8-15, M-7:15 C - Adventures in Health, See Wed.

ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C — Music That Satisfies, See Monday B - Frank Munn, See Monday

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

R – Pickens Sisters, See Wednesday

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 R - Russ Columbo, See Monday

Amos 'n' Andy, See Monday R-

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 - Maxwell House, See Monday С

R - Vincent Lopez, See Monday

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

B -- Harry Reser and Orchestra CFCF CKGW KDKA KFYR KOA KSTP KTBS KWCR WBAL WEBC WEDR WIBA WIS WJR WJZ WLW WRC WREN

ED-11:45 p.m., E-10:45, C-9:45, M-8:45 Don Redman and Orchestra KFAB KFJF KDYL KFPY KLRA KLZ KMBC KOH KOL KRLD KSCJ KTRH KTSA KVOR WAAB WABC WACO WBCM WBIG WBRC WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WFIW WGST WHAS WHEC WHP WISN WKBH WKBW WLAC WLBW WLBZ WMAL WMBD WMT WNAX WNOX WODX WOKO WORC WPG WQAM WREC WSBT WSPD WTAR WTOC WXYZ

ED-12:00 m., E-11:00, C-10:00, M-9:00 C-Gus Arnheim and Orchestra

KDYL KFAB KFH KFJF KFPY KDYL KFAB KFH KF5F KFFY KHJ KLRA KLZ KMBC KOH KOL KSCJ KTRH KTSA KVOR WABO WACO WBCM WBRC WCAH WCAO WCAU WCCO WDAE WDBJ WBRO WDOD WCCO WDAE WDBJ WBRA WFIW WGST WHAS WHEC WHP WIBW WISN WKBH WKBW WLAC WLBW WMBD WMT WNAC WNAX WNOX WODX WOKO WPG WQAM WREC WSBT WSPD WTAR WTOC WXYZ

B - Cab Calloway, See Wednesday

ED-12:05 a.m., E-11:05, C-10:05, M-9:05 R - Jack Pettis, See Tuesday

C-Beau Bachelor KDB KDYL KERN KFBK KFJF B-Jones and Hare, See Monday

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SATURDAY

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

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

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

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

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

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

B - Orphan Annie, See Monday ED-6:30 p.m., E-5:30, C-4:30, M-3:30

C — Jack Miller, See Tuesday

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

B - Orphan Annie, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C – Political Situation, Wile KFAB KFH KFJF KLZ KOH KOL KRLD KSCJ KTRH KVI KVOR KRLD KSCJ KTRH KVI KVOR WABC WACO WADC WBBM WBCM WBIG WBRC WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDAL WDBJ WDBO WDOD WDRU WDSU WEAN WFIW WGR WHP WIBW WISN WLAC WLAP WLBW WMAL WMT WNAC WNOX WOKO WOWO WQAM WREC WSFA WTAQ WTAR WTOC WWVA

B - Amos 'n' Andy, See Monday

B — Amos *n Andy, See Monday ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C — Wm. Vincent Hall, Baritone CFRB KFAB KFBK KFH KFJF KOH KOL KRLD KSCJ KKTH KVI KVOR WABC WACO WADC WBCM WBIG WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC KDSU WEAN WFBL WYIW WGR WHEC WHP WIBW WISN WLAC WLAP WLBW WMAL WMT WNAC WNOX WOKO WORC WOAM WECC WSFA WTAO WQAM WREC WSFA WTAQ WTOC WWVA

R - Laws That Safeguard Society

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

B -- Tastyeast Jesters, See Monday

C - Do Re Me, Female Trio CFRB KFAB KFBK KFH KFJF KFPY KHJ KMBC KMOX KOH KOL KOY KRLD SSCJ KTRH KPFI KHJ KNUD KNUD KSCJ KTRH KVI KVOR WABC WACO WBCM WBIG WBRC WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WFIW WGR WGST WHAS WHP WISN WJAS WLAC WLBW WLBZ WMAL WMT WNOX WOKO WORC WLBZ WQAM WREC WRUF WSBT WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ

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

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Fray and Braggiotti, Piano CFRB KDYL KFAB KFBK KFH KFJF KFPY KLRA KLZ KMBC KMOX KOH KSCJ KTRH KVI KVOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAH WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WHEC WHK WHP WIBW WISN WKBW WIAC WLAP WLBW WMAL WMT WNAX WNOX WOKO WORC WOWO WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ

WWVA WAID R - Ely Culberison, Bridge CFCF CKGW KSD WBEN WCSH WDAF WEAF WEEI WFBR WFI WOV WHO WJAR WMAQ WOC WGY WHO WJAR WMAC WOW WRC WSAI WTAG WTAM

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

ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C - Abe Lyman, See Tuesday

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

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C -- Photoplay's Movie Stars KMBC KMOX WABC WCAO WCAU WFBL WGN WGR WHK WJAS WKRC WMAL WNAC WSPD WXYZ - Dance with Countess d'Orsay R-CFCF CKGW KDKA KWK WBZA WGAR WHAM WJZ WMAQ WREN WBAL WJZ WLW

WMAQ WREN ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C- Vaughn DeLeath CFRB KFAB KFBK KFH KFJF KFPY KLRA KMBC KMOX KOH KOL KSCJ KTRH KVI KVOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAH WCAU WCCO WDAE WDBJ WDB0 WDDD WDRC WDSU WEAN WFBL WFBM WFAA WHEC WHK WHP WIBW WISN WKBW WLAC WLAP WLBW WMAL WMT WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA WXY2 WXYZ

- K-7, Drama CF CKGW KFYR KGHL KGIR CFCF KGO KGW KOA KOMO KPRC KSD KSL KSTP KTAR KTBS KYW WAPI WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WFLA WEAF WEAF WEBC WEEL WIDK WILL WGY WHO WIBA WIS WJAR WKY WMC WOC WOW WPTF WRC WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C-U.S. Army Band CFRB KDYL KFBK KFJF KFPY KLZ KOY KSCJ KTRH KVI KVOR WAAB WABC WBBM WBCM WBIG WBRC WCAH WCAU WDAE WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WFIW WGST WHAS WHEC WHK WHEV WIGST WHAS WKBW WLAC WLBW WLBZ WMAL WMT WNOX WOKO WORC WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ

- Club Valspar

K - CLUD VAISPAT CFCF CKGW KSD WBAP WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WHO WJAR WMAQ QOC WOW WRC WSAI WSB WSMB WTAG WTAM WTIC WWJ

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

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

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

KDYL KFBK KFH KFJF KEPY KLRA KLZ KMBC KMOX KOH KOL KSCJ KTRH KVI KVOR WAAB WABC WACO WADC WBCM WBIG WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WEAN WFBL WFBM WFIW WGL WHEC WHK WHP WIBW WKBW WLAC WLAP WLBW WMAL WMBD WMT WNAX WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSPD WTAO WTAR WTOC WXYZ B - Snoop and Peep CFCF CKGW KOIL KWK WGAR

WHAM WJR WJZ WREN

ED-10:30 p.m., E-9:30, C-8:30, M-7:30 ED-10:30 p.m., E-9:30, C-0.00, B — Twenty Fingers of Harmony FOIL KWCR KWK

CFCF KDKA KOIL KWCR KWK WBAL WBZA WCKY WGAR WHAM WJR WJZ WREN

ED-10:45 p.m., E-9:45, C-8:45, M-7:45 - Street Singer, See Wednesday C

B - McCravy Bros., See Monday ED-11:00 p.m., E-10:00, C-9:00, M-8:00

- Don Redman and Orchestra C

CFRB KDYL KFAB KFBK KFH KFJF KFPY KLRA KLZ KMBC KMOX KOH KOL KSCJ KTRH KVOR WAAB WABC WACO WADC KVOR WAAB WABC WACO WADC WBCM WBIG WBRC WBT WCAH WCAO WCCO WDAE WDBJ WDBO WDDD WDRC WDSU WFBL WFBM WFEA WFIW WGL WGR WHEC WHK WHP WIBW WIP WKBW WLAC WLAP WLBW WHBD WMT WNAX WOKO WORC WQAM WREC WSBT WSPD WTAR WTOC WWVA WXYZ WNOX P. C. C. L. C. S. M. J. C.

R - Russ Columbo, See Monday

B - Amos 'n' Andy, See Monday

ED-11:30 p.m., E-10:30, C-9:30, M-8:30 R-- Jack Pettis and Orchestra

K – Jack Fettis and Orchestra KSD WCKY WEAF WEEI WFI WGY WIBA WJAR WRC WTAM WTIC WWJ

B - Harry Reser, See Friday

ED-11:45 p.m., E-10:45, C-9:45, M-8:45

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

ED-12:00 m., E-11:00, C-10:00, M-9:00 - Paul Specht and Orchestra C

C — Paul Specht and Orchestra KDYL KFAB KFBK KFJF KFPY KLRA KLZ KMBC KOH KOIN KOL KRLD KSCJ KTRH KVOR WABC WADC WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBO WDOD WDSU WEAN WFBL WFBM WFEA WFIW WGL WHEC WHP WIBW WISN WKBW WLAC WLAP

[39]

WLBW WMBD WMT WNAC WNAX WNOX WOKO WQAM WREC WSBT WSPD WTOC WWVA WXYZ

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

SUNDAY

ED-11:30 a.m., E-10:30, C-9:30, M-8:30 R - Major Bowes' Family

KEX KFYR KGA KJR KOA KPO KPRC KSTP WCSII WDAF WEAF WENR WFBR WHAS WHO WJAR WKY WMC WOC WPTF WRC WKY WMC WOC WPTF WRC WSM WSMB WTAM WTIC WWNC

ED-12:00 n., E-11:00, C-10:00, M-9:00

B — Careless Love, Negro Drama KOLL KWCR KWK WCKY WHAM WJZ WREN

ED-12:30 p.m., E-11:30, C-10:30, M-9:30 C - International Broadcast

CFRB KDYL KFAB KFBK KLRA KLZ KMBC KMOX KOIN KOL KRLD KSCJ KTRH KVI KVOR WAAB WABC WBRC WCAH WCAU WCCO WDAE WDBO WDOD WDRC WDSU WEAN WFBL WFEA WFIW WGR WHP WIBW WISN WKBH WLAP WLBW WMAL WMBD WMT WOKO WORC WPG WQAM WREC WSBT WSFA WSPD WWVA WXYZ R - Silver Flute

CKGW WBEN WCSH WDAF WEAF WFI WGY WHO WJAR WOC WTAG WTAM WTIC

ED-12:45 p.m., E-11:45, C-10:45, M-9:45

C – Street Singer CFRB KDYL KFAB KFBK KLRA KLZ KMBC KMOX KOIN KOL KRLD KSCJ KTRH KVI KVOR KRLD KSCJ KTRH KVI KVOR WAAB WABC WBRC WCAH WCAU WCCO WDAE WDBO WDOD WDRC WDSU WEAN WFBL WFEA WFIW WGR WHP WIBW WISN WKBH WLAP WLBW WMAL WMBD WMT WNOX WOKO WORC WPG WQAM WSBT WSFA WSFD WTOC WWVA WXYZ

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

C — Builders of America KDYL KFAB KFBK KFJF KFPY KLZ KMBC KMOX KOH KOL KLZ KMBC KMOX KOH KOL KSCJ KTSA KVOR WAAB WABC KSCJ KTSA KVOR WAAB WABC WBCM WCAU WCCO WDAE WDBJ WDBO WFBL WGR WHAS WHEC WHK WHP WIBW WISN WJAS WKBH WKBN WLBW WMAL WMT WNAX WOKO WPG WQAM WSBT WSPD WTAQ WTAR WWVA WXYZ

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

R – Pop Concert, Walter Logan KFI KFSD KFYR KGO KGW KOA KPRC KSD KSL KSTP KTAR KVOO KYW WBEN WCAE WCSH WDAF WDAY WEAF WEEI WFAA WFBR WFI WFLA WGY WIOD WIS WJAR WF1 WJAX WK1 WRVA WKY WLIT WMC WRVA WSAI WSB WOW WSB WSM WTAG WTAM WTIC WWJ

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

C — Eight Sons of El KFAB KMBC KMOX KRLD WABC WADC WBBM WBRC WBT WCAO WCAU WCCO WDRC WDSU WEAN WGR WHK WJAS WKRC WLAC WMAL WNAC WOKO WOWO

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

CFRB KDYL KFBK KFPY KGB KLZ KMOX KOH KOL KSCJ KTRH KVI KVOR WAAB WABC WACO

WADC WBCM WBT WCAO WCCO WADC WBCM WBT WCAO WCCO WDBJ WDBO WDOD WDRC WDSU WFBL WGL WHEC WHP WIBW WKBH WKBN WKBW WLAC WLAP WLBW WMAL WMT WNOX WOKO WORC WFG WQAM WREC WTAQ WTAR WTOC WXYZ

WITH WHOONSHIDE AND HONEYSUCKLE WCAE WCKY WCSH WDAF WEAF WEEI WFBR WGY WJAR WMAQ WRC WTAG WTAM WTIC WWJ Yeast Foamers D

B – Feast Foamers KDKA KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KPRC KSL KSTP KTAR KTHS KVOO KWK KYW WAPI WBAL WBZA WDAY WEBC WFAA WFLA WGAR WHAM WHAS WIBA WIO WEG WIAY WID WID WID WID WIAR WHAN WHAS WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WLW WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC

ED-3:00 p.m., E-2:00, C-1:00, M-12:00 $R \rightarrow Wayne King and Orchestra$ KSD KYW WBEN WCAE WCSHWDAF WEAF WEEI WFBR WGYWHO WJAR WLIT WOC WOW WRCWSAI WTAG WTAM WTIC WWJB — Friendly Hour CKGW KFSD KFYR KGHL KGIR

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

ED-3:15 p.m., E-2:15, C-1:15,M-12:15 C-Symphonic Hour CFRB KDYL KFAB KFBK KFH KFJF KFPY KGB KHJ KLRA KLZ KFJF KFPY KGB KHJ KLRA KLZ KMBC KMOX KOH KOL KOY KSCJ KTRH KVOR WAAB WABC WACO WBCM WBIG WBRC WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBL WEBM WEEA WEITW WGR WGST WEBM WEEA WEITW WGR WGST WHAS WHEC WIIK WHP WIBW WJAS WKEH WKEN WLAC WLBZ WMAL WMBD WMT WNOX WODX WORO WORC WQAM WREC WSBT WSFA WTAQ WTAR WTOC WWVA WXYZ

WA1Z ED-3:30 p.m., E-2:30, C-1:30, M-12:30 R — National Sunday Forum KFSD KFYR KGIIL KGIR KGO KGW KHQ KOA KPRC KSD KSL KSTP KTAR KTBS KVOO KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEL WFAA WFBR WFLA WIBA WIOD WIS WJAR WJAX WJDX WKY WOAI WOW WPTF WRC WRVA WSAI WSM WSMB WTAG WTAM WTIC WWJ WWNC

С - Cathedral Hour

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

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

R— Iodent, Jane Froman KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD

KSTP KTAR KTBS KTHS KVOO WGST WIP WLAC WNOX WODX KYW WAPI WBAP WBEN WCAE WPG WQAM WREC WSFA WTAR WCSH WDAF WDAY WEAF WEBC WTOC WEEI WFBR WFLA WGY WHAS **R** — Catholic Hour WHO WIBA WIOD WIS WJAR WJAX KEX KFYR KGA KGHL KGIR KJR WJDX WKY WMC WOAI WOC KOA KPO KPRC KSD KSTP KTAR WOW WPTF WRC WRVA WSAI KTBS KVOO WBAP WBEN WCAE WSB WSM WSMB WTAG WTAM WCSH WDAF WDAY WEAF WEBC WTIC WTMJ WWJ WWDC WEEI WENR WFBR WEAA WGY

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

ED-4:15 p.m., E-3:15, C-2:15, M-1:15

R – Joh Fogarty, Tenor KFYR KOA KOMO KPO KSD KSTP KTBS WBEN WCAE WDAF WEAF WEEI WFLA WGY WJAR WKY WSAI WSM WTAG WTAM WTIC WWI

ED-4:30 p.m., E-3:30, C-2:30, M-1:30 R - International Broadcast

KSD WBEN WCAE WCSH WEAF WEEI WFBR WFI WFLA WGY WHO WIOD WJAR WOC WPTF WRC WTAM WTIC WWNC

B — Piccadilly Circus CFCF CKGW KDKA KFI KFSD KFYR KGHL KGIR KGO KGW KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KTHS KVOO KWK WAPI WBAL WBZA WCKY WDAY WEBC WENR WFAA WGAR WIBA WJDX WJR WJZ WKY WAC WOAI WREN_WSB WSM WSMB WTMJ

ED-5:00 p.m., E-4:00, C-3:00, M-2:00 C — Pastorale

CFRB KDYL KFAB KFBK KFH KFPY KGB KLRA KLZ KMBC KMOX KOH KOL KSCJ KTRH KVI KMOX KOH KOL KSCJ KTRH KVI KVOR WAAB WABC WADC WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGL WGR WHP WIBW WKBH WKBN WLAC WLBW WLBZ WMBD WMT WNOX WOKO WORC WOWO WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA WXYZ R - Sabhab R excite

B - Sabbath Reveries B — Sabbath Reverees KFSD KFYR KGIR KGO KHQ KOMO KPRC KSTP KTAR KTBS KTHS KVOO KWK WBAL WBZA WCKY WDAY WEBC WENR WFAA WFLA WGAR WHAM WIBA WIOD WFS WJDX WJZ WOAT WPTF WREN WRVA WSB WSM WWNC

ED-5:30 p.m., E-4:30, C-3:30, M-2:30 C -- Blue Coal Revue OFRB WAAB WABC WCAO WCAU WDRC WEAN WFBL WGR WHEC WHP WOKO WORC C CLUCE Keitek

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

R - Slow River WBEN WCSH WEAF WFLA WGY WHO WIOD WJAR WMAQ WOC WOW WRC WRVA WSAI WTAM WTIC WWJ WWNC

B — Road to Romany KOIL KWK KYW WBAL WBZA WGAR WHAM WJZ WLW WREN ED-6:00 p.m., E-5:00, C-4:00, M-3:00

C - Quiet Harmonies KLRA WBIG WBRC WBT WDAE WDBJ WDBO WDOD WDSU WFIW

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

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

R-Our American School KSD WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WGY WHO WJAR WOC WOW WRC WTAG WTIC WWJ

C-Roses and Drums, Drama KMBC KMOX KRLD WAAB WABC WADC WBBM WCAO WDSU WFBM WCR WCST WHK WJAS WKRC WMAL WXYZ

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C — World's Business

C — World's Business KDYL, KFAB, KFBK, KFH, KFJF KFPY KGB, KHJ, KLZ, KMOX, KOH KOL, KOY, KRLD, KSCJ, KTRH KVOR, WABC, WACO, WBBM, WBCM, WHG, WBRC, WCO, WBBM, WBCM, WFBL, WFEA, WGR, WGST, WHAS WHAS, WKEH, WLAC, WLRZ, WLRZ, WLAS, WKEH, WLAC, WLRZ, WHEC WHP WISH WUSI WHAS WHEC WHP WISH WISH WJAS WKBH WLAC WLBW WLBZ WMAL WHT WNAC WNOX WOKO WORC WFG WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA

R - G.E. Circle

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

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

C — Alex Haas and Orchestra KDYL KFAB KFBK KFH KFJF KFPY KGB KLZ KMBC KMJ KMOX KOFFA KOB KLIZ KMBC KMJ KMOX KOF KOL KOY KRLD KSCJ KTRH KVI KVOR WABC WACO WBCM WBIC WBCC WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFEA WGR WCST WHAS WHDC WHP WIBW WIP WISN WHEC WHP WIBW WIP WISN WKBH WLAC WLBW WLBZ WMAL WMT WNAC WNOX WODX WOKO WORC WQAM WREC WSBT WSFA WSPD WTAQ WTAR WTOC WWVA B --- Fiddle and I

KDKA KOIL KWK KYW WBAL WBZA WGAR WJZ WLW WREN WBAL

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 R — Orchestral Gems, Symphony KSD WCAE WDAF WEAF WFBR WGY WHO WLIT WEAWOC WSAI WTAG WTIC WWJ

B - Three Bakers

 $B \rightarrow 1$ hree bakers CFCF KUKA KFI KFSD KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KVOO KWK KYW WAPI WBAL WBZA WDAY WEBC WFAA WFLA WGAR WHAM WHA WUBA WOD WID WHA WHAS WIBA WIOD WJDX WJR

WJZ WKY WLW WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ

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

C — Sylvanians KMBC KMOX WABC WCAO WCCO WFBL WGN WGR WHK WHP WJAS WKRC WLAP WNAC WOKO WPG WXYZ

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 R — Chase & Sanborn Hour CFCF CFGW KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTHS KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHAS WHO WIOD WIS WJAR WJDX WKY WLIT WLS WMC WOAI WOC WOW WPTF WRC WSAI WSB WSMB WTAM WTIC WTMJ WWJ WWNC

B — McCravy Bros. KFYR KPRC KTBS KWCR WJZ WTMJ

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

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

ED-8:45 p.m., E-7:45, C-6:45, M-5:45 C — Angelo Patri, Your Child KDYL KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WGN WGR WHK WJAS WKRC WMAL WNAC WOWO WSPD WXYZ C C I Steepende and Budd C -- Col. Stoopnagle and Budd KLRA WBRC WBT WDAE WDBJ WDBO WDOD WDSU WFIW WLAC WREC WTAR WTOC

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

ELJ-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Ever-Ready Gaieties KDB KDYL KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KWG WABC WADC WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGN WGR WGST WHK WJAS WKRC WMAL WNAC WOKO WOWO WRR WSPD WYYZ WRR WSPD WXYZ

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

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

R — American Album Familiar Music KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTHS WAPI WBEN WCAE WCSH WDAY WEAF WEBC WENR WFBR WFI WFLA WGG WHAS WHO WIBA WIOD WJAR WJAX WJDX WKY WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMI WWI WTMJ WWJ

B — Bayuk Siag Party KDKA KWK KYW WBAL WBZA WGAR WJR WJZ WLW WREN

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

WSPD WXYZ ED-9:45 p.m., E-8:45, C-7:45, M-6:45 B — Making Movies, Ray Knight KDKA KOIL KWK KYW WBAL WBZA WGAR WHAM WJR WJZ WLW WREN

R — L'Heure Exquise CKGW KFSD KFYR KGHL KGO CKGW KFSD KFYR KGHL KGO KGW KHQ KOA KOMO KPRC KSL KSTP KTAR KTBS KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WFI WGY WIBA WIS WJAR WOW WRVA WBAI WSM WTAM WTIC WWJ WWNC

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C — Ernest Hutcheson, Pianist KDYL KFAB KFBK KFH KFPY KLRA KLZ KMBC KMOX KOH KOIN KOL KSCJ KTRH KVI KVOR WABC WACO WADC WBCM WBRC WBT WCAH WCAU WCCO WDAE WDBJ WDB0 WDRC WDSU WEAN WFBL WFBM WFFA WFIW WGL WGR WHEC WHK WHP WIBW WISN WKBH WKBN WLAC WLAP WISBW WHAL WMT WNAC WNAX WNOX WORC WREC WSFA WSPD WTAR WTOC WWVA

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

B – Old Singing Master KDKA KFI KGO KGW KHQ KOA KOIL KOMO KWK WBAL WBZA W<u>GAR</u> WHAM WJZ WLW WMAQ WREN

R — Shaeffer Lifetime Revue KSD KYW WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WTIC WWI

ED-10:30 p.m., E-9:30, C-8:30, M-7:30 ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C-Ziegield Radio Show KDB KDYL KERN KFBK KFJF KFPY KFRC KGB KHJ KLRA KLZ KMBC4 KMJ KMOX KOIN KOL KRLD KSCJ KTSA KVI KWG WAAB WABC WADC WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDB0 WDOD WDRC WDSU WFBL WFBM WFIW WGN WGR WOST WHEC WHK WIBW WISN WJAS WKBH WKRC WLAC WLAP WLBZ WMAL WMT WNOX WOKO WOWO WQAM WREC WSPD WTAQ WTAR WTOC WXYZ

ED-9:15 p.m., E-8:15, C-7:15, M-6:15 ED-10:45 p.m., E-9:45, C-8:45, M-7:45 R — American Album Familiar Music R — Sunday at Seth Parker's

ED-10:45 p.m., E-9:43, C-5:43, W-1:43 R — Sunday at Seth Parker's CKGW KFSD KFYR KGHL KGIR KGO KGW KOA KOMO KPRC KSL KSTP KTAR KTBS WAPI WBEN WCAE WDAF WDAY WEAF WBEN WEEI WENR WFBR WFI WFLA WGY WHAS WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAM WTMJ WWJ

B — Violin Twins

KOIL WBAL WENR WGAR WHAM WJR WJZ WREN

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C — The Gauchos

C — The Gauchos KDYL KFAB KPH KLRA KLZ KMBC KMOX KOH KRLD KTRH KVOR WAAB WABC WADC WBCM WBRC WBT WCAH WCAO WCCO WDAE WDBJ WDBO WDDOD WDRC WDSU WEAN WFBL WFBM WFEA WFIW WGL WGR WHEC WHP WIBW WISN WKBH WKBN WLAC WLAP WLBW WMAL WMBD WMT WNOX WOKO WFG WQAM WREC WSFA WSPD WTAR WTOC WXYZ

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 R — Russ Columbo and Orchestra

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

B - Mello 'Cello

KFYR KOIL KWCR WBAL WJZ WKY WSB

ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C — Eddie Duchin and Orchestra KFAB KFH KLRA KMBC KMOX KOH KTRH WABC WADC WBCM WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDDD WDSU WEAN WFBL WFBM WFEA WFIW WCL WGR WHEC WHP WIBW WISN WKBN W AP WLBW WMAT WMT WKBN WLAP WLBW WMAL WMT WNAC WNAX WOKO WQAM WREC WSBT WSFA WSPD WTOC

C — Pennzoil Parade

KDYL KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOH KOIN KOL KOY KWG

R — Jesse Crawford, Organ

WCAF WCKY WDAF WEAF WFBR WGY WHO WJAR WMAQ WOC WOW WRC WTAM WWJ

B-Ted Cook's Orchestra KFYR KOIL KWCR KWK WBAL WENR WIBA WJR WJZ WKY WENR WSB

ED-12:00 m., E-11:00, C-10:00, M-9:00 C - Coon-Sanders and Orchestra

C — Coon-Sanders and Orchestra KDYL KFAB KFH KFJF KFPY KLRA KMOX KTRH WABC WBCM WBRC WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDDD WDSU WEAN WFBL WFBM WFEA WFIW WGR WGST WHAS WHEC WHP WIBW WISN WKBH WKBN WLAC WLBW WMAL WMBD WMT WNAC WNAX WNOX WOKO WPG WQAM WREC WSBT WSFA WSPD WTAR WTOC

B — Wm. Stoess and Dutchmen KOA KOIL KWCR KWK WBZA WENR WGAR WJR WJZ WLW KOA KOIL WENR WG WREN WSB

ED-12:30 a.m., E-11:30, C-10:30, M-9:30 R — Larry Funk and Orchestra WCAE WEAF WFBR WHO WOC WCAE WEAF WRC WTAM

NOTICE OF COPYRIGHT

The method of logging by wave-lengths or frequencies was devised by The Radex Press in 1924 and has been copyrighted and recopyrighted each year since that time. The arrangement of stations in groups by frequencies or wave-lengths with dial readings in connection therewith is fully covered by our copyright and all infringers will be vigorously prosecuted.

KEY

KEY Frequency in kilocycles. Wavelengths in meters. Night power in watts in third column. Second column symbols: *Verifies reception for postage or sends station stamp for 10c. †Verifies for postage; no stamp. ¢ Stamp only. ‡ Does not verify. § Does not reply. § Verification 25c, reply card 10c. Fourth column symbols: D, Daytime only. Dn, Daytime but may use some evening hours. S, Sunday only. X, Has permit to increase power. + Uses greater power in daytime. CP, Has construction permit only. Z, Has permit to change frequency. Y, has permit to change location.] These stations are synchronized. 1-2-3, Small fig-ures indicate stations sharing time. a-b-c. Small litetres indicate stations with two sets of calls. Some Can-adian, Cuban and Mexican stations have odd frequencies; correct frequency shown in fourth column. Dashes (___) Official information not received.

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

CE.OL	540 kilo	cycles 5	55.6 meters Windstor, Ontario	99 ¹ / ₂ Essex Broadcasters, Ltd.
0) (075	550 kilo	ocvcles 5	45.1 meters	96
	KFDY † KFUO * KFYR † KOAC † KSD † WGR * WKRC †	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Brookings, S. D. St. Louis, Mo. Bismarck, N. D. Corvallis, Ore. St. Louis, Mo. Buffalo, N. Y. Cincinnati, Ohio	S. D. State College Concordia Theological Seminary Meyer Broadcasting Co. State Agricultural College Pulitzer Publishing Co. Buffalo Broadcasting Co. WKRC Incorporated
	560 kilo	cycles 5	35.4 meters	
	KFDM * KLZ * KTAB * WFI * WIBO * WLIT † WNOX * WPCC * WQAM *	500 X + 1000 C 1000 IR 500 IR 1000 3+ 500 1R 1000 X+C 500 3S 1000 C	Beaumont, Texas Denver, Colo. San Francisco, Cal. Philadelphia, Pa. Chicago, III. Philadelphia, Pa. Knoxville, Tenn. Chicago, III. Miami, Fla.	Magnolia Petroleum Co. Reynolds Radio Co., Inc. Associated Broadcasters Strawbridge & Clothier Nelson Bros. Bond & Mortgage Co. Lit Brothers WNOX, Inc. North Shore Congregational Church Miami Broadcasting Co.
	570 kilo	cycles 5	26.0 meters	872
	KGKO * KMTR * KVI * TGW WEAO † WKBN * WMAC WMAC * WMAX * WPCH * WSYR WSYR WSYR *	250 + 500 - 500 - 500 - 750 1 500 1C 250 2a 500 b 1000 C 500 b 250 2a 1000 N	Wichita Falls, Texas Hollywood, Cal. Tacoma, Wash. Guatamala Columbus, Ohio Youngstown, Ohio Syracuse, N. Y. New York City Yankton, S. D. New York City Syracuse, N. Y. Asheville, N. C.	Wichita Falls Broadcasting Co. KMTR Radio Corp. Puget Sound Broadcasting Co., Inc. Ohio State University WKBN Broadcasting Corp. Clive B. Meredith Knickerbocker Broadcasting Co., Inc. House of Gurney, Inc. Knickerbocker Broadcasting Co., Inc. Clive B. Meredith Citizens Broadcasting Co., Inc.
	580 kilo	cycles 5	16.9 meters	842
	CFCL CHMA CKCL * CKUA † KSAC † WIBW * WOBU * WOBU * WOBU * WOBU * S90 kilo	500 Sa 500 4S 500 4S 500 4 500 2+ 1000 2+C 250 1+ 250 1 250 R	Toronto, Ont. Charlottetown, P. E. I. Edmonton, Alta. Toronto. Ont. Edmonton, Alta. Marhattan, Kans. Topeka, Kansas Charleston, W. Va. Huntington, W. Va. Worcester, Mass. 08.2 meters London, Ont. 74	Dominion Battery Co. The Island Radio Co. Christian and Missionary Alliance The Dominion Battery Co. University of Alberta State Agricultural College Topeka Broadcasting Assn., Inc. WOBU, Inc. WOBU, Inc. Telegram Publishing Co.
	CMW CNRL * KHQ WCAJ *	1400 588 5000 595a 1000 +N 500 1	Havana, Cuba London, Ont. Spokane, Wash. Lincoln, Nebr.	Columbus Commercial & Radio Co. Canadian National Railways Louis Wasmer, Inc. Nebraska Wesleyan University

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WEEI	t	1000	R	Boston, Mass.
WGCM WKZO	*	1000 1000	D D	Gulfport, Miss. Kalamazoo, Mich. Omaha, Nebr.
WOW	•	1000	1R	Omaha, Nebr.
600 k	ilo	cycle	es 49	99.7 meters
CNRO	1	500 500	ΞŇ	Ottawa, Ont. San Diego, Cal.
KFSD WCAC WCAO	ŧ	250	+N 2+ C	San Diego, Cal. Storrs, Conn.
	*	250 250	C 2+	Baltimore, Md. Bridgeport, Conn.
WMT	•	500 500	$\overset{\tilde{2}_{+}}{\overset{c}{c}}$	Bridgeport, Conn. Waterloo, Iowa Memphis, Tenn.
WREC	rilo	cycle		91.5 meters
KFRC	•	1000	C I	San Francisco, Cal.
VPN		500		Nassau, Bahama Kansas City, Mo.
WDAF WFAN	•	1000 500	N Ca	Philadelphia, Pa.
WIP	•	500	Ca Ca	Philadelphia, Pa. Philadelphia, Pa. Cleveland, Ohio
WJAY XETR	1	500 2500	Ď	Mexico City, Mexico
620 l	cilo	cycle	es 4	83.6 meters
KGW KTAR KZRM WFLA	:	1000	+N +N	Portland, Ore. Phoenix, Arizona
KTAR KZRM	-	500 50000		Manila, P. I.
WFLA WLBZ	1	1000 500	+Na C	Clearwater, Fla
WSUN	1	1000	+a +N	Bangor, Maine St. Petersburg, Fla. Milwaukee, Wis.
WTMJ	• -:1-	1000		
630 1	aic	cycle 500	25 4	
CFCT CHCS CJGX		500	+a	Victoria, B. C. Hamilton, Ont. Yorkton, Sask.
CJGX	÷.	500 500	+a	Yorkton, Sask. Hamilton, Ont
CJGX -CKOC -CKTB CMCJ		500	+a	St. Catherines, Ont.
CMCJ CMQ		250 250		Havana, Cuba Havana, Cuba Moncton, N. B.
CNRA	C∉	500		Moncton, N. B. Santo Domingo
HIX KFRU	÷.	1000 500	i	Columbia, Mo. Pierre, S. D.
KGFX WGBF	÷-	200 500	D 1	Pierre, S. D. Evansville, Ind.
WMAL WOS	1	250 500	+C	Evansville, Ind. Washington, D. C.
WOS XETF	•	500 500	1	Jefferson City, Mo. Veracruz, Ver.
	kilo	ocycl	es 4	68.5 meters
CHRC	-ī	100 100	645a	Quevec, Que. Quebec, Que. Waterloo, Ont. Los Angeles, Cal.
CKCI CKCR		100	645a 645	Waterloo, Ont.
KFI WAIU		50000 500	N1 1	Columbus, Ohio
WOI	•	5000	D	Ames, Iowa
650]	kilo	ocycl	es 4	61.3 meters
KPCB WSM	*	100 5000	Dn NX	Seattle, Wash. Nashville, Tenn.
660	kilo	ocycl		54.3 meters
CHWK	1	100 500	66 5 665	Moose Jaw, Sask.
CJRM CJRW CMCO	ŧ	1000	665	Fleming, Sask.
CMDC	-53	250 500		Chilliwack, B. C. Moose Jaw, Sask. Fleming, Sask. Havana, Cuba Havana, Cuba Salvador
RUS	÷	500 500	664 D	Salvador Omaha, Nebr. New York City
WAAW WEAF	Ť	50000	RIT	New York City Hartford, Conn.
wric		5000	R	
670	K1le	ocycl		147.5 meters
VOWR WMAQ	ē.	500 5000	675 N	St. Johns, N. F. Chicago, Ill.

Great South	Illuminatin hern Land Co f the World	g Co. ., Inc.	ксүз. 670
			MTRS.
Airfan Radi Conn. Agric Monument Bridgeport	ultural Colle al Radio, Inc. Broadcasting roadcasting C	ge	447.5 DIAL
75			
Cleveland F	nt Board y Star Co. roadcasting (sting Corp.	
viane pros	Publishing Co. adcasting Co. . of Philippin f Commerce adcasting Co. f Commerce Journal	nes , Inc.	
64			
Hamilton 3 Winnipeg (Wentworth Taylor & B Rafael Rod Jose Ferna Canadlan 1 Dominicar Stephens (Dana McN Evansville M. A. Lees Missouri S	ndez National Raily	ge Icasting Co. ways nc. ng Bureau	
Associated	i. '' Ltd. Liddle nthony, Inc. Radiocasting ege of Agricul	corp.	
Queen Cit National L	y Broadcastin ife & Accider	ng Co. nt Ins. Co.	
J. L. Stow Juan Fern Republic c	Broadcasting rdson & Sons dson & Sons, ers andez de Cast of El Salvador ain Exchange Broadcasting	tro	
Wesley Un National H	ited Church Broadcasting	Co.	

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C 0 0 1				
680	kilocvcl	es 4	40.9 meter	8
	• 2500	D -	St. Joseph, Mo.	
KFEQ KPO	† 5000	ÑX	San Francisco. Ca	Scroggin & Co., Bank al. Hale Bros. & The Chronicle
WPTF	* 1000	N Dn	Raleigh, N. C.	Durham Life Insurance Co.
XFG	2000	683.3	Mexico, Mex.	Sria. de Guerra y Marina
690 1	kilocycl	06 A	34.5 meter	
		<u>сэ</u> т		5
CFAC CFRB			Calgary, Alta. Toronto, Ont. Calgary, Alta.	The Calgary Herald
CJCJ CNRX	• 500	1	Calgary, Alta.	Rogers-Majestic Corp., Ltd.
CNRX	4000	a	Ioronto, Unt.	Albertan Publishing Co., Ltd. Canadian National Railways
NAA VAS	$\frac{1000}{1}$	685	Arlington, Va. Glace Bay, N. S.	U. S. Navy
ACI	1 500		Monterrey, Mexic	Canadian Marconi Co. • Mexico Music Co., S. A.
VCX	100		Monterrey, Mexico Halifax, N. S.	Sambro Lightship
700 1	12100vol	oo 1	10 2 martin	
700 1	kilocycl		28.3 meters	s
WLW	• 50000	В	Cincinnati, Ohio	Crosley Radio Corp.
710 1	kilocycl	es 4	22.3 meters	s [
KMPC	+ 500	Dn	Beverly Hills, Cal.	
WOR	• 5000	X 711	Newark, N. J.	R. S. MacMillan Bamberger Broadcasting Service, Inc.
XEN	† 1000	711	Mexico City	Cia. Civil de Inversiones
720 1	kilocycl	06 A	16 1 motor	
WGN	† 25000	C 4	16.4 meters	
			Chicago, Ill.	WGN, Inc.
730 1	kilocycl	es 4	10.7 meters	s 49-2
CHLS CHYC	100 * 5000	1b	Vancouver, B. C.	W. G. Hassell
-CKAC	* 5000 † 5000	Sa Ca	Montreal, Que. Montreal, Que. Vancouver, B. C. Vancouver, B. C.	Northern Electric Co., Ltd.
CKCD	100	1b	Vancouver B C	La Presse Publishing Co., Ltd.
CKFC	† 50	1	Vancouver, B. C.	Vancouver Daily Province United Church of Canada
CKMO CKWX	₹ 100 † 100	1	vancouver, D. C.	Sprott-Shaw Radio Co
CMK	3150	1	Vancouver, B. C. Havana, Cuba	Western Broadcasting Co., Ltd.
CNRM	• 5000	a	Havana, Cuba Montreal, Que.	Cuban Broadcasting Co., Hotel Plaza Canadian National Railways
XER	75000	735	Villa Acuna, Mex.	Dr. John R. Brinkley
740 1	kilocycl	es 4	05.2 meters	
С ЈСА КММЈ	• 500	745	Edmonton, Alta.	
KMMI	* 1000	Dn	Clay Center, Nebr.	The Edmonton Journal, Ltd.
				LDe M. M. Johnson Co
WSB	5000	NX	Atlanta, Ga.	The M. M. Johnson Co. Atlanta Journal Co.
WSB WHEB	250	NX CPD	Atlanta, Ga. Portsmouth, N. H.	Atlanta Journal Co. Granite State Broadcasting Corp.
wsв wнев 750 1	kilocycle	cPD es 3	Atlanta, Ga. Portsmouth, N. H. 99.8 meters	Atlanta Journal Co. Granite State Broadcasting Corp.
WSB WHEB 750 1 KGU	250 kilocycle † 1000	cPD es 3	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii	Atlanta Journal Co. Granite State Broadcasting Corp. S Allow Marion A. Mulrony
WHEB 750 1 KGU WJR	250 kilocycle	NX CPD	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii	Atlanta Journal Co. Granite State Broadcasting Corp. S
WHEB 750 1 KGU WJR XEQ	250 xilocycle t 1000 t 10000 t 10000 t 5000	es 3 RX BX	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih.	Atlanta Journal Co. Granite State Broadcasting Corp. S Annual Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas
WSB WHEB 750 1 KGU WJR XEQ 760 1	250 kilocycle 10000 10000 5000 kilocycle	es 3 RX BX	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii	Atlanta Journal Co. Granite State Broadcasting Corp. S Arion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas
WSB WHEB 750 1 KGU WJR XEQ 760 1 KXA	250 kilocycle † 10000 † 10000 * 5000 kilocycle * 250	$\begin{array}{c} {}^{NX}\\ {}^{CPD}\\ es & 3'\\ {}^{RX}\\ bx & \cdots\\ es & 3'\\ + & \end{array}$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Scattle Wash	Atlanta Journal Co. Granite State Broadcasting Corp. S
WSB WHEB 750 1 WJR XEQ 760 1 KXA WBAL	250 kilocycle † 1000 † 1000 * 5000 kilocycle * 250 * 1000	es 3 RX BX	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Scattle Wash	Atlanta Journal Co. Granite State Broadcasting Corp. S
WSB WHEB 750 1 KGU WJR XEQ 760 1 KXA	250 kilocycle † 10000 † 10000 * 5000 kilocycle * 250	$es \qquad 3^{\circ}$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Scattle Wash	Atlanta Journal Co. Granite State Broadcasting Corp. S
wsb wheb 750 1 wyr xeq 760 1 kxa wbal wew wzy yz	xilocycle † 1000 † 1000 † 10000 * 10000 xilocycle * 250 * 1000 * 1000 * 30000	$\begin{array}{c} & \text{NX} \\ & \text{CPD} \\ \text{es} & 3' \\ & \text{BX} \\ & \text{es} & 3' \\ & \text{es} & 3' \\ & \text{b} \end{array}$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City	Atlanta Journal Co. Granite State Broadcasting Corp. S Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas S American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc.
WSB WHEB 750 1 WJR 760 1 KXA WBAL WEW WJZ 770 1	xilocycle t 1000 t 10000 t 10000 t 10000 xilocycle t 1000 t 30000 t 30000 xilocycle	$\begin{array}{c} \overset{NX}{CPD} \\ c \\ c \\ RX} \\ BX \\ c \\ c \\ s \\ B \\ B \\ c \\ c \\ s \\ c \\ c$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City 89.4 meters	Atlanta Journal Co. Granite State Broadcasting Corp. S Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc.
wsb wheb 750 1 wyr xeq 760 1 kxa wbal wew wzy yz	xilocycle † 1000 † 1000 † 10000 * 10000 xilocycle * 250 * 1000 * 1000 * 30000	$\begin{array}{c} & \text{NX} \\ & \text{CPD} \\ \text{es} & 3' \\ & \text{BX} \\ & \text{es} & 3' \\ & \text{es} & 3' \\ & \text{b} \end{array}$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. Set. Louis, Mo. New York City 89.4 meters Lincoln, Nebr.	Atlanta Journal Co. Granite State Broadcasting Corp. Marion A. Mulrony WJR. The Goodwill Station, Inc. Feliciano Lopez Islas American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc.
WSB WHEB 750 1 KGU WR XEQ 760 1 KXA WBAL WEAL WEAL WJZ 770 1 KFAB WBBM	xilocycle t 1000 t 10000 t 10000 t 10000 xilocycle t 250 t 1000 t 30000 xilocycle t 5000 t 25000	$\begin{array}{c} \overset{\text{NX}}{\underset{\text{CPD}}{\text{PD}}} \\ \text{es} & 3^{\text{H}} \\ \overset{\text{es}}{\underset{\text{B}}{\text{S}}} \\ \overset{\text{H}}{\underset{\text{B}}{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}}{\text{B}}} \\ \text{es} & 3^{\text{H}} \\ \overset{\text{H}}{\underset{\text{B}}{\text{S}}} \\ \overset{\text{H}}{\underset{\text{B}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}}{\underset{\text{H}}} \\ \overset{\text{H}}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}} \\ \overset{\text{H}}} \\ \overset{\text{H}}} \\ \overset{\text{H}}{\underset{\text{B}}} \\ \overset{\text{H}} \\ \overset{\text{H}}} \\ \overset{\text{H}}} \\ \overset{\text{H}}} \\ \overset{\text{H}} \\ \overset{\text{H}}} \\ \overset{\text{H}} \\ \overset{\text{H}} \\ \overset{\text{H}}} \\ \overset{\overset{\text{H}}} \\ \overset{\text{H}}} \\ \overset{\overset{\text{H}}} \\ \overset{\overset{\text{H}}} \\ \overset{\text{H$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City 89.4 meters Lincoln, Nebr. Chicago, Ill.	Atlanta Journal Co. Granite State Broadcasting Corp. Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc. KFAB Broadcasting Co. WBBM Broadcasting Corp.
WSB WHEB 750 1 KGU WJR XEQ 760 1 KXA WEW WJZ 770 1 KFAB WBBM 780 1	xilocycle * 1000 * 1000 * 1000 * 1000 * 250 * 1000 * 30000 * 30000 * 30000 * 30000 * 30000 * 1000 * 30000 * 300000 * 30000 * 30000 * 30000 * 30000 * 30000	$\begin{array}{c} \overset{\text{NX}}{\underset{\text{CPD}}{\text{cPD}}} \\ \text{es} & 3' \\ \overset{\text{RX}}{\underset{\text{BX}}{\text{rx}}} \\ \text{es} & 3' \\ \overset{\text{BD}}{\underset{\text{BD}}{\text{BD}}} \\ \end{array}$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City 89.4 meters Lincoln, Nebr. Chicago, Ill. 84.4 meters	Atlanta Journal Co. Granite State Broadcasting Corp. Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc. KFAB Broadcasting Co. WBBM Broadcasting Corp.
WSB WHEB 750 1 KGU WJR XEQ 760 1 KXA WBAL WEW WJZ 770 1 KFAB WBBM 780 1 CKY	xilocycle † 1000 † 10000 * 10000 * 2500 xilocycle * 250 * 1000 * 30000 * 30000 * 30000 * 1000 * 5000 * 25000 * 1000 * 30000 * 10000 * 10000 * 10000 * 10000 * 30000 * 10000 * 25000 * 10000 * 10000 * 25000 * 10000 * 30000 * 25000 * 10000 * 30000 * 25000 * 10000 * 25000 * 10000 * 25000 * 10000 * 25000 * 2500 * 25000 * 250000 * 25000 * 25000 * 25000 * 25000 * 25000 * 2500	$\begin{array}{c} \overset{\text{NX}}{\underset{\text{CPD}}{\text{cPD}}} \\ \text{es } 3^{\text{i}} \\ \overset{\text{max}}{\underset{\text{BX}}{\text{max}}} \\ \overset{\text{max}}{\underset{\text{B}}{\text{max}}} \\ \overset{\text{max}}{\underset{\text{Max}}} \\ \overset{\text{max}}{\underset{\text{Max}}} \\ \overset{\text{max}}{\underset{\text{Max}}} \\ \overset{\text{max}}{\underset{\text{B}}{\text{max}}} \\ \overset{\text{max}}{\underset{\text{Max}}} \\ \overset{\text{max}}} \\ \overset{\text{max}}{\underset{\text{Max}}} \\ \overset{\text{max}}{\underset{\text{Max}}} \\ \overset{\text{max}}} \\ \overset{\text{max}}{\underset{\text{Max}}} \\ \overset{\text{max}}{\underset{\text{Max}}} \\ \overset{\text{max}}} \\ \overset{\text{max}}{\underset{Max}} \\ \overset{\text{max}}} \\ \overset{\text{max}}} \\ \overset{\text{max}}} \\ \overset{\text{max}}}$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City 89.4 meters Lincoln, Nebr. Chicago, Ill. 84.4 meters	Atlanta Journal Co. Granite State Broadcasting Corp. Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc. KFAB Broadcasting Co. WBBM Broadcasting Corp.
WSB WHEB 750 1 KGU WR XEQ 760 1 KXA WBAL WEW WJZ 770 1 KFAB WBBM 780 1 CKY CNRW KELW	xilocycle i 1000 i 10000 i 10000 xilocycle i 2500 xilocycle i 25000 xilocycle i 25000 xilocycle i 25000 xilocycle i 25000 xilocycle i 25000 xilocycle i 5000 xilocycle i 5000 xilocycle xilocy	$\sum_{\substack{\text{CPD}\\\text{CPD}}}^{\text{NX}}_{\text{CPD}}$ $\sum_{\substack{\text{RX}\\\text{BX}\\B$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City 89.4 meters Lincoln, Nebr. Chicago, Ill. 84.4 meters Winnipeg, Manitol Winnipeg, Manitol	Atlanta Journal Co. Granite State Broadcasting Corp. S Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas S American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc. S KFAB Broadcasting Corp. B Manitoba Telephone System
WSB WHEB 750 1 KGU WJR XEQ 760 1 KKA WBAL WEW WJZ 770 1 KFAB WBBM 780 1 CNRW KELW	xilocycle t 1000 t 10000 t 10000 xilocycle 2500 t 1000 1000 t 30000 xilocycle 5000 xilocycle	$\sum_{\substack{\text{CPD}\\\text{CPD}}}^{\text{NX}}_{\text{CPD}}$ $\sum_{\substack{\text{RX}\\\text{BX}\\B$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City 89.4 meters Lincoln, Nebr. Chicago, Ill. 84.4 meters Winnipeg, Manitol Winnipeg, Manitol	Atlanta Journal Co. Granite State Broadcasting Corp. S Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas S American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc. S KFAB Broadcasting Corp. B Manitoba Telephone System
WSB WHEB 750 1 KGU WJR XEQ 760 1 KXA WBAL WEAL WEAL WBAL WBAL WBAL WJZ 770 1 KFAB WBBM 780 1 CKY CNRW KELW KTM WEAN	xilocycle t 1000 t 10000 t 10000 xilocycle 2500 t 1000 1000 t 30000 xilocycle 5000 xilocycle	$\sum_{\substack{\text{CPD}\\\text{CPD}}}^{\text{NX}}_{\text{CPD}}$ $\sum_{\substack{\text{RX}\\\text{BX}\\B$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City 89.4 meters Lincoln, Nebr. Chicago, Ill. 84.4 meters Winnipeg, Manitol Winnipeg, Manitol	Atlanta Journal Co. Granite State Broadcasting Corp. S Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas S American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc. S KFAB Broadcasting Corp. B Manitoba Telephone System
WSB WHEB 750 1 KGU WJR XEQ 760 1 KXA WEW WJZ 770 1 KFAB WBBM 780 1 CNRW KELW KELW KELW WPOR	xilocycle t 1000 t 10000 t 10000 xilocycle 2500 xilocycle 1000 t 30000 xilocycle 500 xilocycle 5000 xilocycle	$\sum_{\substack{\text{CPD}\\\text{CPD}}}^{\text{NX}}_{\text{CPD}}$ $\sum_{\substack{\text{RX}\\\text{BX}\\B$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City 89.4 meters Lincoln, Nebr. Chicago, Ill. 84.4 meters Winnipeg, Manitol Winnipeg, Manitol	Atlanta Journal Co. Granite State Broadcasting Corp. S Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas S American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc. S KFAB Broadcasting Corp. B Manitoba Telephone System
wsb wheb 750 1 kgu wr xeq 760 1 kxa wbal wjz 770 1 kfab wbbm 780 1 cky cnrw kfab wbbm 780 1 cky cnrw kfab wbbm	xilocycle t 1000 t 10000 t 10000 t 10000 xilocycle t 250 1000 t 30000 xilocycle t 5000 xilocycle t 5000 xilocycle	$\sum_{\substack{\text{CPD}\\\text{CPD}}}^{\text{NX}}_{\text{CPD}}$ $\sum_{\substack{\text{RX}\\\text{BX}\\B$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City 89.4 meters Lincoln, Nebr. Chicago, Ill. 84.4 meters Winnipeg, Manitol Winnipeg, Manitol Burbank, Cal. Los Angeles, Cal. Providence, R. I. Memphis, Tenn. Norfolk, Va.	Atlanta Journal Co. Granite State Broadcasting Corp. Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc. KFAB Broadcasting Corp. KFAB Broadcasting Corp. Manitoba Telephone System Canadian National Railways Magnolia Park, Ltd. Pickwick Broadcasting Service, Inc. Memphis Commercial-Appeal, Inc. WTAR Radio Corp.
WSB WHEB 750 1 KGU WJR XEQ 760 1 KXA WEW WJZ 770 1 KFAB WBBM 780 1 CNRW KELW KELW KELW KELW WPOR	xilocycle t 1000 t 10000 t 10000 xilocycle 2500 xilocycle 1000 t 30000 xilocycle 500 xilocycle 5000 xilocycle	$\sum_{\substack{\text{CPD}\\\text{CPD}}}^{\text{NX}}_{\text{CPD}}$ $\sum_{\substack{\text{RX}\\\text{BX}\\B$	Atlanta, Ga. Portsmouth, N. H. 99.8 meters Honolulu, Hawaii Detroit, Mich. Juarez, Chih. 94.5 meters Seattle, Wash. Baltimore, Md. St. Louis, Mo. New York City 89.4 meters Lincoln, Nebr. Chicago, Ill. 84.4 meters	Atlanta Journal Co. Granite State Broadcasting Corp. Marion A. Mulrony WJR, The Goodwill Station, Inc. Feliciano Lopez Islas American Radio Tel. Co. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting[Co., Inc. KFAB Broadcasting Co. WBBM Broadcasting Corp.

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790 kilocycles 379.5 meters [
CMBS 150 Havana, Cuba CMBT 150 Havana, Cuba CMHC 250 Tuinucu, Cuba KGO 7500 N WGY 50000 R Schenectady, N. Y.	Enrique Artalejo Emilio Perera Frank H. Jones National Broadcasting Co., Inc. General Electric Co.
	General Electric CO.
800 kilocycles 374.8 meters	
WBAP † 10000 IXN Fort Worth, Texas WFAA ¢ 50000 IN Dallas, Texas	Carter Publications, Inc. News & Journal
810 kilocycles 370.2 meters	KCYS 880
CHNS * 500 Za815 Halifax, N. S. CNRH 500 Za815 Halifax, N. S. WCCO * 5000 CX Minneapolis, Minn. WNYC † 500 New York City XFC 250 Aguascalientes, Mexico VOAS 75 St. John's, N. F.	Maritime Broadcasting Co., Ltd. Canadian National Railways Northwestern Broadcasting, Inc. Dept. of Plants & Structures Gobierno del Estado de Aguascalientes Ayre & Sons, Ltd. DIAL
820 kilocycles 365.6 meters	
CMGC 30 Matanzas, Cuba WHAS † 25000 CX Louisville, Ky. XFI 1000 818 Mexico City	Oscar S. Mechoso Courier-Journal X Times Sria. de Ind., Commercio y Trabajo
830 kilocycles 361.2 meters	
KOA † 12500 NX Denver, Colo. WEEU 1000 D Reading, Pa. WHDH 1000 D Boston, Mass. WRUF * 5000 DnC Gainesville, Fla.	National Broadcasting Co., Inc. Berks Broadcasting Co. Matheson Radio Co., Inc. University of Florida
840 kilocycles 356.9 meters	35
-CKGW * 10000 Na Toronto, Ont. CKLC † 1000 b Red Deer, Alta. CMC * 500	Gooderham & Worts, Ltd. Alberta Pacific Grain Co., Ltd. Cuban Telephone Co. Canadian National Railways Canadian Pacific Railways Carlos de la Sierra
850 kilocycles 352.7 meters	
CMJE 20 856 Camaguey, Cuba KWKH 10000 1 Shreveport, La. WWL 10000 1 New Orleans, La.	Manuel Fernandez Hello World Broadcasting Corp. Loyola University
860 kilocycles 348.6 meters	
WABC * 50000 Ca New York City WBOQ 50000 a New York City WHB * 500 D Kansas City, Mo. XFX 500 867 Mexico City, Mexico	Atlantic Broadcasting Corp. Atlantic Broadcasting Corp. WHB Broadcasting Co. Secretaria de Educacion Publica
870 kilocycles 344.6 meters	
WENR50000 1N Chicago, III. WLS † 50000 1N Chicago, III. XFF500 875 Chihuahua, Chih.	National Broadcasting Co., Inc. Agricultural Broadcasting Co. Gobierno del Estado de Chihuahua
880 kilocycles 340.7 meters	312
CHML • 50 4 Hamilton, Ont. CJCB • 50 Sydney, N. S. CKCV † 50 a Quebec, Que. CKPC † 100 4 Preston, Ont. CNRQ † 50 a Quebec, Que. KFKA † 500 2+ Greeley, Colo. KLX • 500 Oakland, Cal. KPOF • 500 2 Denver, Colo. WCOC • 500 + Meridian, Miss. WGBI • 250 1 Scranton, Pa. WQAN † 250 1 Scranton, Pa. WSUI • 500 Iowa City, Iowa	Maple Leaf Radio Co., Ltd. N. Nathanson Vandry, Inc. Cyrus Dolph Canadian National Railways Midwestern Radio Corp. Tribune Publishing Co. Pillar of Fire, Inc. Mississippi Broadcasting Co., Inc. Scranton Broadcasters, Inc. Scranton Times University of Iowa

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890	kilo	cycle	es	336.9	meters
CFBO		500	1.11	St. Jo	hn, N. B.
сксо	t	100	3		a. Ont.
CKPR		50	3	Ft. Wi	lliam, Ont.
CMCF	+	250			a, Cuba
CMX	*	500			a. Cuba
KARK		250	+	Little	Rock. Ark.
KFNF		500	2+	Shena	ndoah, Iowa
KUSD	÷	500	2	Vermi	llion, Ś. D.
WGST	*	250	+C		a, Ga.
WILL	1	250	2+	Urban	a, I11.
WJAR	•	250	$+\mathbf{R}$	Provid	ence, R. I.
WKAQ		500	$\mathbf{X}\mathbf{Z}$	San Ji	Jan, P. R.
₩MMŀ		250	+	Fairm	ont, W. Va.
XES	\$	500		Tamp	ico, Mexico
000	1_11.	. 1		I	

900 kilocycles 333.1 meters

KGBU KHJ KSEI WBEN WJAX WKY WIBI	† * * *	500 1000 250 1000 1000 1000 2000	C R N N	Ketchikan, Alaska Los Angeles, Cal. Pocatello, Idaho Buffalo, N. Y. Jacksonville, Fla. Oklahoma City
WLBL	1	2000	D	Stevens Point, Wis.

910 kilocycles 329.6 meters

CFLC		100	915	Prescott, Ont.
CFQC CNRS		500	а	Saskatoon, Sask.
		500	8	Saskatoon, Sask.
TICR		50	911	San Jose, Costa Rica
XEW	- †	5000		Mexico City

920 kilocycles 325.9 meters

CMCD	11	250	925	Havana, Cuba
CMCN		250	925	Havana, Cuba
ннк	÷7	1000		Port au Prince, Haiti
KFEL	+	500	1	Denver, Colo,
KFXF	÷	500	î.	Denver, Colo.
KOMO	+	1000	N	Seattle, Wash,
KPRC	÷	1000	+N	Houston, Texas
WAAF		5 0 0	Ď	Chicago, Ill.
WBSO		500	D	Needham, Mass.
WWJ	+	1000	R	Detroit, Mich.

930 kilocycles 322.4 meters

CFCH		100	3	North Bay, Ont.
CFRC		50	3+	Kingston, Ont.
CKX	+	500		Brandon, Man.
CMJF		225		Camaguey, Cuba
KFŴI	+	500	1	San Francisco, Cal.
KGBZ		500	2+	York, Nebr.
KMA	*	500	2+	Shenandoah, Iowa
KROW		500	1+X	Oakland, Cal.
WBRC		500	+C	Birmingham, Ala,
WDBJ		250	÷Č	Roanoke, Va.
WIBĞ		25	Ď –	Elkins Park, Pa.

940 kilocycles 319.0 meters

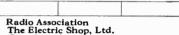
KOIN	1000	С	Portland, Oregon
KZRC	 500	937.5	Cebu, P. I.
WAAT	 300	D	Jersey City, N. J.
WCSH	1000	$\mathbf{R}+$	Portland, Maine
WDAY	1000	N	Fargo, N. D.
WFIW	1000	С	Hopkinsville, Ky.
WHA	 750	D+	Madison, Wis.
XEO	 5000		Mexico City

950 kilocycles 315.6 meters ^{CMHD} - ²⁵⁰ - ^{Caibarien, Cuba</sub> KFWB - ¹⁰⁰⁰ - ^{Caibarien, Cuba} Hollywood, Cal}

C. A. Munro, Ltd. Dr. G. M. Geldert Dougall Motor Car Corp. Raoul Karman Francisco Lavin Arkansas Radio & Equipment Co. Henry Field Co. University of South Dakota Georgia School of Technology University of Illinois The Outlet Co. Radio Corp. of Porto Rico Holt-Rowe Broadcasting Co. Difusora Portena XES

4	29	12	/		 -		

Alaska Radio & Service Co. Don Lee, Inc. Radio Service Corp. WBEN, Inc. City of Jacksonville WKY Radiophone Co. Wisconsin Dept. of Markets



Canadian National Railways

Mexico Music Co.

Angel Bertematy Antonio Ginard Republic of Haiti Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Service Organization, Inc. The Detroit News

Northern Supplies, Ltd. Queen's University Manitoba Telephone System John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Broadcasting Corp. Birmingham Broadcasting Co., Inc. Times-World Corp. WIBG, Inc.



Manuel Alvarez Warner Bros. Broadcasting Corp.

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				1 1102 202100120 11		
KGHL KMBC VONA	÷-	1000 1000 30	B+ C	Billings, Mont. Kansas City, Mo. St. John's, N. F.	Northwestern Auto Supply Co., Inc. Midland Broadcasting Co., Inc. Lane, Gillard & Avery	
WRC	Ŧ	5 00	R	Washington, D. C.	National Broadcasting Co., Inc.	
960	kilo	ocycl	es	312.3 meters		
CHCK CHWC	3	100 500	3	Charlottetown, P. E. I. Regina, Sask.	W. E. Burke & J. E. Gesner R. H. Williams & Sons, Ltd.	
CJBR CKCK		500	3a	Regina, Sask. Regina, Sask. Regina, Sask.	Cooperative Wheat Producers, Ltd. Leader-Post, Ltd.	
CKCK CKNC CMBC	1	500 500	3a	Toronto, Ont.	Canadian National Carbori Co., Ltd.	
CMBD		150 150	965 965	Havana, Cuba Havana, Cuba	Luis Perez Garcia	
CMJL CNRR		50 500	3a	Camaguey, Cuba Regina, Sask.	Enrique Artimes Canadian National Railways	
XED	÷.	10000	965	Reynosa, Mexico	International Broadcasting Co.	
970	kild	ocycl	es	309.1 meters		
KJR WCFL	•	5000 1500	N R Dn	Seattle, Wash. n Chicago, Ill.	Northwest Broadcasting System, Inc. Chicago Federation of Labor	
980	kile	ocycl	26	305.9 meters		KCYS.
		10000	985	Calgary, Alta.	W. W. Grant & H. G. Love	1020
CFCN KDKA TI4NR	н 🗄	50000 15	985 B	Pittsburgh, Pa. Heredia, C. R.	Westinghouse Elec. & Mfg. Co. Armando Cespedes	mtrs. 293.9
99 0	kild	ocycl	es	302.8 meters		DIAL
CMGF	' †	50	987	Matanzas, Cuba	Bernabe R. de la Torre	JIAL
WBZA	. †	25000 1000		K Boston, Mass. K Springfield, Mass.	Westinghouse Elec. & Mfg. Co. Westinghouse Elec. & Mfg. Co.	1
XEK		101		Mexico City	Arturo Martinez	
) kil	locycl		299.8 meters		
KFVD WHO WOC	* *	259 5000 5000	Dn $R \square X$ $R \square X$	Los Angeles, Calif. X Des Moines, Iowa X Davenport, Iowa	Los Angeles Broadcasting Co. Central Broadcasting Co. Central Broadcasting Co.	
WORK		1000	D	York, Pa.	York Broadcasting Co.	i i
XEA XEC	Ŧ	100 50		Guadalajara, Jal. Toluca, Mex.	Alberto Palos Sauza Jesus R. Benavides	
XEE XEFE XEFI		105 100		Oaxaca, Oax. N. Laredo, Tams.	Alfonso Zorilla B. Rafael T. Carranza Feliciano Lopez Islas	
XEFI XEFS		100		Chihuahua, Chih.	Feliciano Lopez Islas Salvador Sanchez	
XEI	÷-	101		Queretaro, Qro. Morelia, Mexico	Carlos Gutierrez M.	
XEI XEJ XEL	•	100 25		Juarez, Chih. Saltillo, Coah. Jalapa, Ver.	Juan G. Buttner Antonio Garza Castro	i i
XETC		100		Jalapa, Ver.	Juventino Sanchez Feliciano Lopez Islas	í.
XETG XEU		$\begin{array}{c} 100 \\ 100 \end{array}$			Fernando Pazos	1
XEV XEY		$100 \\ 105$		Veracruz, Ver. Puebla, Pue. Merida, Yuc.	Ciro Molina Partido Socialista S. E.	
1010) kil	locycl	les	296.8 meters		
CKIC		50		Wolfville, N. S.	Acadia University	
CMBZ KGGF	Ŧ	150 500	2	Havana. Cuba Coffeyville, Kans.	Manual y G. Salas Powell & Platz	
KOW WHN	÷	500 250	- 1	San Jose, Cal. New York City	Pacific Agricultural Foundation, Ltd. Marcus Loew Booking Agency	1
WIS	+	500	1 +N 2	Columbia, S. C.	South Carolina Broadcasting Co., Inc. University of Oklahoma	Í
WNAD WPAP	*	500 250	2 1	Norman, Okla. New York City	Calvary Baptist Church	l.
WQAO WRNY		250 250	1	New York City New York City New York City	Calvary Baptist Church Aviation Radio Station, Inc.	
		locycl	-	293.9 meters		
CMIH		15	1017	Ciego de Avila, Cuba	Luis Marauri	i i
KFKX KYW WRAX	: :	10000 10000 250	a Na D	Chicago, III. Chicago, III. Philadelphia, Pa.	Westinghouse Elec. & Mfg. Co. Westinghouse Elec. & Mfg. Co. WRAX Broadcasting Co.	
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1030	kil	ocyc	les 、	291.1 meters [
CFCF CMHI	11	500 30	N	Montreal, Que.	Canadian Marconi Co.
CMKC		150	1034	Santa Clara, Cuba Santiago de Cuba	Lavin y Paz M. P. Martinez
CNRV XEB	1	500 1000		Vancouver, B. C. Mexico City, Mexico	Canadian National Railways El Buen Tono, S. A.
	1.1	ocyc		288.3 meters	El Buen Tono, S. A.
CMGH		150		Matanzas, Cuba	Alberto Alvarez
KRLD		10000	CI NI	Dallas, Texas	KRLD Radio Corp.
KTHS WKAR	Ţ	1000	D	Hot Springs, Ark. East Lansing, Mich.	Chamber of Commerce Michigan State College
	kil	ocyc	les	285.5 meters [
CMJG KFBI	24 - C	50 5000	Dn	Camaguey, Cuba Milford, Kansas	Jose Antonio Lefran Farmers & Bankers Life Insurance Co.
KNX	*	5000		Hollywood, Cal.	Western Broadcast Co.
XEFC	1.1	10 ocyc	100	Merida, Yuc.	Hugo Molina Font.
KWII	*	500 500	Dn	282.8 meters	KWJJ Broadcast Co., Inc.
KWJJ WBAL		10000	1B	Baltimore, Md. Norfolk, Nebr.	Consolidated Gas Elec. & Pwr. Co.
WJAG WTIC	÷	1000 50000	Dn 1R	Hartford, Conn.	Norfolk Daily News Travelers Broadcasting Service Corp.
1070	kil	ocyc	les	280.2 meters	17-24
CMBG		225		Havana, Cuba	Francisco Garrigo
CMCB KJBS WCAZ	•	150 100	D	Havana, Cuba San Francisco, Cal.	Antonio Capablanca Julius Brunton & Sons Co.
WCAZ WDZ	*	50 100	D D	Carthage, Ill. Tuscola, Ill.	Superior Broadcasting Service
-WTAM	1	50000	Ř	Cleveland, Ohio	James L. Bush National Broadcasting Co., Inc.
XEG	1-:1	250	1	Mexico City, Mexico	Miguel Yarza
	KII	ocyc	les	277.6 meters	
WBT WCBD	÷	5000 5000	CX 1 Dn	Charlotte, N. C. Zion, Ill.	Station WBT, Inc. Wilbur Glenn Voliva
WMBI	*	5000	1 Dn	Chicago, Ill.	Moody Bible Institute
	KII	ocyc		275.1 meters	
KMOX	1_11	50000	С 1	St. Louis, Mo.	Voice of St. Louis, Inc.
	K11	ocyc		272.6 meters	
KGDM WLWL	÷.	250 5000		Stockton, Cal. New York City	E. F. Peffer Missionary Society of St. Paul
WPG	•	5000	îC	Atlantic City, N. J.	WPG Broadcasting Corp.
1110	kil	ocyc	les	270.1 meters	
KSOO KZKA	*	2500 1000	Dn	Sioux Falls, S. D. Manilla, P. I.	Sioux Falls Broadcasting Assn., Inc.
WRVA		5000	Ň	Richmond, Va.	Larus & Bros. Co., Inc.
	kil	ocyc	les	267.7 meters	
CFCA	†	500 100	8	Toronto, Ont. Kamloops, B. C.	Star Pub. & Ptg. Co. D. S. Dalgleish & Sons
CFJC CHGS CJOC CMHJ	Ť	500		Summerside, P. E. I.	R. T. Holman, Ltd.
CMHJ	†	100 40	1125	Lethbridge, Alta Cienfuegos, Cuba	Harold R. Carson Arturo Hernandez
ČNRŤ KFIO	*	500 100	a D	Toronto, Ont. Spokane, Wash.	Canadian National Railways Spokane Broadcasting Corp.
KFSG	1	500	33	Los Angeles, Cal.	Echo Park Evang. Assn.
KRKD KRSC	*	500 50	3 D	Los Angeles, Cal. Los Angeles, Cal. Seattle, Wash.	Dalton's, Inc. Radio Sales Corp.
KTRH WDBO	† ∗	500	2C	Houston, Texas Orlando, Fla.	KTRH Broadcasting Co.
WDEL	t	250 250	+C +X	Wilmington, Del.	Orlando Broadcasting Co., Inc. WDEL, Inc.
WHAD WISN		250 250		Wilmington, Del. Milwaukee, Wis. Milwaukee, Wis. College Station, Texas	Marquette University Evening Wisconsin Co.
WTAW	‡	500	2	College Station, Texas	Agricultural & Mech. College
1130	kil	ocyc	les	265.3 meters [
KSL	:	5000 20000	NX Dn	Salt Lake City	Radio Service Corp. of Utah
W J JD WOV		1000	D	Mooseheart, Ill. New York City	WJJD, Inc. International Broadcasting Corp.
XEH		1000	1132	Monterrey, N. L.	Constantino Tarnava

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1140	kil	ocycl	es	263.0 meters
CMBW CMCQ KVOO WAPI XETA		150		Havana, Cuba
CMCQ		1000		Havana, Cuba Havana, Cuba Tuisa, Okia.
KVOO		5000	INX	Tulsa, Okla.
WAPI	•	5000	1NX	Birmingham, Ala.
XEIA	- 12	500		Mexico City
1150	1-11	ocycl	06	260.7 meters
1150	KII	Jeyer	C3	
CMGI		30	BX	Colon, Cuba
WHAM 10-AT		5000 25	ВА 1155	Rochester, N. Y. Trail, B. C.
10-A1		20		
1160	kild	ocycl	es	258.5 meters
WOWO				
WOWO	- - -	10000 5000	1C 1C	Ft. Wayne, Ind. Wheeling, W. Va.
1170	kil	ocycl	es	256.3 meters
WCAU	*	10000	cx	Philadelphia, Pa.
1180	kil	ocycl	es	254.1 meters
		5000	2N	
KEX		20000	2	Portland, Ore. State College N. M.
WDGY	*	1000	Dn	Minneapolis, Minn.
KOB WDGY WINS		500		State College, N. M. Minneapolis, Minn. New York City
WMAZ	+	500		Macon, Ga.
1100	1 .1	1		252 0
1190	k 1l	ocycl	es	252.0 meters
WOAI		50000	N	San Antonio, Texas
1200	1-11	001101	~~	249.9 meters
1200	KII	ocycl	es	
CKOV CMGB		100		Kelowna, B. C. Matanzas, Cuba Paragould, Ark.
CMGB		30 100	1205 D	Matanzas, Cuba Desegould Ask
KBTM KERN		100	č	Roversteld Col
KEIR	Ť	100	¥	Marshailtown, Iowa
KFWF		100	5+	St. Louis, Mo.
KFXD	*	100		Nampa, Idaho
KFJB KFWF KFXD KGDE KGDY		100	+	Marshalltown, Iowa St. Louis, Mo. Nampa, Idaho Fergus Falls, Minn. Huron, S. D. Yuma, Colo.
KGDY	17	100	9	
KGEK	1	100 100	9	Fort Morgan Colo
KGFI	1	100	,	Los Angeles, Cal.
KGEK KGEW KGFJ KGHI		100		Yuma, Colo. Fort Morgan, Colo. Los Angeles, Cal. Little Rock, Ark. Monroe La
KGHI KMLB KVOS KWG WABI WABZ WBBZ		100	D	Monroe, La.
KVOS	*	100		Bellingham, Wash.
KWG		100 100		Bangor Maine
WAB7	1	100	1	New Orleans, La.
WBBZ		100		Ponca City, Okla.
WBHS		100 50	10CP	Huntsville, Ala.
WCAT WCAX WCLO WCOD WFAM	1	100	2	Monroe, La. Bellingham, Wash. Stockton, Cal. Bangor, Maine New Orleans, La. Ponca City, Okla. Huntsville, Ala. Rapid City, S. D. Burlington, Vt. Ianesville, Wis.
WCAX		100	2	Burlington, Vt.
WCOD	Ţ	100 100	3	Harrisburg Pa
WFAM	4	100	8	South Bend, Ind.
WHRC	*	50	10X	Y Knoxville, Tenn.
WFBE WHBC WHBY WIBX		100	+	Burlington, Vt. Janesville, Wis. Harrisburg, Pa. South Bend, Ind. Y Knosville, Tenn. Cincinnati, Ohio Canton, Ohio
WHBC	- t	10		Cincinnati, Ohio Canton, Ohio Green Bay, Wis. Utica, N. Y. St. Louis, Mo. La Salle, 111. Decatur, 111. New Orleans, La. Lancaster, Pa.
WIBY	1	100 100	 -	Ution N Y
		100	5+	St. Louis. Mo.
WJBC WJBL WJBW		100	6	La Salle, Ill.
W)BL	t	100	6	Decatur, Ill.
NJBW	<u>t</u>	100	1 3	New Orleans, La.
WKJC WLAP	-	100 250	3	Lancaster, Pa.
		100	Ŧ	Lancaster, Pa. Louisville, Ky. Petersburg, Va.
WNBO		100		Washington, Pa.
WNBO WNBW WNBX	' †	10		Carbondale, Pa.
WNBX	+	10	2	Springfield, Vt.
WORC		100	ÇX	Washington, Pa. Carbondale, Pa. Springfield, Vt. Worcester, Mass. Columbuse Ga
WRBL WWAE	Ţ	50 100	ČX X 8	Hammond Ind
10-AB		25		Columbus, Ga. Hammond, Ind. Moose Jaw, Sask. Wingham, Ont. Brantford, Ont.
10-AB 10-BP	Ŧ	15		Wingham, Ont.
10-BQ		15		Brantford, Ont.

	TUDERO		
Alvarez-M Andres M Southwest WAPI Bro Manuel Es		p.	
Armando Stromberg Trail Ama	Lizama 5-Carlson Tel. teur Radio Ass	Mfg. Co. sn.	
14%			
Main Auto West Virgi	o Supply Co. inia Broadcast	ing Corp.	
Universal	Broadcasting	Co.	
Western E College of Dr. Georg American Southeast	Broadcasting C Agriculture & e W. Young Radio News C tern Broadcast	o. 2 Mech. Arts orp. ing Co., Inc.	1
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Southern	Equipment Co	.	1
J. W. B. E Jose Anor W. J. Bea	Browne ga rd's Temple of rfield Brdosta	Music	KCYS.
Voice of S Beehler E City of Fo Ben S Mo	source ga rd's Temple of sfield Brdcstg Electric Co., 11 Truth Center, Hurt g Co. outh Dakota lec. Equipmen rt Morgan cGlashan k voadcasting Sta	t Co.	1200 mtrs. 249.9 DIAL
Voice of S Beehler E City of Fo Ben S. Mo O. A. Cool Liner's Br KVOS, In Portable V First Unit Samuel D C. L. Carr The Huto	outh Dakota lec. Equipmen ort Morgan cGlashan k vadcasting Sta C: Wireless Tel. C versalist Societ , Reeks rell hens Co.	t Co. ation, Inc. o., Inc.	мтрз. 249.9
Voice of S Beehler E City of Fc Ben S. Mc O. A. Cool Liner's Br KVOS, In Portable V First Unit Samuel D C. L. Carr The Hutc State Sch Burlingto WCLO Ra Keystone South Beu Virgil V	outh Dakota lec. Equipmenn rt Morgan Glashan k vodcasting Sta c. Wireless Tel. C versalist Societ real societ hens Co. ool of Mines n Daily News dio Corp. Broadcasting nd Tribune Fvans	t Co. htion, Inc. o., Inc. y Corp	мтрз. 249.9
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Voice of S Beehler E City of Fo Ben S. MG O. A. Cool Liner's Br Portable V First Unit Samuel D C. L. Carr The Hutc State Sch Burlingto WCLO Ra Keystone South Bei Virgil V. I Post Publ St. John's St. Norbe WIBX, In Missouri Kaskaskii Commode Charles C Lancaster American WLBG, II John Bro Home Cu First Con Alfred Fr WRBL Ra Hammon Moose Ja	outh Dakota lec. Equipmenn rt Morgan Glashan k vadcasting Sta c. Wireless Tel. C versalist Societ rell hens Co. ool of Mines n Daily News udio Corp. Broadcasting nd Tribune Evans lishing Co. s Catholic Chu rt's College te. Broadcasting (t Co. ation, Inc. o., Inc. y Corp arch Corp. r Co. ng, Inc. ice Inc. Corp. of Ky. na Co. nurch st nc. road. Corp.	мтрз. 249.9

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1210	kil	ocycl	les	247.8 meters
CFCO		250	8	Chatham, Ont.
CFNB		50	~	Fredericton, N. B.
CJOR		500		Vancouver, B. C.
CKMC		100	8	Cobalt, Ont.
KDLR	Ť	100		Devil's Lake, N. D.
VEII	1			Vieweek Felle
KF JI KFOR	‡	100		Klamath Falls, Ore
KEVS		$100 \\ 100$	+	Lincoln, Nebr.
KFVS KFXM	ŧ		6	Cape Girardeau, Mo.
KGCR		100	7	San Bernardino, Cal.
KGMP	t	100		Watertown, S. D.
KGNO	- 18 ¹⁰	100		Elk City, Okla.
KGNU		100		Dodge City, Kansas Olympia, Wash. Fresno, Cal.
KGY	‡ =	100		Olympia, Wash.
KMJ		100		Fresno, Cal.
KPPC	***	50	9	Pasadena, Cal.
KWEA		100		Shreveport, La.
WALR	*	100		Zanesville, Ohio
WBAX	*	100	1	wilkes-Barre, Pa.
WBBL	- t -	100	7S	Richmond, Va. Springfield, Ill.
WCBS	*	100	2	Springfield, Ill.
WCOH	*	100	3Z	Yonkers, N. Y.
WCRW		100	4	Chicago. Ill,
WEBQ	*	100	6	Harrisburg, Ill.
WEDC	~ ~	100	4	Chicago, Ill.
WGBB		100	3	Freeport, N. Y.
WHBF		100		Rock Island, Ill.
WHBU	+	100		Anderson, Ind. Poynette, Wis.
WIBU	*	100		Poynette, Wis.
WJBI		100	3	Red Bank, N. J.
WJBU	*	100	1	Lewisburg, Pa.
WJBU WJBY		100		Godedon Alo
WJW WLCI		100		Mansfield, Ohio
WLCI	*	50		Ithaca, N. Y.
WMBG	*	100	7C	Ithaca, N. Y. Richmond, Va.
WMRJ		100	3	Jamaica, N. Y.
WOCL		50		Jamestown, N. Y.
WOMT		100		Manitowoc, Wis. Providence, R. I.
WPAW	*	100	a	Providence, R. I.
WPRO		100	a	Providence, R. 1.
WQDX WRBQ		100		Thomasville, Ga.
WRBO	+	100	+	Greenville, Miss.
WSBC	*	100	4	Chicego, Ill.
WSEN	1	100		Columbus, Ohio
WSIX	- ÷	100		Columbus, Ohio Springfield, Tenn.
WSOC	+	100		Gastonia, N. C.
WTAX	÷	100	2	Springfield, Ill.
XEX		500		Mexico City
	1			-
1220	KII	ocycl		245.8 meters
KFKU	*	500	1	Lawrence, Kansas
KTW	z -	1000	2	Seattle, Wash.
KWSC	*	1000	+ 2	Pullman, Wash.
WCAD	*	500	D	Canton, N. Y.
WCAE		1000	R	Canton, N. Y. Pittsburgh, Pa.
WDAE	* .	1000	C	Lampa, Fla.
WREN		1000	1B	Lawrence, Kansas

1230 kilocvcles 243.8 meters

CMBY		350	1235	Havana, Cuba
CMCA		150	1235	Havana, Cuba
KFQD		250		Anchorage, Alaska
KGĞM	+	250	+	Albuquerque, N. Mex.
KYA	*	1000	в	San Francisco, Cal.
WFBM	*	1000	1C	Indianapolis, Ind.
WNAC	*	1000	С	Boston, Mass.
WPSC		500	D	State College, Pa.
WSBT	t	500	1C	South Bend, Ind.
XETQ		100		Mexico, Mex.

1240 kilocycles 241.8 meters Cuba

	TCTTC	<i>,</i> , , , , , , , , , ,	00	PILO INCLU
CMAB		20	1249	Pinar del Rio. Cub
KGCU		250	3	Mandan, N. D.
KLPM	+	250	3	Minot, N. D.
KTAT	- t	1000	1	Ft. Worth, Texas
KTFI		500	+	Twin Falls, Idaho
WACO	+	1000	1C	Waco, Texas
WXYZ	†	1000		Detroit, Mich.

John Beardall James S. Neill & Sons, Ltd. G. C. Chandler R. L. MacAdam KDLR, Inc. KFJI Broadcasters, Inc. Howard A. Shuman Hirsch Battery & Radio Co. J. C. & E. W. Lee Greater Kampeska Radio Corp. Bryant Radio & Electric Co. Dodge City Broadcasting Co. KGY, Inc. James McClatchy Co. James McClatchy Co. Pasadena Presbyterian Church Hello World Broadcasting Corp. Roy W. Waller John H. Stenger, Jr. Grace Covenant Pres. Church H. L. Dewing & Chas. Messter Westchester Broadcasting Corp. Clinton R. White First Trust & Savings Bank First Trust & Savings Bank Emil Denemark, Inc. Harry H. Carman Beardsley Specialty Co. Anderson Broadcasting Corp. Wm. C. Forrest Monmouth Broadcasting Co. **Bucknell University** Gadsen Broadcasting Co., Inc. Mansfield Broadcasting Co., Inc. Mansfield Broadcasting Assn. Lutheran Assn. of Ithaca Havens & Martin, Inc. Peter J. Prinz A. E. Newton Cherry & Webb Broadcasting Co. Cherry & Webb Broadcasting Co. Stevens Luke J. Pat. Scully World Battery Co., Inc. Columbus Broadcasting Co. 638 Tire & Vulcanizing Co. WSOC, Inc. WTAX, Inc. Excelsior, Cia Editorial S. A.

University of Kansas First Presbyterian Church State College of Washington St. Lawrence University Pittsburgh Sun-Telegraph Tampa Publishing Co. Jenny Wren Co.

Callejas-Estefani Manuel Cruz Anchorage Radio Club New Mexico Broadcasting Co. Pacific Broadcasting Corp. Indianapolis Power & Light Co. Shepard Broadcasting Service, Inc. Pennsylvania State College South Bend Tribune Carlos G. Cabaliero

Francisco Martinez Mandan Radio Assn. John B. Cooley Texas Air Transport Radio Broadcasting Corp. Central Texas Broadcasting Co., Inc. Kunsky-Trendle Broadcasting Corp.

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1250	kilc	ocycl	es 2	239.9 meters 🛛		[· · · · · · · · · · · · · · · · · · ·]
KFMX KFOX	t	1000	2	Northfield, Minn. Long Beach, Cal.	Carleton College		,
KFOX WAAM	*	1000 1000	$\overline{i+X}$	Long Beach, Cal.	Nichols & Warinner, Inc		
WCAL		1000	2	Newark, N. J. Northfield, Minn.	WAAM, Inc. St. Olaf College Jos. H. Uhalt		
WDSU WGCP	1	1000 250	C 1	New Orleans, La.	Jos. H. Uhalt May Radio Broadcast Co		
WLB	Ť	1000	2	Newark, N. J. St. Paul, Minn.	University of Minnesota Richard E. O'Dea	np.	
WODA WRHM	- 1	1000 1000	12	Paterson, N. J. Minneapolis, Minn.	Richard E. O'Dea Minnesota Broadcasting	Corn	
XEFA		250		Mexico City	Manuel F. Murguia	corp.	
1260	kilo	ocycl	es 2	238.0 meters [11]
CMJI		5	D	Ciego de Avila, Cuba	Gilberto Gessa		
KOĬL KRGV		1000 500	B 1	Council Bluffs, Iowa Harlingen, Texas	Mona Motor Oil Co. KRGV, Inc.		
KRGV KVOA KWWG	t	500	D 1	Harlingen, Texas Tucson, Arizona Brownsville, Texas	KRGV, Inc. Robert M. Riculfi Herald Pub. Co.		
-WLBW		500 500	ċ+	Oil City, Pa.	Radio-Wire Program Co	rp.	
WTOC	•	500	C	Savannah, Ga.	Savannah Broadcasting	Co.	
1270	kilo		es 1	236.1 meters []
CMCU CMCW KGCA		150 150		Havana, Cuba Havana, Cuba	Jorge Garcia Serra Jose Lorenzo		
KGCA	Ť	50	2D	Decorah, Iowa Seattle, Wash.	Charles W. Greenley		
KOL KVOR	Ŧ	1000 1000	с с	Seattle, Wash. Colorado Springs, Colo.	Seattle Broadcasting Co Reynolds Radio Co., Inc		
KWLC WASH	•	100	2D	Grand Rapids, Mich.	Luther College	•	
WASH WEAI	:	500 1000	a D	Grand Rapids, Mich. Ithaca, N. Y.	Kunsky-Trendle Broadc	asting Corp.	
WFBR	-	500	R	Baltimore, Md.	Luther College Kunsky-Trendle Broadc Cornell University Baltimore Radio Show, Lamar Life Insurance C	Inc.	
WJDX WOOD	* †	1000 500	N a	Jackson, Miss. Grand Rapids, Mich.	Kunsky-Trendle Broade	o. asting Corp.	
1280	kilo	ocycl	es	234.2 meters]
				L.	the second se		
KFBB		1000	+	Great Falls, Mont.	Buttrey Broadcast, Inc.		
WCAP	-	500	1	Great Falls, Mont. Camden, N. J.	Buttrey Broadcast, Inc. City of Camden Radio Industries Broad	cest Co	
WCAM WCAP WDOD		500 500 1000	1 1 +C	Camden, N. J.	WDOD Broadcasting Co	rp.	
WCAM WCAP WDOD WIBA		500 500 1000 500	1 1 +C +N	Camden, N. J.	WDOD Broadcasting Co	rp.	
WCAM WCAP WDOD	+	500 500 1000	1 1 +C	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas	Radio Industries Broad	rp.	
WCAM WCAP WDOD WIBA WOAX	• • ፪	500 500 1000 500 500 500	1 +C +N 1 C	Camden, N. J.	WDOD Broadcasting Co	rp.	KCYS.
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL	• • ፪	500 500 500 500 500 500 500 500 500	1 +C +N 1 C es	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City	Kadio Industries Broad WDOD Broadcasting Co Badger Broadcasting Co WOAX, Inc. City of Dallas	rp.	ксуз. 1310
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KFUL	: ē kilo	500 500 500 500 500 500 500	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ 1 \\ C \end{array} $ $ \begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark.	Adio Industries Broad WDOD Broadcasting Co Badger Broadcasting Co WOAX, Inc. City of Dallas) 0 4- Intermountain Broadca News Publishing Co. C. L. Lintzenich	rp. sting Corp.	1310
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KFUL	: <i>i</i> <i>k</i> ilo 1 -	500 500 500 500 500 500 500 500 500 500	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ 1 \\ C \end{array} $ $ \begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas	Radio Industries Broad WDOD Broadcasting Co Badger Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co	rp. sting Corp.	1310 MTRS.
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KTSA WEBC	: i kilo	500 500 500 500 500 500 500 500 500 500	$ \begin{array}{c} 1 \\ 1 \\ 1 \\ \mathbf{C} \\ \mathbf{N} \\ \mathbf{C} \\ \mathbf$	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa.	Radio Industries Broad WDOD Broadcasting Co Badger Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl	rp. sting Corp.	1310 MTRS.
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KFUL	÷ kilo ↓	500 500 500 500 500 500 500 500 500 500	$ \begin{array}{c} 1\\ 1\\ +C\\ +N\\ 1\\ C\\ es\\ 1 \end{array} $	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas	Radio Industries Broad WDOD Broadcasting Co Badger Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co	rp. sting Corp.	1310
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KLCN WEBC WJAS WNBZ 1300		500 500 500 500 500 500 500 500 500 500	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ 1 \\ C \\ es \\ C \\ 1 \\ + \\ C \\ D \\ + \\ C \\ D \end{array} \right) $	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters	Radio Industries Broad WDOD Broadcasting Co Badger Broadcasting Co WOAX, Inc. City of Dallas) 0 4 Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace	rp. sting Corp.	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KTSA WEBC WJAS WNBZ 1300 CMKJ		$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500$	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ 1 \\ C \end{array} $ es $ \begin{array}{c} C \\ 1 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles Cal	Radio Industries Broad WDOD Broadcasting Co Bedger Broadcasting Co WOAX, Inc. City of Dallas) 0 4 Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace	rp. sting Corp. ing Co. y House	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KFUL KLCN KTSA WNBZ 1300 CMKJ KFAC KFH	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500$	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ 1 \\ C \\ es \\ - \\ 1 \\ + \\ C \\ + \\ C \\ + \\ C \\ es \\ - \\ + \\ C \\ $	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles Cal	Radio Industries Broad WDOD Broadcasting Co Bedger Broadcasting Co WOAX, Inc. City of Dallas) 0 4 Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace	rp. sting Corp. ing Co. y House	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KFUL KLCN KTSA WNBZ 1300 CMKJ KFAC KFH	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ $	1 + CN = C + CN = CN =	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles Cal	Kadio Industries Broad WDOD Broadcasting Co Badger Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace Luis Morlote Los Angeles Broadcastin Radio Station KFH Co. Ashley C. Dixon-KFJR M. E. Brown	rp. sting Corp. ing Co. y House ng Co. , Inc.	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KTSA WEBC WBC MKJ KFAC KFH KFJR KFBR KFJR KFJR KFJR KFBR WBBR	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500$	1 + CN = C + CC + CD = C + C	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles, Cal. Wichita, Kansas Portland, Ore. Portland, Ore.	Radio Industries Broad WDOD Broadcasting Co Beadger Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace Luis Morlote Los Angeles Broadcastin Radio Station KFH Co. Ashley C. Dixon-KFJR M. E. Brown	rp. sting Corp. ing Co. y House ng Co. , Inc.	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KFUL KLCN KFUL KTSA WNBZ 1300 CMKJ KFAC KFH KFJR KTBR KBBR WEDD	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500$	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ 1 \\ C \\ es \\ C \\ 1 \\ + \\ + \\ + \\ - \\ D \\ es \\ 4 \\ C \\ 3 \\ 3 \\ 1 \\ 1 \\ 1 \end{array} $	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles, Cal. Wichita, Kansas Portland, Ore. Portland, Ore.	Radio Industries Broad WDOD Broadcasting Co Beadger Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace Luis Morlote Los Angeles Broadcastin Radio Station KFH Co. Ashley C. Dixon-KFJR M. E. Brown	rp. sting Corp. ing Co. y House ng Co. , Inc.	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KTSA WNBZ 1300 CMKJ KFJR KFJR KFJR KFJR KFJR KFJR KFJR KF	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ \hline \\ 500\\ \hline \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ 1 \\ C \\ e \\ e \\ C \\ 1 \\ + \\ C \\ - \\ 1 \\ + \\ C \\ - \\ e \\ e \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles, Cal. Wichita, Kansas Portland, Ore. Portland, Ore. Brooklyn, N. Y. New York City New York City New York City New York City	Radio Industries Broad WDOD Broadcasting Co Beadger Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace Luis Morlote Los Angeles Broadcastin Radio Station KFH Co. Ashley C. Dixon-KFJR M. E. Brown People's Pulpit Associat Debs Memorial Radio F Defenders of Truth Soc Rensselaer Polytechnic	rp. sting Corp. ing Co. y House ng Co. , Inc. ion und, Inc. lety, Inc. Institute	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KFUL KLCN KFUL KLCN KFUL KFJR KTBR KTBR KFFH KFJR KFJBR WBBR WEVD WFAB WHAZ WIOD	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500$	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ 1 \\ C \\ es \\ C \\ 1 \\ + \\ + \\ + \\ - \\ D \\ es \\ 4 \\ C \\ 3 \\ 3 \\ 1 \\ 1 \\ 1 \end{array} $	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles, Cal. Wichita, Kansas Portland, Ore. Brooklyn, N. Y. New York City Troy, N. Y. Miami, Fla.	Radio Industries Broad WDOD Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace Luis Morlote Los Angeles Broadcastin Radio Station KFH Co. Ashley C. Dixon-KFJR M. E. Brown People's Pulpit Associat Defenders of Truth Soc Rensselaer Polytechnic Isle of Dreams Broadca	rp. sting Corp. ing Co. y House ng Co. , Inc. idon und, Inc. lety, Inc. Institute sting Corp.	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KTSA WBC WEBC WBC KFAC KFAC KFAC KFAR KTBR KTBR KTBR WBBR WEYD WFAB WHAZ WIOO XEM	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500$	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ 1 \\ C \\ es \\ C \\ 1 \\ + \\ C \\ D \\ + \\ C \\ es \\ 4 \\ C \\ 3 \\ 3 \\ 1 \\ 1 \\ 1 \\ N \end{array} \right) $	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles, Cal. Wichita, Kansas Portland, Ore. Brotklyn, N. Y. New York City Troy, N. Y. Miami, Fia. Kansas City, Mo. Tampico, Tams.	Radio Industries Broad WDOD Broadcasting Co Beadger Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace Luis Morlote Los Angeles Broadcastin Radio Station KFH Co. Ashley C. Dixon-KFJR M. E. Brown People's Pulpit Associat Debs Memorial Radio F Defenders of Truth Soc Rensselaer Polytechnic	rp. sting Corp. ing Co. y House ng Co. , Inc. idon und, Inc. lety, Inc. Institute sting Corp.	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KFUL KLCN KFUL KLCN KFUL KLCN KFUL KFUL KFUL KFAC KFAC KFAC KFAC KFAC KFAC KFAC KFAC	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500$	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ + \\ C \\ es \\ c \\ 1 \\ - \\ + \\ + \\ C \\ D \\ es \\ \hline \\ 4 \\ C \\ 3 \\ 3 \\ 1 \\ 1 \\ - \\ N \\ \hline \\ es \\ es \\ \end{array} $	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles, Cal. Wichita, Kansas Portland, Ore. Brooklyn, N. Y. New York City Troy, N. Y. Miami, Fla. Kansas City, Mo. Tampico, Tams. 228.9 meters	Adio Industries Broad WDOD Broadcasting Co Beadger Broadcasting Co WOAX, Inc. City of Dallas) Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace Luis Morlote Los Angeles Broadcastin Radio Station KFH Co. Ashley C. Dixon-KFJR M. E. Brown People's Pulpit Associat Defenders of Truth Soc Rensselaer Polytechnic Isle of Dreams Broadca Unity School of Christi Maria T. de Gutirrez	rp. sting Corp. ing Co. y House ng Co. , Inc. idon und, Inc. lety, Inc. Institute sting Corp.	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KFUL KLCN KFUL KLCN KFUL KLCN KFUL KFUL KFUL KFAC KFAC KFAC KFAC KFAC KFAC KFAC KFAC	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500$	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ + \\ 1 \\ C \\ es \\ C \\ 1 \\ + \\ + \\ C \\ D \\ es \\ 4 \\ C \\ 3 \\ 3 \\ 1 \\ 1 \\ 1 \\ N \\ es \\ D \\ es \\ D \\ \end{array} $	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles, Cal. Wichita, Kansas Portland, Ore. Brooklyn, N. Y. New York City New York City New York City Troy, N. Y. Miami, Fla. Kansas City, Mo. Tampico, Tams. 228.9 meters	Radio Industries Broad WDOD Broadcasting Co Beadger Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace Luis Morlote Los Angeles Broadcastin Radio Station KFH Co. Ashley C. Dixon-KFJR M. E. Brown People's Pulpit Associat Debs Memorial Radio F Defenders of Truth Soc Rensselaer Polytechnic Isle of Dreams Broadca Unity School of Christil Maria T. de Gutirrez	rp. sting Corp. ing Co. y House ng Co. , Inc. idon und, Inc. lety, Inc. Institute sting Corp.	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KTSA WEBC WEBC WEBC WEBC KFAC KFAC KFAC KFAC KFAC KFAC KFAC KFA	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500$	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ + \\ C \\ es \\ c \\ 1 \\ - \\ + \\ + \\ C \\ D \\ es \\ \hline \\ 4 \\ C \\ 3 \\ 3 \\ 1 \\ 1 \\ - \\ N \\ \hline \\ es \\ es \\ \end{array} $	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles, Cal. Wichita, Kansas Portland, Ore. Brooklyn, N. Y. New York City New York City Troy, N. Y. Miami, Fla. Kansas City, Mo. Tampico, Tams. 228.9 meters Jerome, Arizona Sacramento, Cal.	Radio Industries Broad WDOD Broadcasting Co WoAX, Inc. City of Dallas Intermountain Broadca News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace Luis Morlote Los Angeles Broadcastin Radio Station KFH Co. Ashley C. Dixon-KFJR M. E. Brown People's Pulpit Associat Defenders of Truth Soc Rensselaer Polytechnic Isle of Dreams Broadca Unity School of Christi. Maria T. de Gutirrez	rp. sting Corp. ing Co. y House ng Co. , Inc. idon und, Inc. lety, Inc. Institute sting Corp.	1310 MTRS. 228.9
WCAM WCAP WDOD WIBA WOAX WRR 1290 KDYL KFUL KLCN KLCN KFUL KLCN WEBC WNBZ 1300 CMKJ KFAC KFH KFJR KFBR WEVD WFAB WHAZ WIOO XEM 1310 KFBK	kilo	$\begin{array}{c} 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500\\ 500$	$ \begin{array}{c} 1 \\ 1 \\ + \\ + \\ + \\ 1 \\ C \\ es \\ C \\ 1 \\ + \\ + \\ C \\ D \\ es \\ 4 \\ C \\ 3 \\ 3 \\ 1 \\ 1 \\ 1 \\ N \\ es \\ D \\ es \\ D \\ \end{array} $	Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Guantanamo, Cuba Los Angeles, Cal. Wichita, Kansas Portland, Ore. Brooklyn, N. Y. New York City New York City New York City Troy, N. Y. Miami, Fla. Kansas City, Mo. Tampico, Tams. 228.9 meters	Radio Industries Broad WDOD Broadcasting Co Badger Broadcasting Co WOAX, Inc. City of Dallas Intermountain Broadcast News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co Head of Lake Broadcast Pittsburgh Radio Suppl Smith & Mace Luis Morlote Los Angeles Broadcastin Radio Station KFH Co. Ashley C. Dixon-KFJR M. E. Brown People's Pulpit Associat Debs Memorial Radio F Defenders of Truth Soc Rensselaer Polytechnic Isle of Dreams Broadca Unity School of Christi Maria T. de Gutirrez	rp. sting Corp. ing Co. y House ng Co. , Inc. idon und, Inc. lety, Inc. Institute sting Corp.	1310 MTRS. 228.9

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KFXJ	+	100		Grand Junction, Colo.
KFXR	- 4	100	+	
KFYO	1		+	Oklahoma City
KCDV	1	100		Lubbock, Texas
KGBX	. T.	100		St. Joseph, Mo.
KGCX	T	100	+	Wolf Point, Mont.
KGEZ	1	100		Kalispell, Mont.
KGFW	t	100		Kearney, Nebr. Yakima, Wash.
KIT	+	100		Yakima, Wash.
KMED	+ t	100	000	Medford, Ore.
KRMD	- ÷	50	x	Shreveport, La.
KTLC	÷ .	100		Houston, Texas
KTSM	+	100	2	El Paso, Texas
KXRO	+	100	-	Aberdeen, Wash.
WBEO		100		Marquette, Mich.
WBOW	- 1 2	100		
WBRE	-			Terre Haute, Ind.
	2.1	100		Wilkes-Barre, Pa.
WCLS		100	1	Joliet, Ill.
WDAH	- I	100	2	El Paso, Texas
-WEBR		100	+	Buffalo, N. Y.
WEXL	1	50		Royal Oak, Mich.
WFBG		100	3X	Altoona, Pa.
WFDF		100		Flint, Mich.
WGAL		100	5	Lancaster, Pa.
WGH		100		Newport News, Va.
WHAT	+	100	4	Philadelphia, Pa.
WIAS	ŧ	100	7	Ottumwa, Iowa
WJAC	÷ .	100	3	Johnstown, Pa.
WJAK		50	6	Fikhert Ind
WKAV		100	v	Elkhart, Ind. Laconia, N. H.
WKBB		100	1	Lacoma, N. 11.
WKBC		100	1	Joliet, Ill.
WKBS				Birmingham, Ala.
	- I -	100	2	Galesburg, Ill.
WLBC	- I -	50	6	Muncie, Ind.
WMBO	I	100		Auburn, N. Y.
WNBH		100		New Bedford, Mass.
WOL		100		Washington, D. C.
WRAW		100	5X	Reading, Pa.
WROL	1	100		Knoxville, Tenn.
WSAJ	•	100		Grove City, Pa.
WSJŠ		100		Winston-Salem, N. C.
WTEL		100	4	Philadelphia, Pa.
WTJS	+	100	- -	Jackson, Tenn.
WTSL		100		Laurel, Miss.
XEFB		50	1315	Monterrey, N. L.
		50	1010	Monterrey, N. L.
1320	kild	nevel	PS (771 meters

1320 kilocycles 227.1 meters

KGHF KGMB KID WADC WSMB	‡ ‡ ‡	250 250 250 1000 500	+ C + C Z	Pueblo, Colo. Honolulu, Hawaii Idaho Falls, Idaho Akron, Ohio New Osloppo Lo
wSMB	-	500	N	New Orleans, La.

1330 kilocycles 225.4 meters

KGB KMO KSCJ WDRC WSAI WTAQ	+ + + +	500 250 1000 500 500 1000	C 1+C C R+ 1C	San Diego, Cal. Tacoma, Wash. Sioux City, Iowa Hartford, Conn. Cincinnati, Ohio Eau Claire, Wis.
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1340 kilocycles 223.7 meters CMCR -- 150 1345 Havana, Cuba CMCY -- 250 1345 Havana, Cuba

CMCR		150	1345	Havana, Cuba
CMCY		250	1345	Havana, Cuba
KFPW	+	50	XZ	Fort Smith, Ark.
KFPY	*	1000	С	Spokane, Wash.
WCOA		500		Pensacola, Fla.
WSPD	٠	1000	C	Toledo, Ohio

1350 kilocycles 222.1 meters

+	1000		E
•	1000	B	S
	250	1	2
	250	1a	N
•	250	1	1
	500	D	Ē
	250	la	N
	• •	 1000 250 250 250 500 	• 1000 B • 250 1 - 250 1a • 250 1 • 250 1 • 500 D

222.1 meter Boise, Idaho St. Louis, Mo. Zarephath, N. J. New York City New York City Emory, Va. New York City

Western Slope Broadcasting Co. Exchange Ave. Baptist Church T. E. Kirksey KGBX, Inc. First State Bank of Vida Donald C. Treloar Central Nebraska Broadcasting Corp. Carl E. Haymond Mrs. W. J. Virgin Radio Station KRMD, Inc. Houston Broadcasting Co. W. S. Bledsoe & W. T. Blackwell KXRO, Inc. Lake Superior Broadcasting Co. Banks of Wabash, Inc. Louis G. Baltimore WCLS, Inc. Bledsoe & Blackwell Howell Broadcasting Co., Inc. Royal Oak Broadcasting Co. Wm. F. Gable Co. Frank D. Fallain WGAL, Inc Hampton Roads Broadcasting Corp. Independence Broadcasting Co. Iowa Broadcasting Co Johnstown Automobile Co. Truth Publishing Co., Inc. Laconia Radio Club Sanders Bros. Radio Station R. B. Broyles Furniture Co Permil N. Nelson Donald A. Burton WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co. Sun Publishing Co. G. A. Houseman Quintanilla y Stevenson

C. P. Ritchie & J. E. Finch Honolulu Broadcasting Co., Ltd. KID Broadcasting Co. Allen T. Simmons WSMB, Inc.

Don Lee, Inc. KMO, Inc. Perkins Bros. Co. WDRC, Inc. Crosley Radio Corp., Lessee Gillette Rubber Co.

Aurelio Hernandez M. D. Autran Southwestern Hotels Co. Symons Broadcasting Co. Pensacola Broadcasting Co. Toledo Broadcasting Co.

Boise]	Broadc	astin	g Stat	ion
Greate	er St. L	ouis İ	Brdest	tg Corp.
	of Fire			
	ard Cal			
				ting Co., Inc
Emory	& Her	ary Co	ollege	
Madis	on Sq.	Garde	en Bro	dctg. Corp.

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1360	kilo	ocycl	es	220.4 meters
KGER	•	1000	Ň	Long Beach, Cal.
KGIR WCSC	1	500 500	N	Butte, Montana Charleston, S. C.
WFBI.	•	1000	CX	Syracuse, N. Y.
WGES	:	500 1000	$^{1+}_{1+z}$	Charleston, S. C. Syracuse, N. Y. Chicago, Ill. Gary, Ind.
WGES WJKS WQBC	Ť	500	D D	Vicksburg, Miss.
1370	kilo			218.7 meters
CMGE HRB		30 2300	1375	Cardenas, Cuba
KCRC	† *	100	2+	Tegucigalpa, Hond. Enid, Okla.
KFBL	*	50 100	3	
KFJM KFJZ KFLX	‡	100		Grand Forks, N. D. Ft. Worth, Texas Galveston, Texas
KFLX	* -	100	+	Galveston, Texas
KGAR KGDA		100 100	+	Galveston, Texas Tucson, Arizona Mitchell, S. D. Oklahoma City Raton, N. M. San Angelo, Texas Clovis, N. Mex. San Antonio Texas
KGPG	† † †	100	2	Oklahoma City
KGFL	t	50	4	Raton, N. M.
KGKL KICA	+	100 100	4CP	Clovis, N. Mex.
KMAC	Ť	100	5	San Antonio, Texas San Antonio, Texas Marshfield, Ore. Berkeley, Cal. Walla Walla, Wash. Seattle, Wash. Kansas City, Mo. Danville, Va. Baltimore, Md.
KONO	1	100 100	5	San Antonio, Texas Marshfield, Ora
KOOS KRE KUJ		100		Berkeley, Cal.
KUJ	+	100	3	Walla Walla, Wash.
KVL KWKC		100 100	-	Kansas City, Mo.
WBTM	Ţ	100	7	Danville, Va.
WCBM	*	100 100	+z+	Baltimore, Md. Philadelphia, Pa
WDAS WESG WGL	¢ †	50		Glens Falls, N. Y.
WGL	•	100	С	Fort Wayne, Ind.
WHBD WHBO	Ŧ	100 100		Memphis, Tenn.
WHBQ WHDF	ť	100	+	Calumet, Mich.
WIBM WIBK		100 50	1	Danville, Va. Baltimore, Md. Philadelphia, Pa. Glens Falls, N. Y. Fort Wayne, Ind. Mount Orab, Ohio Memphis, Tenn. Calumet, Mich. Jackson, Mich. Detroit, Mich. Atlanta, Ga. Lezington, Mass.
WIBM WJBK WJTL WLEY WLVA WMBR		100		Atlanta, Ga.
WLEY	÷-	100 100	+	Lexington, Mass.
WMBR	† † †	100		Tampa, Fla.
WPFB	t	100	Ď	Hattiesburg, Miss.
WQDM WRAK	÷	100 100	6	Atlanta, Ga. Lerington, Mass. Lynchburg, Va. Tampa, Fla. Hattiesburg, Miss. St. Albans, Vt. Williamsport, Pa. Williamsport, Pa. Williamsport, Pa.
WRAM	•	100		Wilmington, N. C.
WRDO	t	100 100		Augusta, Maine Racine, Wis. Buffalo, N. Y.
WRJN WSVS	•	50		Buffalo, N. Y.
		100	6	Williamsport, Pa.
1380	kild			217.3 meters
CMJC KOH KQV KSO	Ŧ-	75 500	1382	Camaguey, Cuba Reno, Nevada
ROV	÷	500	C :	Pittsburgh, Pa.
KŠO	*	500	1	Clarinda, Iowa
WKBH WSMK		1000 200	1C 2	Dayton, Ohio
XETB		125		Reno, Nevada Pittsburgh, Pa. Clarinda, Iowa La Crosse, Wis. Dayton, Ohio Torreon, Coah.
1390	kilo			215.7 meters
CMCG CMCH		30 20	1395	Havana, Cuba Havana, Cuba Havana, Cuba Havana, Cuba Little Rock, Ark
CMCH		15	1395 1395	Havana, Cuba
CMDB		40	1395	Havana, Cuba
KLRA	:	1000 500	1C C	Little Rock, Ark. Phoenix, Arizona
KOY KUOA	+	1000		Favetteville, Ark.
WHK	•	1000	ĉ	Cleveland, Ohio
1400	kild		es	214.2 meters
KLO		500		Ogden, Utah

KLO	٠	500		Ogden, Utah
KOCW	*	250	+	Chickasha, Okla.
WBAA	+	500	1 +	Lafayette, Ind.

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Consolidated Broadcasting Corp.

KGIR, Inc. South Carolina Broadcasting Co., Inc. Onondaga Radio Broadcasting Corp. Oak Leaves Broadcasting Station, Inc. Johnson-Kennedy Radio Corp. Delta Broadcasting Co., Inc.

Genaro Sebater United Fruit Co. Enid Radiophone Co. Leese Bros. University of North Dakota Ralph S. Bishop George Roy Clough Tucson Motor Service Co. Mitchell Broadcasting Corp. Oklahoma Broadcasting Co., Inc. KGFL, Inc. KGKL, Inc. W. E. Whitmore W. W. McAllister Mission Broadcasting Co. H. H. Hanseth, Inc. First Congregational Church KUJ, Inc. KVL, Inc. Wilson Duncan Broadcasting Co. Piedmont Broadcasting Corp. Baltimore Broadcasting Corp. WDAS Broadcasting Station, Inc. W. N. Parker and H. H. Metcalfe Fred Z. Zieg F. P. Moler Broadcasting Station WHBQ, Inc. Upper Michigan Broadcasting Co. WIBM, Inc. James F. Hopkins, Inc. Oglethorpe University Lexington Air Stations Lynchburg Broadcasting Corp. F. J. Reynolds Hattiesburg Broadcasting Co. A. J. St. Antoine C. R. Cummins Wilmington Radio Association WRDO, Inc. Racine Broadcasting Corp. Seneca Vocational School Sun-Gazette Broadcasting Co.

	Iowa Broad WKBH, Ind	nc. Icasting Co. Icasting Co. 2. Krohn, Jr.		KCYS. 1400 MTRS.
	Nielson Ra University	ontanals Aadicu	Co. Ig Goods Co.	214.2 DIAL
L	Interstate College for Purdue Un		Corp.	

			a D	I INEQUENCIES A	IND DIRE NORDERS
WBBC		500	2	Brooklyn, N. Y.	Brooklyn Broadcasting Corp.
WCGU		500	2	Brooklyn, N. Y. Brooklyn, N. Y.	U. S. Broadcasting Corp.
WCGU WCMA	+	500	1	Culver, Ind.	General Broadcasting Corp.
WFOX		500	2	Brooklyn, N. Y.	Paramount Broadcasting Co.
WKBF	Ŧ	500	1	Indianapolis, Ind.	Indianapolis Broadcasting, Inc.
WLTH		500	2	Indianapolis, Ind. Brooklyn, N. Y.	The Voice of Brooklyn, Inc.
XEP		200		Laredo, Mexico	La Voz Latino
1410	kile	ocvel	es	212.6 meters	
KFLV		500	4	Rockford, Ill.	Rockford Broadcasters, Inc.
KGRS	‡	1000	î	Amarillo, Texas	Gish Radio Service
WAAB	*	500	C C	Boston, Mass.	Bay State Broadcasting Corp.
WBCM	*	500	C	Bay City, Mich. Amarillo, Texas	James E. Davidson National Radio & Broadcasting Corp.
WDAG	*	1000	1 4	Amarillo, Texas	National Radio & Broadcasting Corp.
WHBL WHIS	*	500 250	4	Sheboygan, Wis. Bluefield, W. Va.	Press Pub. Co. Daily Telegraph
WODX	‡	500	зс	Mobile, Ala.	Mobile Broadcasting Corp.
WRBX	*	250	2	Roanoke, Va.	Richmond Development Corp.
WSFA	+	500	3C	Montgomery, Ala.	Montgomery Broadcasting Co., Inc.
1420	kild	ocvel	25	211.1 meters	7
		· · · ·		- · · -	Alexa Based extine Co
KABC KBPS	1	100 100	4	San Antonio, Texas Portland, Ore.	Alamo Broadcasting Co. Benson Polytechnic Institute
KCMC		100		Texarkana, Ark.	North Mississippi Broadcasting Corp.
KFIZ	*	100	10.5	Fond du Lac, Wis.	Reporter Printing Co.
KFIZ KFXY KGFF		100	Ŷ	Flagstaff, Arizona	Reporter Printing Co. Albert H. Scherman KGFF Broadcasting Co.
KGFF	Ŧ	100	5	Flagstaff, Arizona Shawnee, Okla.	KGFF Broadcasting Co.
KGGC KGIW	1	100		San Francisco, Cal.	Golden Gate Broadcasting Co.
KGIX	Ţ	100 100		Trinidad, Colo. Las Vegas, Nevada	Leonard E. Wilson Las Vegas, Nevada, Radio Corp.
KGKX	÷	100		Sand Point, Idaho	Sandpoint Broadcasting Co.
KGVO	† † *	100	DZ	Missoula, Montana	Mosby's, Incorporated
KICK		100	Y	Red Oak, Iowa Eugene, Ore.	Red Oak Radio Corp.
KORE	*	100	D	Eugene, Ore.	Eugene Broadcasting Station
KWCR	1	100 100	\mathbf{B}_4	Cedar Rapids, Iowa	Cedar Rapids Broadcast Co. KXL Broadcasters, Inc.
KXL KXYZ		100		Portland, Ore. Houston, Texas Presque Isle, Maine Waterbury, Vt.	Harris County Broadcast Co.
WAGM		100		Presque Isle, Maine	Aroostook Broadcasting Corp.
WDEV		50	D	Waterbury, Vt.	Harry C. Whitehill WEHS, Inc.
WEHS		100	a	Cicero, III.	WEHS, Inc.
WELL	+	50	D	Battle Creek, Mich.	Enquirer-News Co.
WENC WERE	÷-	100 100	D	Americus, Ga. Erie, Pa.	Americus Broadcast Co. Erie Dispatch-Herald
WFDW		100		Anniston, Ala.	Raymond G. Hammett
WHDL	*	100	D	Tupper Lake, N. Y	Tupper Lake Broadcasting Co. Inc.,
WHFC		100	a	Cicero, Ill.	WHFC, Inc.
WILM	+	100		Wilmington, Del.	Delaware Broadcasting Co., Inc.
WJBO	*	100	D	New Orleans, La.	Valdemar Jensen Marius Johnson WKBI, Inc.
WJMS WKBI	÷-	100 100	a	Ironwood, Mich. Cicero, Ill.	Warius Jonnson WKBI Inc
WLBF		100	a	Kansas City, Kansas	WLBF Broadcasting Co.
WMBC	‡	100	+	Detroit, Mich.	Michigan Broadcasting Co., Inc.
WMBH		100	÷	Detroit, Mich. Joplin, Mo.	Edwin Dudley Aber
WPAD	1	100		Paducah, Ky.	Paducah Broadcasting Co.
WSPA WTBO	÷	100 100	+	Spartanburg, S. C. Cumberland, Md.	Voice of South Carolina Associated Broadcasting Corp.
	ц 1 нт				
1430	kil			209.7 meters	
KECA	1	1000	N	Los Angeles, Cal.	Earle C. Anthony, Inc.
KGNF WBAK	‡	500 500	D	North Platte, Nebr.	Great Plains Broadcasting Co. Penna. State Police
WCAH	ŧ.	500	с'n	Harrisburg, Pa. Columbus, Ohio	Commercial Radio Service Co.
WFEA	*	500	č	Manchester, N. H.	New Hampshire Broadcasting Co.
WHEC		500		Manchester, N. H. Rochester, N. Y.	WHEC, Inc.
WHP	*	500	1C+	Harrisburg, Pa. Memphis, Tenn. Albany, N. Y.	WHEC, Inc. WHP, The Harrisburg Telegraph Memphis Broadcasting Co.
WNBR	*	500		Memphis, Tenn.	interripting biodecedening oot
woko	ŧ	500	C□	Albany, N. Y.	WOKO, Inc.
1440	1.11	1		100 1	
1440	K1l			208.2 meters	
CMBI		30 20	1444	Havana, Cuba Havana, Cuba	Francisco Mayorquin

CMBL CMBN KDFN KLS WBIG		20 30 500 250 500	1444 1444 D C	Havana, Cuba Havana, Cuba Casper, Wyo. Oakland, Cal. Greensboro, N. C.	Julio C. Hidalgo Armando Romeu Donald Lewis Hathaway Warner Bros. North Carolina Broadcasting Co.
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	250 500 250 500 ilocycl	a 3+C a 3 es N	Allentown, Pa. Quincy, Ill. 206.8 meters [Shreveport, La.	B. B. Musselman Peoria Broadcasting Co. Allentown Call Publishing Co., Inc. Illinois Broadcasting Corp. Tri-State Broadcasting System, Inc.	
WBMS WGAR WHOM WNJ WSAR WTFI	250 500 500 250 250 250 500	1 B 1 1	Hackensack, N. J. Cleveland, Ohio Jersey City, N. J. Newark, N. J. Fall River, Mass. Athens, Ga.	WBMS Broadcasting Corp. WGAR Broadcasting Co. New Jersey Broadcasting Corp. Radio Investment Co. Doughty & Welch Electric Co., Inc. Toccoa Falls Broadcasting Co.	
1460 k	ilocycl	es	205.4 meters		
KSTP WJSV	10000 10000	N 	St. Paul, Minn. Alexandria, Va.	National Battery Broadcasting Co. WJSV, Inc.	
1470 k	ilocycl	es	204.0 meters		
KGA WLAC	5000 5000	N C	Spokane, Wash. Nashville, Tenn.	Northwest Broadcasting System, Inc. Life & Casualty Insurance Co.	
1480 k	ilocycl	es	202.6 meters [
KFJF WKBW	5000 5000	C C	Oklahoma City Buffalo, N. Y.	National Radio Mfg. Co. Buffalo Broadcasting Co., Lessees	
1490 k	ilocycl	es	201.2 meters		
WCHI WCKY	5000 5000	1 1N	Chicago, Ill. Covington, Ky.	Midland Broadcasting Company L. B. Wilson, Inc.	
1500 k	ilocycl	es	199.9 meters [
KGFI KGFK KGIZ KGKB KGKY KNOW KPJM KPO KREG KXO WFDV WKBV WKBV WKBV WKBV WMBA WMBQ WMBA WMBQ WMBA WMPC WNBF WOPI WPEN WRDW WWRL	$\begin{array}{c} 50\\ 100\\ 100\\ 50\\ 100\\ 100\\ 100\\ 100\\ 1$	C + 1 + 1 + 1 C P +	Havana, Cuba Havana, Cuba Santa Barbara, Cal. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Nebr. Austin, Texas Prescott, Arizona Wenatchee, Wash. Santa Ana, Cal. El Centro, Cal. Rome, Ga. Connersville, Ind. Ludington, Mich. Long Island City, N. Y. Boston, Mass. Newport, R. I. Brooklyn, N. Y. Brooklyn, N. Y. Brooklyn, N. Y. Brooklyn, N. Y. Binghamton, N. Y. Binghamton, N. Y. Bristol, Tenn. Philadelphia, Pa. Augusta, Ga. Rutland, Vt. Woodside, N. Y. Pittsburgh, Pa. Coyoacan, D. F. Kosciusku, Miss.	Gali-Sardinas Tomas Basail Santa Barbara Broadcasters, Ltd. Eagle Broadcasting Co., Inc. Red River Broadcasting Co., Inc. Grant City Park Corp. East Texas Brdestg. Co. Hilliard Co., Inc. KNOW Broadcasting Co. A. P. Miller Wescoast Broadcasting Co. J. S. Edwards E. R. Irey and F. M. Bowles Rome Broadcasting Corp. Knox Battery & Electric Co. K. L. Ashbacker John N. Brahy Boston Broadcasting Co. LeRoy Joseph Beebe Paul J. Gollhofer Arthur Faske First M. P. Church Howitt, Wood Radio Co., Inc. Radiophone Brdestg. Station, Inc. Wm. Penn Broadcasting Co. Long Island Broadcasting Corp. Manuel Zetina Attala Milling & Produce Co.	ксүз. 1500 мtrs. 199.9 DIAL

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

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				and a second			
				Sam Jose I t	500	KQW	1010
ALABAMA	Watts		Kcys.	San Jose J-1 Santa Ana M-3	100	KREG	1500
Anniston O-22	100	WFDW	1420	Santa Barbara M-2	100	KDB C	1500
Birmingham O-21	5000	WAPI N	1140	Stockton J-2	250	KGDM	1100
	500 100	WBRC C WKBC	930 1310	1	100	KWG	1200
Gadsden O-21	100	WIBY	1210				
Huntsville N-21	50	WJBY WBHS	1200	COLORADO			_
Mobile Q-20	500	WODX C	1410	Colorado Springs K-1	1 1000	KVOR C	1270
Montgomery P-21	500	WSFA C	1410	Denver K-11	500	KFEL	920
					500 1000	KFXF KLZ C	920 560
ALASKA			3		12500	KLZ C KOA N	830
			10.00	•	500	KPOF	880
Anchorage	250	KFQD	1230	Fort Morgan J-11	100	KGEW	1200
Ketchikan	500	KGBU	900	Grand Junction K-9	100	KFXJ	1310
			1	Greeley J-11	500 250	KFKA KGHF	880 1320
ARIZONA				Pueblo L-11 Trinidad L-11	100	KGIW	1420
	100	KFXY	1420	Yuma J-12	100	KĞEK	1200
Flagstaff M-7 Jerome M-6	100	KCRJ	1310				
Phoenix N-6	500	KOY C	1390	CONNECTICUT	•		
	500	KTAR N	620	1		NUCC	(00
Prescott M-6	100	KPJM KGAR	1500	Bridgeport H-27	250	WICC WDRC C	600
Tucson O-7	100	KGAR	1370	Hartford H-27	500 50000		1330 1060
	500	KVOA	1260	Storrs H-28	250	WCAC	600
					200		***
ARKANSAS			- 1	DELANADE			
Blytheville M-19	50	KLCN	1290	DELAWARE			
Fayetteville M-16	1000	KUOA	1390	Wilmington J-26	250	WDEL	1120
Fort Smith N-16	50	KFPW	1340	1	100	WILM	1420
Hot Springs N-17	10000	KTHS N	1040 890	1			
Little Rock N-17	250 100	KARK KGHI	1200	DISTRICT OF	COLU	MBIA	
	1000	KLRA C	1390	Washington J-26	250	WMAL C	630
Paragould M-18	100	KBTM	1200	g	500	WRC R	950
Texarkana O-17	100	KCMC	1420	1	100	WOL	1310
				FLORIDA			
CALIFORNIA				Clearwater R-24	1000	WFLA N	620
Bakersfield L-3	100	KERN C	1200	Gainesville Q-24	5000	WRUF C	830
Berkeley J-2 Beverly Hills M-3	100	KRE	1370	Jacksonville Q-24	1000	WJAX N WIOD N	900
Beverly Fills M-3	500 500	KMPC KELW	710	Miami T-25	1000 1000	WÌOD N WQAM C	1300 560
Burbank M-3 El Centro N-4	100	KXO	1500	Orlando R-24	250	WDBO C	1120
Fresno K-2	100	KMJ	1210	Pensacola Q-21	500	WCOA	1340
Hollywood M-3	1000	KFŴB	950	St. Petersburg S-24	1000	WSUN	620
	500	KMTR	570	Tampa R-24	1000	WDAE C	1220
	5000	KNX	1050	1	100	WMBR	1370
Long Beach M–3	1000 1000	KFOX KGER	1250 1360	CEODOLA			
Los Angeles M-3	1000	KECA N	1430	GEORGIA			
Los Angeles M-0	1000	KFAC	1300	Americus P-22	100	WENC	1420
	50000	KFI N	640	Athens O-23	500	WTFI	1450
	500	KFSG	1120	Atlanta O-22	250 100	WGST C	890 1370
	250	KFVD	1000		5000	WJTL WSB N	740
	100	KGFJ	1200	Augusta O-23	100	WRDW	1500
	1000 500	KHJ C KRKD	900 1120	Columbus O-22	50	WRBL	1200
	500	KTM	780	Macon O-23	500	WMAZ	1180
Oakland J-1	250	KLS	1440	Rome N-22	100	WFDV	1500
ounding y	500	KLX	880	Savannah O-24	500	WTOC C	1260
	500	KROW	930	Thomasville Q-22	100	WQDX	1210
Pasadena M-3	50	KPPC	1210	HAWAII			
Sacramento J-2	100	KFBK	1310		. . .		
San Bernardino M-3 San Diego N-3	100 500	KFXM KFSD N	1210	Honolulu	250	KGMB C	1320
Our Dieko 14-0	500	KGB C	1330		1000	KGU R	750
San Francisco J-1	1000	KFRC C	610	IDAHO			
	500	KFWI	930	1			
	100	KGGC	1420	Boise G-5	1000	KIDO	1350
	7500	KGO N	790	Idaho Falls G-7	250 100	KID KF X D	1320 1200
	100	K JBS KPO N	680	Nampa G-5 Pocatello H-7	250	KSEI	900
			000	/ ocateno II-/	200		
	5000 1000	KTAB	560	Sand Point D-6	100	KGKX	1420
	1000 1000	KTAB KYA B	560 1230	Sand Point D-6 Twin Falls H-6	100 500	KGKX KTFI	1420 1240

Cartnage J-18 Son WCAZ 1000 KEX 1000 KKX								
Carthage J-18 50 WCAZ 1020 Sioux City L-15 900 NMA 930 Chicago I-20 10000 KYW 1020 Sioux City L-15 900 KAA 930 Chicago I-20 10000 KYW 1020 KANSAS 600 KGCC 100 Soow CAZ 1000 WCFL R 700 KANSAS 600 KGCC 100 Soow WCFL R 700 KANSAS 500 KGCC 100 KGCC 100 KGCC 101 KGCC 100 KGCC 100 KGCC 100 KGCC 100 KGCC 100 KGCC 100 KEN 121 1000 WENS N 870 Soo Soo KENTUCKY 1000 KFH 130 1000 WEIS 1200 WKBI 1200 KENTUCKY 1300 KENTUCKY 1300 KCHY 1400 KENTUCKY 1300 KENTUCKY 1300 KENTUCKY 1300 KENTUCKY </td <td>ILLINOIS</td> <td>Watts</td> <td></td> <td>Kcvs.</td> <td>Shenandoah J-16</td> <td>500</td> <td>KFNF</td> <td>890</td>	ILLINOIS	Watts		Kcvs.	Shenandoah J-16	500	KFNF	890
1500 WÄÄR Näär KANSAS 25000 WEBMC 770 Coffeyrille M-15 500 KGCF 101 100 WCRW 1210 Coffeyrille M-15 500 KGCS 1210 100 WCRW 1210 Kansas City K-16 100 KENS 1210 100 WECC 1200 Marhattan K-15 500 KSAC 500 5000 WKB 500 WKGS 500 WIGOT K-12 1000 WEFH 1200 5000 WKB 1800 KENTUCKY Corington K-22 5000 WCIY N 1490 5000 WKB 1200 WKB 1200 LOUISIAN 1300 Cicero 1-20 100 WKB 1200 Corington K-22 5000 WCIY N 1490 Galesburg J-18 100 WKB 1200 LOUISIANA 100 WCIY N 1490 Jolet 1-9 100 WKB 1200 KENTUCKY 1000 WCIY N 1400	Carthage J-18 Chicago I-20	50 10000	KFKX	1070 1020	Sioux City I-15 Waterloo I-17	1000	KMA KSCJ C WMT C	930 1330 600
1500 WCFL 970 Cofferville Number of the second seco		500	WAAF	920	WAND 40			
5000 WCHI 1490 Dodg? City L-13 TOO KCNO 1421 100 WCRW 1210 Kanasa City K-16 1000 WERN 1212 5000 WERN 870 Marhattan K-15 5000 WERV 1300 5000 WCN C 770 Marhattan K-15 5000 WEWC 1300 5000 WLS N 870 Milford K-14 1000 WIEWC 1300 5000 WCC 500 WCC 1300 KEH 1300 5000 WMAQ 670 1400 WIEWC 940 Covington K-22 5000 WCCY 1400 VIEWC 940 Calcero 1-20 100 WKB 1310 Louisville L-21 25000 WCCY N 1400 Galesburg J-18 100 WCBS 1310 LoUISIANA 1200 WARZ 1200 Galesburg J-19 100 WCBS 1210 New Orleans R-19 1000 WCBX 1200		1500	WCFL R	770 970		500	KOOF	1010
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			WCHI		Dodge City L-13	100	KGNO	1210
Johnson WENK N Store Manhattan K-15 Johnson WREN B 122 J0000 WENK N 5000 WENK N 5000 WREN 500 WREN 5000 WREN		100	WEDC	1210			KFKU	1420 1220
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50000 WLS N 870 More and a constraint of the co				720	Milford K-14	5000	KFBI	1050
5000 WMBI 1080 500 WPCC 500 60 WSBC 1210 100 WEIS 1420 100 WEIS 1420 100 WKBI 1200 Decatur K-19 100 WKBI 1200 Galesburg J-18 100 WEB 1200 Joilet I-19 100 WKBB 1200 Mooseheart I-19 100 WKBB 1200 Paducah M-19 100 WABZ 1200 Poria Heights J-19 500 WMBD 1400 Poria Heights J-19 500 WMBE 1210 Pack Island I-18 100 WBS 1210 Tuscola K-20 100 WTAX 1210 Urbran J-20 250 WILL 890 Zion I-20 500 WCAY 1400 Comenswille K-21 100 WKBY 1200 Comenswille L-20 500 WGBF 630 Gary I-20		50000	WLS N	870			KFH C	580 1300
Cicero 1-20 100 WSBC 1210 Covington K-22 5000 WCKY N 1490 Decatur K-19 100 WHS 1200 WFIW C 3000 WFIW		5000	WMBI	1080	RENTRORY			
Cicero I-20 100 WEHS 1420 Hor hardshift and the second se						5000	WORKN	1400
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Cicero 1-20			1420	Hopkinsville M-20	1000	WFIW C	940
Decatur K-19 100 W/BL 1200 Paducah M-19 100 WPAD 1420 Harrisburg L-19 100 WEBQ 1210 100 WEBQ 1210 Joliet I-19 100 WEBQ 1210 100 WCLS 100 WABZ 1200 Mosscheart 1-19 20000 WJBC 1200 New Orleans R-19 100 WABZ 1200 Porial Heights J-19 500 WTAD 1440 Norroe P-18 100 WIBC 1200 Rock Island I-18 100 WEBS 1210 New Orleans R-19 1000 WSME N 1300 Tuscola K-20 100 WCES 1210 1000 KTES N 4450 Culver 1-20 5000 WCBD 1000 KWH 1000 KWH 1210 Culver 1-20 5000 WCBF 1300 MAINE 1200 Culver 1-20 1000 WKBF 1300 MAINE 1200 Gary 1-20 1000	D . 17 10	100	WKBI	1420	Louisville L-21		WHAS C WLAP	820 1200
Joliet 1-19 100 WCLS 1310 LOUUSIANA La Saile J-19 100 WKBB 1310 Monroe P-18 100 WABZ 1200 Mooseheart 1-19 500 WIBC 1300 New Orleans R-19 100 WABZ 1200 Peoria Heights J-19 500 WHBD C 1440 100 WJBC 1200 Rock Kand I-18 100 WHBF 1210 500 WSLB 1200 Springfield K-19 100 WCBS 1210 10000 WUL 850 Tuscola K-20 100 WDZ 1070 KTBS 1440 1000 KWEA 1210 Zion I-20 500 WLB 890 1000 WKBZ 620 1000 WKBZ 620 Culver I-20 500 WGBF 630 WLAK 1310 MAR YLAND 1200 MAGM 1420 Culver I-20 500 WABF 1200 1000 WCAS 1300 MCAS 1200		100	WKBS		Paducah M-19	100		1420
Ioo WKBB 1310 Monroe P-18 100 KMLB 1200 Mooseheart I-19 20000 WJDC 1130 1000 WAEZ 1200 Peoria Heights J-19 500 WABD C 1440 100 WJBC 1420 Rock Island I-18 500 WTAZ 1210 500 WSBT 1200 Springfield K-19 100 WTAX 1210 500 WSBT 1310 Tuscola K-20 100 WTAX 1210 1000 KWEA 1210 Urbana J-20 250 WLL 890 1000 KWEA 1210 Connersville K-21 100 WHBU 1210 1000 KWEA 1200 Curber I-20 500 WCMA 1400 MAINE 1200 WRAB 1200 Curber I-20 100 WKBV 1200 WRAB 1200 WRAB 1200 Likhart I-21 500 WCMA 1400 MASSACHUSETTS 10000 WCBV			WEBQ WCLS		LOUISIANA			
Peoria Heights J-19 500 WMBD C 1440 1400 Wild C 1440 Rock Kaland I-18 100 WHBY 1210 500 WSBN 1200 Springfield K-19 100 WCBS 1210 500 WSBN 1200 Springfield K-19 100 WCBS 1210 500 WSBN 1200 Tuscola K-20 100 WCBS 1210 Shreveport P-17 50 KRMD 1310 Urbara J-20 250 WILL 800 1000 KWEA 1210 Storo J-21 00 WCBD 1000 KWEA 1200 Culver I-20 500 WCBL 1300 WABI 1200 Culver I-20 500 WGBE 1300 MAR YLAND Bargor F-29 100 WAGM 1420 Culver I-20 1000 WKKV 1300 MAR YLAND 1420 MASSACHUSETTS Bargors J-21 1000 WEBF 1400 1000 WEB 1200 <	•	100	WKBB	1310	Monroe P-18		KMLB ,	1200
Peoria Heights J-19S00WTADL1440100W JBO1440Rock Kiand I-18500KFLV1440500WSMB N1200Springfield K-19100WCBS1210500WSMB N1300Springfield K-19100WCBS12101000KTBS N1300Tuscola K-20100WDZ1000KTBS N1440Itobara J-20250WILL8901000KWEA1210Zion I-205000WCBD1080MAINE1000KWEA1210Culver I-20500WCMA1400MAINE1000WBZ C630Culver I-20500WCMA1400MAR YLAND1420Culver I-20500WCMA1400MAR YLAND1420Culver I-201000WKSC1360100WAGM1420Culver I-20500WCBF1400MAR YLAND1000WCAA640Barlimore J-211000WFBF12001000WEBF1200Lafayette J-20500WEBF1400MASSACHUSETTS1000WLEY1300South Berd I-27500WEBF13001000WLEY1300Curmberland J-16500KSO13801000WLEY1300Corner I-18500KGCA12701000WBA I1400Muncie J-21500WCRA14001000WLEY1300Curda J-261000 <t< td=""><td>Mooseheart I-19</td><td>20000</td><td>WJJD</td><td>1130</td><td>New Orleans R-19</td><td></td><td></td><td>1200 1250</td></t<>	Mooseheart I-19	20000	WJJD	1130	New Orleans R-19			1200 1250
Rock Island 1-18 100 WHER 1210 500 WSMB N 1320 Springfield K-19 100 WCBS 1210 1000 WW 850 Tuscola K-20 100 WDZ 1070 1000 WTAX 1210 Urbana J-20 250 WILL 890 1000 KWEN 1400 KWKH 850 WCBD 1080 WRD 1000 KWEN 1200 INDIANA Anderson J-21 100 WHBU 1210 MAINE MAINE Culver I-20 500 WCMA 1400 WEBZ 1000 WCBR 1400 Evansville L-20 500 WGE C 1370 100 WCB C 1200 Gary I-20 1000 WESB C 1230 1000 WEBB C 1200 Indianapolis J-21 1000 WESB C 1230 1000 WEBB C 1200 Iowar H-20 500 WBA A 1400 MASSACHUSETTS 1000 WCBA C	Quincy K-18	500	WTAD	1440		100	WJBO	1420
Springfield K-19 100 WCBS 1210 1000 WRD 1310 Tuscola K-20 100 WDZ 1070 1000 WTAS 1210 Urbana J-20 250 WILL 890 1000 KTES 1210 Jon L-20 500 WCBS 1210 1000 KWA 1210 INDIANA 500 WCBS 1210 1000 KWA 1210 Anderson J-21 100 WHBU 1210 1000 WCMA 1200 Connersville K-21 100 WKBV 1500 Portland F-28 1000 WCSH 940 Presque Isle D-29 100 WCAS 1400 MARYLAND 1420 Ekhart I-21 500 WGBF 630 100 WCBM 1370 Gary I-20 1000 WWAE 1200 1000 WCBM 1370 Lafayette J-20 500 WEAM 1200 1000 WCBM 1370 South Bend I-20 1	Rockford I-19 Rock Island I-18					500	WSMB N	1320
Tuescola K-20100WD21070Urbana J-20250WILL890Zion I-205000WCBD1080INDIANAAnderson J-21100WHBU1210Connersville K-21100WKBV1500Culver I-20500WCMA1400Ekhart I-21500WJAK1310Evansville L-20500WGBF630Fort Wayne J-211000WGBF630Gary I-201000WGBF1200Indianapolis J-211000WKBK1200Lafayette J-20500WKBF1200Muncie J-21500WKBF1200Indianapolis J-211000WFBR1230Lafayette J-20500WKBF1400South Bend I-20100WFAM1200IOWA500WKBF1400Muncie J-21500WKAFSouth Bend I-20100WFAMIOWA500WKAFAmes I-17500WGCCedar Rapids I-181000KKGQCarrinda J-16500KSOGourneti Bluffs J-16500KSODavenport I-18500KGCADavenport I-18500KGCADavenport I-18500WCCDea Moines I-17500WHO100KWLC1270Dea Moines I-17500WHO100KWLC1270Calurinda J-16500KSOGournet K-191		100	WCBS	1210	Shreveport P-17	50	KRMD	1310
Urbana J-20 250 WILL 390 10000 KWKH 850 Zion I-20 5000 WCBD 1080 MAINE MAINE MAINE INDIANA		100	WDZ	1070				
INDIANA MAINE Anderson J-21 100 WHBU 1210 Connersville K-21 100 WKBV 1500 Curver I-20 500 WCMA 1400 Evansville L-20 500 WGBF 630 Fort Wayne J-21 100 WGE C 1370 Indianapolis J-21 100 WGE C 1370 Indianapolis J-21 1000 WFBM C 1230 Indianapolis J-21 500 WBF 1400 Muncie J-21 500 WBF 1400 Musce J-21 500 WBC 1310 South Bend I-20 100 WFB 1400 Musce M-220 100 WFB 1400 Musce M-220 1000 WSB 12	Urbana J-20 Zion I-20		WCBD					850
INDIANA Bañgor F-29 100 WABI 1200 Anderson J-21 100 WHBU 1210 Gonnersville K-21 100 WKBV 1500 Culver I-20 500 WCMA 1400 WKBV 1610 WCMA 1420 Culver I-20 500 WGBF 630 1000 WAGM 1420 Fort Wayne J-21 100 WGEF 630 1000 WCCA 1600 1000 WCCA 600 1600 WCCA 600 1600 1000 WCCA 600 100 WCCA 600 1400 1400 1400 1400 1400 1400 1400 1400 1400 WCCA 1400 1400 WCCA 1400 1400 WCCA 1400 1400 WCCA 1400 1400 1000 WCCA 1400						100	WDDO	1270
Anderson J-21 100 WHBU 1210 Portland F-28 1000 WCSH R 940 Connersville K-21 100 WKBV 1500 Presque Isle D-29 100 WAGM 1420 Culver I-20 500 WGBF 630 1000 WAGM 1420 Evansville L-20 500 WGBF 630 10000 WAGM 1420 Gary I-20 10000 WGWC C 1300 Baltimore J-26 10000 WCAO C 600 Hammond I-20 1000 WKBY 1300 500 WEBR R 1270 Indianapolis J-21 1000 WFBM C 1230 500 WFBR R 1270 Lafayette J-20 500 WBAA 1400 MASSACHUSETTS MASSACHUSETTS Boston G-28 500 WABZ 500 WBZ B 990 Terre Haute K-20 100 WFGQ 1310 1000 WeEI R 500 IOWA 100 KSQ 1310 100 WLC 1370 1000 WBC 1310 1000 Needham G-28 500 WAAB C 1230<						100	WABI	1200
Converse iile K-21 100 WKBV 1500 Presque isle D-29 100 WAGM 1420 Culver I-20 500 WCMA 1400 MAR YLAND MAR YLAND Evansville L-20 500 WGBF 630 250 WCAC 600 Gary I-20 1000 WK S 1310 Baltimore J-26 10000 WCAC 600 Hammond I-20 1000 WKBF 1400 1000 WCBR 1200 Lafayette J-20 500 WBAL 1200 MASSACHUSETTS 500 WTBO 1420 South Bend I-20 100 WFAM 1200 MASSACHUSETTS 500 WABE 990 Terre Haute K-20 100 WSBT 1230 1000 WEE B 990 IOWA 100 KFGQ 1310 1000 WLBE 1900 IOWA 1100 KFGQ 1310 1000 WLBE 1300 Carinda J-16 500 KSO 1380 1380		100	WEIDTI	1210	Portland F-28		WCSH R	620 940
Elkhart I-21 50 WJAK 1310 MAR YLAND Evansville L-20 500 WGE C 1370 10000 WBAL B 10600 Gary I-20 1000 WWCC 1360 100 WCAO 600 Hammond I-20 1000 WWAE 1200 100 WCBM 1230 Indianapolis J-21 1000 WFBM 1230 500 WFBR 1270 Muncie J-21 500 WKBF 1400 1400 WTBO 1420 South Bend I-20 100 WFAM 1200 1000 WEBC 1230 Terre Haute K-20 100 WBOW 1310 1000 WEL R 590 IOWA 500 WSBT 1310 1000 WLOE 1300 IOWA 500 WOI 640 1000 WLOE 1300 Carre Faids I-17 100 KFGQ 1310 1000 WEL 1300 Bavenport I-18 500 KGCA 1300 250 WSA 1450 Dewonport I-18 500 KGCA	Connersville K-21	100	WKBV	1500	Presque Isle D-29	100	WAGM	1420
Evansville L-20 500 WGBF 630 Baltimore J-26 10000 WBAL B 1060 Gary I-20 1000 WGKS 1360 1000 WGKS 1360 1000 WGBF 630 1000 WGBF 630 1000 WGAC 6100 1000 WGKS 1360 1000 WGBF 1400 1000 WGBF 1400 1000 WGBF 1400 1000 WGBF 1400 1000 WGBR 1270 Lafayette J-20 500 WBAA 1400 MASSACHUSETTS Cumberland J-25 100 WTBO 1420 South Bend I-20 100 WFAM 1200 1000 WEE B 990 1000 WEE B 990 Terre Haute K-20 100 WBOW 1310 1000 WEE B 1000 WAB E 1000 WAB E 1000 WLB E 1000 WLB E 1000 WLB E 1000 WLB E 120 1000 WLB E 120 1000 WL	Elkhart I-21	50	WJAK		MARYLAND			
10000 WOWOCC 1160 WCBM 1370 Gary I-20 1000 WJKS 1360 500 WCBM 1370 Hammond I-20 1000 WWAE 1200 500 WCBM 1270 Indianapolis J-21 1000 WFBM C 1230 500 WFBR R 1270 Lafayette J-20 500 WBAA 1400 MASSACHUSETTS MASSACHUSETTS South Bend I-20 100 WFAM 1200 1000 WEE R 990 Terre Haute K-20 100 WBOW 1310 1000 WEE R 590 IOWA 500 WSBT C 1230 1000 WBC R 1400 Boone I-17 100 KFGQ 1310 1000 WLE R 590 Clarinda J-16 5000 KSOL R 1320 1000 WBC R 1300 Carinda J-16 1000 KGL R 1326 1300 Springfield H-27 1000 WBZ A 890 Council Buffs J-16			WGBF		Baltimore J-26		WBAL B	1060
Indianapolis J-21 1000 WFBM C 1230 100 WTBO 1420 Lafayette J-20 500 WBAA 1400 MASSACHUSETTS Muncie J-21 50 WLBC 1310 MASSACHUSETTS South Bend I-20 100 WFAM 1200 1000 WBZ B 990 Terre Haute K-20 100 WBOW 1310 1000 WEEI R 590 IOWA 100 WBOW 1310 1000 WEEI R 590 IOWA 500 WGI 640 1000 WCB R 900 IOWA 100 WBOW 1310 1000 WEEI R 590 IOWA 120 100 WGC R 1400 1000 WLBC R 1200 IOWA 1300 KFGQ 1310 1000 WCC R 1310 1000 WBC C 1230 1000 WC C 1230 1000 WC C 1230 1000 WC C 2 1200		10000	wowoc	1160		100	WCAO C WCBM	1370
Indianapoils J-21 1000 WFBM C 1230 Lafayette J-20 500 WBA A 1400 Muncie J-21 500 WBC B 1310 South Bend I-20 100 WFAM 1200 500 WSBT C 1230 500 WSBT C 1230 500 WSBT C 1230 500 WSBT C 1230 100 WFAM 1200 500 WSBT C 1230 100 WBOW 1310 Mass I-17 5000 WOI 6dar Rapids I-18 100 KFGQ 100 KFGQ 1310 Cedar Rapids I-18 100 KWCR B 100 KWCR B 1420 Charinda J-16 5000 KSO 1380 Council Buffs J-16 1000 KOIL B 1260 Davenport I-18 5000 WOC R 1000 100 KWLC 1270 100 WBAC C 100 KWLC 1270 100 WCrester G-28 100 1	Hammond I-20	100	WWAE	1200	Cumberland I-25			
Muncle J-21 50 WLBC 1310 South Bend I-20 100 WFAM 1200 South Bend I-20 100 WFAM 1200 Terre Haute K-20 100 WBC 1310 IOWA 100 WBOW 1310 IOWA 500 WSBT 1230 IOWA 100 WBOW 1310 IOWA 500 WOI 640 Boone I-17 100 KFGQ 1310 Cedar Rapids I-18 100 KVCR 1410 Clarinda J-16 500 KSO 1380 Davenport I-18 500 WOC R 1000 Decorah H-18 50 KGCA 1270 Dew Moines I-17 5000 WHO R 1000 Ibwel C 1270 Battle Creek I-21 50 WELL Bay 100 KWELC 1300 250 WTAG R 500	Indianapolis J-21			1230				
South Bend I-20 100 WFAM 1200 Boston G-28 500 WAB C 1900 Terre Haute K-20 100 WSBT C 1230 1000 WELI 8 590 IOWA 100 WBOW 1310 1000 WLOE 1500 WSE B 990 IOWA 100 WBOW 1310 1000 WLOE 1500 WSC C 1230 Mess I-17 5000 WGI 640 1000 WLOE 1300 Gedar Rapids I-18 100 KWCR B 1420 1310 Springfield H-27 1000 WBSO 920 Carinda J-16 500 KSO 1380 100 WCC C 1200 Davenport I-18 5000 WOC R 1000 KGLL 1260 250 WTAG R 580 Des Moines I-17 5000 WHO R 1000 KGL 1270 100 WCC C 1200 Dew Cirk I-18 5000 WOC R 1000 250 WTAG R	Lafayette J-20 Muncie I-21						WAAR C	1410
Terre Haute K-20 100 WBOW 1310 1000 WHDH 830 IOWA 1000 WHO 1310 1000 WHDH 830 IOWA 1000 WAC 1230 1000 WHDH 830 Ames I-17 5000 WOI 640 1000 WAC 1230 Boone I-17 100 KFGQ 1310 Needham G-28 500 WBSO 920 Cedar Rapids I-18 1000 KVC B 1420 Springfield H-27 1000 WDBH 1310 Davenport I-18 500 KGCA 1270 Springfield H-27 1000 WTAG R 580 Decorah H-18 50 KGCA 1270 Battle Creek I-21 50 WELL 1420 Dwa Christ I-17 5000 WHO R 1000 Calumet F-19 100 WHD F 1370	South Bend I-20	100	WFAM	1200	Doston G-28	25000	WBZ B	990
IOWA 100 WLOE 1500 Ames I-17 5000 WO1 640 1000 WNAC 1230 Boone I-17 100 KFGQ 1310 Lexington G-28 100 WLEY 1370 Clarinda J-16 500 KSO 1380 Springfield H-27 1000 WDRC 2120 Davenport I-18 5000 WOC R 1000 WCR B 1200 Des Moines I-17 100 KGCA 1270 MICHIGAN 250 WTAG R 580 Dew Moines I-17 5000 WHQ R 1000 Carrow 100 WHQ R 1000 Des Moines I-17 5000 WHQ R 1000 Carrow 100 WHQ R 1000 Deavenport I-18 5000 WHQ R 1000 Carrow 1300 MICHIGAN Deavenport I-18 5000 WHQ R 1000 Carrow 100 WHQ R 1000 Deavenport I-18 5000 WHQ R 1000 Carrow	Terre Haute K-20		WBOW C					
IOWA Fall River H-28 250 WSAR 1450 Ames I-17 5000 WO1 640 Needham G-28 100 WLE Y 1370 Boone I-17 100 KFGQ 1310 Needham G-28 100 WBSO 920 Cedar Rapids I-18 100 KWCR 1420 New Bedford H-27 1000 WBSO 920 Council Buffs J-16 5000 KSO 1380 250 WTAG R 580 Davenport I-18 5000 WOC R 1000 WOC R 1000 250 WTAG R 580 Des Moines I-17 5000 WHO R 1000 Battle Creek I-21 500 WELL 1420 Dwa City I-18 5000 WHO R 1000 Calumet E-19 100 WHD F 1300						100	WLOE	1500
Ames I-17 5000 WOI 640 Needham G-28 500 WBSO 920 Boone I-17 100 KFGQ 1310 New Bedford H-28 100 WBSO 920 Cedar Rapids I-18 100 KWCR B 1420 New Bedford H-28 100 WBSA 990 Clarinda J-16 500 KSO 1380 Springfield H-27 1000 WBCA B 990 Council Bluffs J-16 1000 KOLL B 1260 Worcester G-28 100 WORC C 1200 Decorah H-18 50 KGCA 1270 Battle Creek I-21 50 WELL 1420 Des Moines I-17 5000 WHO R 1000 Calumet E-19 500 WBCM C 1400 Dwa City I-18 500 WHO R 1000 Calumet E-19 500 WBCM C 1420 Daw City I-18 500 WHO R 1000 Calumet E-19 500 WBCM C 1400	IOWA				Fall River H-28	250	WSAR	1450
Boone I-17 100 KFGQ 1310 New Diringfield H-27 1000 WDTA 990 Cedar Rapids I-16 500 KSO 1380 Springfield H-27 1000 WORC A 1000 WORC C 1200 WORC C 1410 1200 WORC C 1200 WORC C 14100 WORC C		5000	wor	640	Needham G-28	500	WBSO	920
Clarinda J-16 500 KSLK D 1420 Worcester G-28 100 WORC C 1200 Council Bluffs J-16 1000 KOLL B 1250 Michael 250 WTAG R 580 Devenport I-18 5000 WOC R 1000 MICHIGAN MICHIGAN Des Moines I-17 5000 WHO R 1000 Battle Creek I-21 500 WELL 1420 Des Moines I-17 5000 WHO R 1000 Calumet F-19 100 WHD F 1370	Boone I-17	100	KFGO	1310	New Bedford H-28 Springfield H-27		WNBH WBZA B	
Devenport I-18 5000 WOLL B 1250 MICHIGAN Decorah H-18 50 KGCA 1270 MICHIGAN 100 KWLC 1270 Battle Creek I-21 50 WELL 1420 Des Moines I-17 5000 WHO R 1000 Bay City H-22 500 WBCM C 1420 Des Moines I-17 5000 WHO R 1000 Calument E-19 100 WHDE 1320			KSO		Worcester G-28	100	WORC C	1200
100 KWLC 1270 Battle Creek 1-21 50 WELL 1420 Des Moines I-17 5000 WHO R 1000 Bay City H-22 500 WBCM C 1410 Iowa City I-18 500 WSUI 880 Calument E-19 100 WHDF 1320	Council Bluffs J-16	1000	KOIL B	1260	MORE	230	WIAG R	300
Des Moines I-17 5000 WHO R 1000 Bay City H-22 500 WBCM C 1410 Iowa City I-18 500 WSUI 880 Calumet E-19 100 WHDE 1370	Decorah H-18	50	KGCA	1270		EO	WELL	1430
Jowa City I-18 500 WSUI 880 Calumet E-19 100 WHDF 1370 Marshalltown I-17 100 KFJB 1200 Detroit H-22 50 WJBK 1370 Ottumwa J-17 100 WIAS 1310 10000 WJR 8 750 Red Oak J-16 100 KICK 1420 100 WMBC 1420	Des Moines I-17	5000	WHO R	1000	Bay City H-22	500	WBCM C	1410
Ottumwa J-17 100 WIAS 1310 10000 WIR B 750 Red Oak J-16 100 KICK 1420 100 WIBC 1420	Iowa City I-18 Marshalltown I-17		WSUI		Calumet E-19 Detroit H-22		WHDF	
	Ottumwa J-17	100	WIAS	1310		10000	WIR B	750
		100		1920		100		1760

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Detroit H-22	100 0	WWJ R		NEVADA	Watts		Kcys.
	1000	WXYZ	1240 1040	Las Vegas L-5	100	KGIX	1420
East Lansing H-21 Flint H-22	1000 100	WKAR WFDF	1310	Reno I-3	500	кон с	1380
Grand Rapids H-21	500	WASH	1270 1270		DD		
-	500	WOOD	1270	NEW HAMPSHI			
Ironwood F-18 Jackson I-21	100 100	WJMS WIBM	1420 1370	Laconia G-28	100	WKAV	1310
Kalamazoo I-21	1000	WKZO	590	Manchester G-28 Portsmouth G-28	506 250	WFEA C WHEB	1430 740
Lapeer H-22	100	WMPC	1500	Fortsmouth G-28	200		7 10
Ludington H-20	50	WKBZ	1500	NEW JERSEY			
Marquette F-19 Royal Oak H-22	100 50	WBEO WEXL	1310 1310	Asbury Park I-27	500	WCAP	1280
Royal Oak II-22				Atlantic City J-27	5000	WPG C	1100
MINNESOTA				Camden I-26	500	WCAM	1280 1450
Fergus Falls F-15	100	KGDE	1200	Hackensack I-27	250 300	WBMS WAAT	940
Minneapolis G-17	5000	wcco c	810	Jersey City I-27	500	WHOM	1450
	1000 1000	WDGY WRHM	1180 1250	Newark I-27	1000	WAAM	1259
Moorhead F-15	50	KGFK	1500	6	250 250	WGCP WNJ	1250 1450
Northfield G-17	1000	KFMX	1250		5000	wor	710
St. D. 1.C. 17	1000	WCAL	1250	Paterson I-27	1000	WODA	1250
St. Paul G-17	1000 10000	WLB KSTP N	1250 1460	Red Bank I-27	100	W JBI WOAX	1210
	10000	NOIL IV		Trenton I-26	500 250	WOAX WAWZ	1280 1350
MISSISSIPPI				Zarephath I-27	250	WA W2	1330
Greenville O-18	100	WRBQ	1210	NEW MEXICO			
Gulfport Q-19	1000	WGCM	590	Albuquerque N-7	250	KGGM	1230
Hattiesburg Q-19	100 1000	WPFB WIDX N	1370 1270	Clovis N-11	100	KICA	1370
Jackson P-19 Kosciusko O-19	100	WJDX N WHEF	1500	Raton M-11	50	KGFL	1370
Laurel P-20	100	WTSL	1310	State College P-9	20000	ков	1180
Meridian P-20	500	WCOC	880	NEW YORK			
Vicksburg P-18	500	WQBC	1360	NEW YORK	F00	WOVOC	1430
MISSOURI			- 1	Albany H-27 Auburn H-25	500 100	WOKO C WMBO	1310
Cp. Girardeau L-19	100	KFVS	1210	Binghamton H-26	100	WNBF	1500
Columbia K-17	500	KFRU	630	Brooklyn I-27	500	WBBC	1400
Grant City J-16 Jefferson City L-17	100	KGIZ	1500	-	1000	WBBR	1300
Jefferson City L-17	500 100	WOS WMBH	630 1420		500 500	WCGU WFOX	1400 1400
Joplin M-16 Kansas City K-16	1000	KMBC C	950		500	WLTH	1400
iteristic city it it	100	KMBC C KWKC	1370		100	WMBQ	1500
	1000	WDAF N	610 860	D	100 1000	WMIL WBEN R	1500 900
	500 1000	WHB WOO	1300	Buffalo H-24	1000	WEBR	1310
St. Joseph K-16	2500	KFFO	680		1000	WGR C	550
• •	100	KGBX	1310		5000	WKBW C	1480
St. Louis L-18	500 100	KFUO KFWF	550 1200	Canton F-26	50 500	WSVS WCAD	1370 1220
	50000	KMOX C	1090	Freeport I-27	100	WGBB	1210
	500	KSD R	550	Glens Fails G-27	50	WESG	1370
	1000	KWK B	1350	Ithaca H-25	1000	WEAI	1270
	1000 100	WEW WIL	760 1200	Jamaica H-27	50 100	WLCI WMRJ	1210 1210
MONITANIA	100			Tamestown H-24	50	WOCL	1210
MONTANA	1000	KCHI P	950	Long Island City I-27 New York City I-27	100	WLBX	1500
Billings F-9 Butte F-7	1000 500	KGHL B KGIR N	1360	New York City I-27	50000 250	WABC C WBNX	860 1350
Great Falls E-8	1000	KFBB	1280		50000	WBOQ	860
Kalispell D-7	100	KGEZ	1310		250	WCDA	1350
Missoula E-7	100	KGVO	1420 1310		50000	WEAF R	660
Wolf Point E-11	10 0	KGCX	1310		500 1000	WEVD WFAB	1300 1300
NEBRASKA					500	WINS	1180
Clay Center J-14	1000	KMMJ	740		250	WHN	1010
Kearney J-14	100	KGFŴ	1310 770		30000	WJZ B WLWL	760
Kearney J-14 Lincoln J-15	5000	KFAB C	770		5000 500	WMCA	1100 570
	100 500	KFOR WCAJ	1210 590		250	WMSG	1350
Norfolk I-15	1000	WJAG	1060		500	WNYC	810
North Platte J-13	500	WJAĞ KGNF	1430		1000	WOV	1130
Omaha J-15	500 1000	WAAW WOW R	660 590		250 500	WPAP WPCH	1010 570
Scottsbluff I-11	1000	KGKY	1500		250	WQAO	1010
York J-15	5 00	KGBZ	930		250	WRNY	1010
-			1				

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Rochester G-25	5000	WHAM B	1150	Portland E-3	5000	KEX N	1180
Rochester G=25	500	WHEC C	1430	I Of Cland L=5	100	KBPS	1420
Saranac Lake F-26	50	WNBZ	1290		500	KFJR	1300
Schenectady G-27	50000	WGY R	790		1000	KGW N	620
Syracuse G-25	1000	WFBL C WMAC	1360		1000	KOIN C	940
	250	WMAC	570		500	KTBR	1300
T 0.1 T	250	WSYR	570		500	KTBR KWJJ	1060
Troy G-27	500	WHAZ	1300		100	KXL	1420
Tupper Lake F-26	100	WHDL	1420				
Utica G-26 Woodside I-27	100 100	WIBX WWRL	1200 1500	PENNSYLVANI.	A		
Yonkers I-27	100	WCOH	1210		250	NICOD (
I OIMÇI'S I-L/	100	weon	1210	Allentown I-26	250	WCBA	1440
				Altoona I-25	250 100	WSAN WFBG	1440 1310
NORTH CARO	LINA			Carbondale H-26	100	WNBW	1200
Asheville M-23	1000	WWNCN	570	Elkins Park I-26	25	WIBG	930
Charlotte M-24	5000	WBT C	1080	Erie H-24	100	WERE	1420
Gastonia M-24	100	wsoc	1210	Grove City I-24	100	WSAI	1310
Greensboro M-24	500	WBIG C	1440	Harrisburg I-25	500	WBAK	1430
Raleigh M-25	1000	WPTF N	680		100	WCOD	1200
Wilmington N-26	100	WRAM	1370		500	WHP C	1430
Winston-Salem M-24	100	wsjs	1310	Johnstown J-24	100	WJAC	1310
				Lancaster I-26	100	WGAL	1310
NORTH DAKO	ТА			T 11 T 44	100	WKJC	1200
				Lewisburg I-26	100	WJBU WLBW C	1210
Bismarck F-13	1000	KFYR N	550	Oil City I-24	500	WCAU C	1260
Devils Lake E-14	100	KDLR	1210	Philadelphia I-26	10000	WCAU C WDAS	1170 1370
Fargo F-15	1000	WDAY N	940		100 500	WFAN C	610
Grand Forks E-15	100	KFJM	1370		500	WFAN C WFI R	560
Mandan F-13 Minot E-13	250 250	KĞCU KLPM	1240 1240		100	WHAT	1310
MINOC E-15	230	KLF M	1240		500	WIP C	610
					500	WLIT R	560
OHIO				1	100	WPEN	1500
Akron I-23	1000	WADC C	1320		250	WRAX	1020
Canton I-23	1000	WHBC	1200		100	WTEL	1310
Cincinnati K-22	100	WFBE	1200	Pittsburgh J-24	50000 500	KDKA B	980 1380
	1000	WKRC C	550		1000	KQV WCAE R	1220
	50000	WLW B	700		1000	WJAS C	1290
	500	WSAI R	1330		1000	WJAS C WWSW	1500
Cleveland I-23	500	WGAR B	1450	Reading I-26	1000	WEEU	830
	1000	WHK C	1390		100	WRAW	1310
	500	WJAY	610	Scranton H-26	250	WGBI	880
Columbus J-22	50000 500	WTAM R	1070		250	WQAN WPSC	880
Columbus J-11	500	WAIU WCAH C	640 1430	State College I-25	500	WPSC	1230
	750	WEAO	570	Washington J-24 Wilkes-Barre I-26	100	WNBO	1200
	100	WSEN	1210	Wilkes-Barre 1-20	100 100	WBAX WBRE	1210
Dayton J-22	200	WSMK	1380	Williamsport I-25	100	WRAK	1310 1370
Dayton J-22 Mansfield J-22	100	WJW	1210	Winnanisport 1-20	100	within the second second	1370
Mount Orab K-22	100	WHBD	1370	York J-26	1000	WORK	1000
Toledo I-22	1000	WSPD C WKBN C	1340				
Youngstown I-23	500	WKBN C	570	PHILIPPINES			
Zanesville J-23	100	WALR	1210	THEITINES			
				Cebu	500	KZRC	937.5
OKLAHOMA		1		Manila	1000	KZKA	1110
	350	KOCW	1400		5000 0	KZRM	618. 5
Chickasha N-14 Elk City N-13	250	KOCW	1400				
Enid M-14	100 100	KGMP KCRC	1210 1370	PORTO RICO			
Norman N-15	500	WNAD	1010		For	WIKAO	000
Oklahoma N-15	5000	KFJF C	1480	San Juan W-34	500	WKAQ	890
	100	KFXR	1310				
	100	KGFG	1370	RHODE ISLAN	D		
-	1000	WKY N	900			WA CO A	1500
Ponca City M-15	100	WBBZ	1200	Newport H-28 Providence H-28	100 250	WMBA WEAN C	1500 780
Shawnee N-15	100	KGFF	1420	Providence n-20		WEAN C WIAR R	890
Tulsa M-15	5000	KVOO N	1140		250 100	WJAR R WPAW	1210
					100	WPRO	1210
OREGON					100		1210
	1000	KOAC					
Corvallis E-2 Eugene F-2	1000 100	KOAC	550	SOUTH CAROL	INA		
Klamath Falls G-3	100	KORE	1420	Charleston 0-25	500	WCSC	1360
Marshfield F-1	100	KFJI KOOS	1210 1370	Columbia N-24	500	WCSC WIS N	1010
Medford G-2	100	KMED	1310	Spartanburg N-23	100	WSPA	1420
	100		1010	Spartanours 11-20	1.00		1420
and the second se							

SOUTH DAKO	TA Watt	9	Kcys.	VIRGINIA	Watts	Kcys.
Brookings H-15	500	KFDY	550	Alexandria K-26	10000	WJSV 1460
Huron H-14	100	KGDY	1200	Arlington J-25	1000	NÀA 690
Mitchell H-14	100	KGDA	1370	Danville L-25	100	WBTM 1370
Pierre G-13 Rapid City H-12	200 100	KGFX WCAT	630 1200	Emory L-23	500 100	WEHC 1350 WLVA 1370
Sioux Falls H-15	2500	KSOO	1110	Lynchburg L-25 Newport News L-26	100	WGH 1310
Vermillion I-15	500	KUSD	890	Norfolk L-26	500	WPOR 780
Watertown G-15 Yankton I-15	100 1000	KGCR WNAX C	1210 570	Determinant 26	500 100	WTAR C 780 WLBG 1200
I ankton 1-15	1000	WINAA C	370	Petersburg L-26 Richmond K-26	100	WBBL 1210
TENNEGOEE					100	WMBG C 1210
TENNESSEE					5000	WRVA N 1110 WDBJ C 930
Bristol L-23	100	WOPI WDOD C	1500 1280	Roanoke L-24	250 250	WRBX 1410
Chattanooga N-21 Jackson N-20	1000 100	WTJS	1310		200	
Knoxville M-22	50	WFBC	1200	WASHINGTON		
	1000	WNOX C	560	Aberdeen D-2	160	KXRO 1310
Mammhic N 10	100 100	WROL WHBQ	1310 1370	Bellingham C-3 Everett C-3	100 50	KVOS 1200 KFBL 1370
Memphis N-19	500	WMC N	780	Olympia D-3	100	KGY 1210
	500	WNBR	1430	Pullman E-5	1000	KWSC 1220
Nashville M-21	500 5000	WREC C WLAC C	600 1470	Seattle C-3	5000 1000	KJR N 970 KOL C 1270
Nasrivine W-21	5000	WSM N	650	1	1000	KOMO N 920
Springfield M-20	100	WSIX	1210		100	KPCB 650
					50 1000	KRSC 1120 KTW 1220
TEXAS					100	KVL 1370
Amarillo N-12	1000	KGRS	1410		500	KXA 760
	1000	WDAG	1410	Spokane D-5	100	KFIO 1120 KFPY C 1340
Austin Q-14	100 500	KNOW KFDM	1500 560		1000 5000	KFPY C 1340 KGA N 1470
Beaumont R-17 Brownsville U-15	500	KWWG	1260		1000	KHQ N 590
College Sta. Q-15	500	WTAW	1120	Tacoma D-3	250	KMÔ 1330 KVI C 570
College Sta. Q-15 Corpus Christi S-14	100	KGFI	1500	Walla Walla E-5	1000 100	
Dallas P-15	10000 50000	KRLD C WFAA N	1040	Wenatchee D-4	50	KUJ 1370 KPQ 1500
	500	WRR C	1280	Yakima D-4	100	KIT 1310
Dublin P-14	100	KFPL	1310	WEET VIDCINI		
El Paso P-9	100 100	KTSM WDAH	1310 1310	WEST VIRGINI		
Fort Worth P-15	100	KFJZ	1370	Bluefield L-24 Charleston K-23	250 250	WHIS 1410 WOBU 580
	1000	KTAT	1240	Fairmont J-24	250	WMMN 890
Columban P. 16	10000 100	WBAP N KFLX	800	Huntington K-23	250	WSAZ 580
Galveston R-16	500	KFUL	1290	Wheeling J-24	5000	WWVA C 1160
Greenville O-15	15	KFPM	1310	WISCONSIN		
Harlingen T-14	500	KRGV KPRC N	1260 920		1000	WTAQ C 1330
Houston R-16	1000 100	KPRC N KTLC	1310	Eau Claire G-18 Fond du Lac H-19	1000 100	KFIZ 1420
	500	KTRH C	1120	Green Bay G-19	100	WHBY 1200
	100	KXYZ KFYD	1420	Janesville I-19	100	WCLO 1200 WKBH C 1380
Lubbock O-12 San Angelo Q-13	100 100	KGKL	1310 1370	La Crosse H-18 Madison H-19	1000 750	WHA 940
San Antonio R-14	100	KABC	1420	Wadison II-19	500	WIBA N 1280
	100	KMAC	1370 1370	Manitowoc H-20	100	WOMT 1210
	100 1000	KONO KTSA C	1290	Milwaukee H-19	250 250	WHAD 1120 WISN C 1120
	50000	WOAL N	1190		1000	WTMJ N 620
Tyler P-16 Waco Q-15	100	KGKB	1500	Poynette H-19	100	WIBU 1210
Waco Q-15 Wichita Falls O-14	1000 250	WACO C KGKO	1240 570	Racine I-20	100 500	WRJN 1370 WHBL 1410
wienita rans 0-14	230	NOINO	0/0	Sheboygan H-20 Stevens Point G-19	2000	WLBL 900
TTTALT			1	Superior F-17	1000	WEBC N 1290
UTAH			1400	WWO ONC		
Ogden I-7	500 1000	KLO KDYL C	1400 1290	WYOMING		
Salt Lake City I-7	5000	KSL N	1130	Casper H-10	500	KDFN 1440
VEDALONIT				CAN	NADA	
VERMONT			1200		ADA	
Burlington F-27 Rutland G-27	100 100	WCAX WSYB	1200 1500	ALBERTA		
St. Albans F-27	100	WODM	1370	Calgary B-7	500	CFAC 690
Springfield G-27	10	WNBX	1200		10000 500	CFCN 985 CJCJ 690
Waterbury F-27	50	WDEV	1420		500	
	100 million 100 million		-	1		

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

2							and a subscription of the subscription of the
Edmonton A-8	250	CHMA	580		Watts		Kcys.
	500	CJCA CKUA	745	Ouebec D-27	100	CHRC	645
tallate on	500	CKUA	580	Quebec D-27	100	CKCI	645
Lethbridge C-8 Red Deer A-8	100 1000	CJOC CKLC	1120 840		50	CKCV	880
Red Deer A-6	1000	CNRD	840		50	ČNRQ	880
BRITISH COLU			040	SASKATCHEW	AN		
Chilliwack B-3	100	CHWK	665	Fleming C-13	1000	CJRW CJRM	665
Kamloops B-5	100	CFJC	1120	Moose Jaw C-11	500	CJRM	665
Kelowna C-5	100	CKOV	1200		25	10-AB	1200
Trail C-6	25	10-AT	1155	Regina C-12	500 500	CHWC CJBR	960 960
Vancouver B-3	100	CHLS	730	1	500	CKCK	960
	500	CJOR	1210		500	CNRR	960
	100	CKCD	730	Saskatoon B-11	500	CFOC	910
	50 100	CKFC CKMO	730 730		500	CNRS	910
	100	CKWX	730	Yorkton B-13	500	CJGX	630
	500	CKWX CNRV	1030			4.3.775	
Victoria C-3	500	CFCT	630	NEWFO			
MANITOBA				St. Johns A-35	75	VOAS	810
					_30	VONA	950
Brandon D-14	500	CKX	930		500	VOWR	675
Winnipeg D-15	5000	CKY	780	CENTRAI	4 N /	EDICA	
NEW DDUNOW	5000	CNRW	780		Aivi	CRICA	
NEW BRUNSW Fredericton D-29	50	CFNB	1210	COSTA RICA			
Moncton D-30	500	CNRA	630	Heredia FF-23	15	TI4NRH	980
St. John D-30	500	CFBO	890	San Jose FF-23	50	TICR	911
-	000	01 20	0,00	GUATAMALA			
NOVA SCOTIA	2000	VAS	685	2	50	-	F 70
Glace Bay C-32 Halifax E-31	2000	CHNS	815	Guatamala CC-19	50	TGW	570
Hamax E-31	500	CNRH	815	HONDURAS			
	100	CNRH VCX	690		2200	HRB	1370
Sydney C-32	50	CJCB	880	Tegucigalpa CC-21	2300	FIRD	1370
Wolfville D-31	50	CKIC	1010	SALVADOR			
ONTARIO				Salvador CC-19	500	RUS	664
Brantford H-23	15	10-BO	1200				001
Chatham H-22	250	CFCO	1210	ME	XICC	•	
Cobalt E-23	100	CKMC	1210	AGUASCALIEN	TES		
Ft. William E-19	50	CKPR	890			WEG	010
Hamilton H-24	500 50	CHCS CHML	630 880	Aguascalientes W-10	250	XFC	810
	500	CKOC	635	BAJA CALIFOR	INIA		
Kingston G-25	50	CFRC	930	Tiajuana N-3	300	XEFD	845
London H-23	5000	CJGC CNRL	595	CHIHUAHUA			
	5000		595				
North Bay E-23	100	CFCH	930	Chihuahua R-9	100	XEFI	1000
Ottawa F-25	100 500	CKCO CNRO	890 600	Juarez P-9	250 101	XFF XEJ	875 1000
Prescott F-25	100	CELC	915	Juarez F-9	5000	XEO	750
Preston H-23	100	CKPC	880	COAHUILA	0000		
St. Catherines H-24	500	CKIB	635		25	XEL	1000
Toronto G-24	500	CFCA	1120	Saltillo, Coah. U-12 Torreon U-11	25 125	XETB	1380
	500	CFCL	580	Torreon 0-11	100	XETG	1000
	10000 500	CFRB C CKCL	690 580	Villa Acuna R-12	75000	XER	735
	10000	CKGW N	840	D. F.			
	500	CKNC	960				
	500	CNRT	1120	Coyoacan Y-13	100	XETZ	1500
	4000	CNRX	690	Mexico City Y-13	1000 250	XEB XEFA	1030 1250
	5000	CPRY	840		250	XEG	1070
Waterloo G-23 Windsor H-22	. 100 5000	CKCR CKWO C	645 540		101	XĔK	990
Wingham G-23	15	10-BP	1200		1000	XEN	711
			1200		5000	XEO	940
PRINCE EDWA		CECY	580		500	XETA	1140
Charlottestown C-31	500 100	CFCY CHCK	580 960		100 2500	XETQ XETR	1230 610
Summerside C-31	500	CHGS	1120		5000	XEW	910
	500	0,100			500	XEX	1210
QUEBEC					500	XEZ	780
Montreal E-26	500	CFCF N	1030		2000	XFG	638
	5000	CHYC	730		1000	XFI	818
	5000 5000	CKAC C	730 730	Toluca. Y-12	500 50	XFX XEC	867 1000
	3000	CINKIW	/ 30	101uca. 1-12	30	ABC	1000
		and the second se					

(Continued on page 67)

CFAC

A COMPLETE INDEX BY CALL LETTERS

KFDY

CFAC 690	CKCK 960	CMCF 890	CNRH 815
Calgary, Alta.	Regina, Sask.	Havana, Cuba	Halifax, N. S.
CFBO 890	CKCL 580	CMCG 1395	CNRL 595
Crbo 650		Havene Cuba	
St. John, N. B.	Toronto, Ont.	Havana, Cuba	London, Ont.
CFCA 1120	CKCO 890	CMCH 1395	CNRM 730
Toronto, Ont.	Ottawa, Ont.	Havana, Cuba	Montreal, Que.
CFCF 1030	CKCR 645	CMCJ 630	CNRO 600
Montreal, Que.	Waterloo, Ont.	Havana, Cuba	Ottawa, Ont.
CFCH 930		CMCM 1395	CNRQ 880
North Bay, Ont.	Quebec, Que.	Havana, Cuba	Quebec, Que.
CFCL 580	ČKFC 730	CMCN 925	CNRR 960
Toronto Ont	Vancouver B C	Havana, Cuba	Regina, Sask.
Toronto, Ont.	Vancouver, B. C.	CMCO CCO	Regina, Sask.
CFCN 985	CKGW 840	CMCO 660 Havana, Cuba	CNRS 910
Calgary, Alta.	Toronto, Ont.	Havana, Cuba	Saskatoon, Sask.
CFCO 1210	CKIC 1010	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CNRT 1120
Chatham, Ont.	Wolfville, N. S.	Havana, Cuba	Toronto, Ont.
CFCT 630	CKLC 840 Red Deer, Alta.	CMCR 1345	CNRV 1030
Victoria, B. C.	Red Deer, Alta.	Havana, Cuba	Vancouver, B. C.
CFCY 580	CKMC 1210	CMCU 1270	CNRW 780
Ch'lottet'n,P.E.I.	CKMC 1210 Cobalt, Int.		
Children, F.E.I.	CKMO 730	Havana, Cuba	Winnipeg, Man.
ÇFJÇ 1120	CEMIO 730	CMCW 1270	CNRX 690
Kamloops, B. C.	Vancouver, B. C.	Havana, Cuba	Toronto, Ont.
CFLC 915	0 0 1 0 0 1	CMCY 1345	CPRY 840
Prescott, Ont.	Toronto, Ont.	Havana, Cuba	Toronto, Ont.
UPNB 1210	CKOC 635	II CMDB 1395	HHK 920
Fredericton, N.B. CFQC 910	Hamilton, Ont.	Havana, Cuba	Port au Prince,H.
CFQC 910	CKOV 1200	CMDC 660	HIX 630
Saskatoon, Sask.	Kelowna, B. C.	Havana, Cuba	Santo Domingo
CEDD COO			UDD 1970
CFRB 690	CKPC 880		HRB 1370
Toronto, Ont.	Preston, Ont.	Matanzas, Cuba	Tequcigalpa
CFRC 930	CKPR 890	CMGC 820	KABC 1420
Kingston, Ont.	Ft. William, Ont.	Matanzas, Cuba	San Antonio, Tex.
CHCK 960	CKTB 635	CMGE 1375	KARK 890
Ch'lottet'n,P.E.I.	St. Cath., Ont.	Cardenas, Cuba	Lit. Rock, Ark.
CHCS 630	CKUA 580	CMGF 987	KBPS 1420
Hamilton, Ont.	Edmonton, Alta.	Matanzas, Cuba	Portland, Ore.
CHGS 1120	CKWO 540	CMGH 1040	KBTM 1200
	Windsor, Ont.	Matanzas, Cuba	Ronageuld Ask
Sum'rside, P.E.I. CHLS 730	CKWX 730	CMCI 1150	Paragould, Ark.
		CMGI 1150	KCMC 1420
Vancouver, B.C.	Vancouver, B. C.	Colon, Cuba	Texarkana, Ark.
CHMA 580	CKX 930	CMHC 790	KCRC 1370
Edmonton, Alta.	Brandon, Man.	Tuinucu, Cuba	KCRC 1370 Enid, Okla.
CHML 880	CKY 780	CMHD 950	KCRJ 1310
Hamilton, Ont.	Winnipeg, Man	Caibarien, Cuba	Jerome, Ariz.
CHNS 815	CMAB 1249	CMHI 1030	KDB 1509
Halifax, N. S.	Pinar del Rio, Cu	Santa Clara, Cu	S Danhama Cal
CHRC 645		CMHJ 1125	S. Barbara, Cal.
	CMBC 965		KDFN 1440
Quebec, Que.	Havana, Cuba	Cienfuegos, Cuba	Casper, Wyo.
CHWC 960	CMBD 965	CMJC 1382	KDKA 980
Regina, Sask.	Havana, Cuba	Camaguey, Cuba	Pittsburgh, Pa.
CHWK 665	CMBG 1070	CMJE 856	KDLR 1210
Chilliwack, B. C	Havana, Cuba	Camaguey, Cuba	Devils Lake, N.D.
CHYC 730	I CMBI 1444	CMJF 930	KDYL 1290
Montreal, Que.	Havana, Cuba	Camaguey, Cuba	Salt Lake City
CJBR 960	CMBL 1444	CMJG 1050	KECA 1420
Regina, Sask.	Havana, Cuba	Comeguey Cube	KECA 1430
CJCA 745	CMBN 1444	Camaguey, Cuba CMJH 1017	Los Angeles, Cal. KELW 780
CJCA 745	CMBN 1444	Cioro do Amile C	LELW 780
Edmonton, Alta	Havana, Cuba	Ciego de Avila, C.	Burbank, Cal.
CJCB 880	CMBQ 1500	CMJI 1260	KERN 1200
Sydney, N. S.	Havana, Cuba	Ciego de Avila, C.	Bakersfield, Cal.
CJCJ 690	CMBR 1500	CMJL 960	KEV 1190
Calgary, Alta.	Havana, Cuba	Camaguey, Cuba	Portland, Ore.
CJGC 595	CMBS 790	CMK 730	KFAB 770
London, Ont.	Havana, Cuba	Havana, Cuba	Lincoln, Nebr.
CJGX 630	CMBT 790	CMKC 1034	KFAC 1300
Yorkton, Sask.	Havana, Cuba	Santiago, Cuba	Los Angeles, Cal.
CJOC 1120	CMBW 1140	CMKJ 1300	KEDD 1990
	Havana, Cuba		KFBB 1280
Lethbridge, Alta.	CMDV 102-	Guantanamo, C.	Great Fls., Mont.
CJOR 1210	CMBY 1235	CMQ 630	KFBI 1050
Vancouver, B. C.	Havana, Cuba	Havana, Cuba	Milford, Kans.
CJRM 665	CMBZ 1010	CMW 588	KFBK 1310
Moose Jaw, Sask.	Havana, Cuba	Havana, Cuba	Sacramento, Cal.
UJRW 665	UMU 840	CMX 890	KFBL 1370
Fleming, Sask.	Havana, Cuba	Havana, Cuba	Everett, Wash.
CKAC 730	CMCA 1235	CNRA 630	KFDM 560
Montreal Que	Havana, Cuba	Moneton, N. B.	Begumont Tor
CKAC 730 Montreal, Que. CKCD 730	CMCB 1070	CNRD 840	Beaumont, Tex.
Vancouver B C			KFDY 550
vancouver, B. C.	Havana, Cuba	Red Deer, Alta.	Brookings, S. D.
CKCI 645	CMCD 925		
Quebec, Que.	Havana, Cuba		

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KFEL

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KRKD

KFEL 920	KFXD 1200	KGHI 1200	KMAC 1370	
Denver, Colo. KFEQ 680	Nampa, Idaho KFXF 920	Little Rock, Ark KGHL 950	San Antonio, Tex. KMBC 950	
St. Joseph, Mo.	Denver, Colo.	Billings, Mont.	Kan. City Mo.	
KFGQ 1810	KFXJ 1310 Grand June.,Col.	KGIR 1360 Butte, Mont.	KMED 1310 Medford, Ore.	
Boone, Iowa KFH 1390	KFXM 1210	KGIW 1420	IKMI 1210	
Wichita, Kansas	San Ber'd no,Cal.	Trinidad, Colo.	Fresno, Cal.	
KFI 640	KFXR 1310 Oklahoma City	KGIX 1420	KMLB 1200 Monroe, La.	
KFIO 1120	KFXY 1420	Las Vegas, Nev KGIZ 1500	KMMJ 740	
Spokane, Wash.	Flagstaff, Ariz.	Grant City, Mo	Clay Ctr., Nebr. KMO 1330	
KF1Z 1420	KFYO 1310 Lubbock, Texas	KGKB 1500	KMO 1330 Tacoma, Wash.	
Fond du Lac, Wis KFJB 1200	KFYR 55	Tyler, Texas KGKL 1370	KMOX 1090	
Marshalltown, Ja.	Bismarck, N D	San Angelo, Tex.	St. Louis, Mo.	
KFJF 1480	KGA 1470	KGKO 570	KMPC 710	2570
Oklahoma City KFJI 1210	Spokane, Wash. KGAR 1370	Wichita Fils., Tex. KGKX 1420	Beverly Hills, Cal KMTR 570	<u></u>
Klamath Falls Ore	Tucson, Arizona	Sand Point, Idaho	Hollywood, Cal.	
KFJM 1870	KGB 1330	KGKY 1500	KNOW 1500	
Grd. Forks, N.D. KFJR 1300	San Diego, Cal. KGBU 900	Scottsbluff, Nebr KGMB 1320	Austin, Tex. KNX 1050	
Portland, Ore.	Ketchikan, Al'ka	Honolulu, T. H.	Hollywood, Cal.	2070
KFJZ 1370	KGBX 1310	KGMP 1210	KOA 830	
Ft. Worth, Tex	St. Joseph, Mo. KGBZ 930	Elk City, Okla. KGNF 1430	Denver, Colo. KOAC 550	
Greeley, Colo.	York, Nebr.	No. Platte, Nebr.	Corvallis, Ore.	
<u>k</u> fku 1220 .	KGCA 1270	KGNO 1210	KOB 1180	
Lawrence, Kans KFKX 1020	Decorah, Iowa KGCR 1210	Dodge City, Kas. KGO 790 7 com	State Col., N. M. KOCW 1400	
Chicago, Ill.	Watertown, S. D.	II San F'ncisco Cal 🖆 🖉 🖓	Chickasha, Okla.	
Chicago, Ill. KFLV 1410	KGCU 1240	KGRS 1410	KOH 1380	
Rockford, Ill. KFLX 1370	Mandan, N. D. KGCX 1310	Amarillo, Texas KGU 750	Reno, Nevada KOIL 1260	
Galveston, Tex.	Wolf P't, Mont.	Honolulu, Hawaii	Council Bluffs, Ia.	
KFMX 1250	KGDA 1370	KGVO 1420	KOIN 940	
N'thfield, Minn. KFNF 890	Mitchell, S. D. KGDE 1200	Missoula, Mont KGW 620	Portland, Ore. KOL 1270	
Shenandoah, Ia.	Fergus Falls, Minn	Portland, Ore.	Seattle, Wash.	
KFOR 1219	KGDM 1100	KGY 1210	KOMO 920	2050
Lincoin, Nebr.	Stockton, Cal. KGDY 1200	Olympia, Wash KHJ 900	Seattle, Wash. KONO 1370	205
Long Beach, Cal	Huron, S. D.	Los Angeles Cal 4 100	San Antonio, Tex.	
KFPI. 1316	KGEK 1200	KHQ 590 .00	KOOS 1370	
Dublin, Texas KFPM 1310	Yuma, Colo. KGER 1360	Spokane, Wash. 10-0 KICA 1370	Marshfield, Ore. KORE 1420	
Greenville, Texas	Long Beach, Cal.	Clovis, N. M.	Eugene. Ore.	
KFPW 1340	KGEW 1200	KICK 1420	KOY 1390	
Ft. Smith, Ark. KFPY 1340	Ft.Morgan, Colo KGEZ 1310	Red Oak, Iowa KID 1320	Phoenix, Arizona KPCB 650	
Spokane, Wash.	Kalispell, Mont.	Idaho Fails, ⁷ da.	Seattle, Wash.	
KFQD 1230	KGFF 1420	KIDO 1350	KPJM 1500	
Anchorage, Alas. KFRC 610	Shawnee, Okla. KGFG 1370	Boise, Idaho KIT 1310	Prescott, Ariz. KPO 680	19 11 -
San F'ncisco, Cal.	Oklahoma City	Yakima, Wash.	San F'ncisco, Cal.	2200
KFRU 630	KGFI 1500 Corp's Ch'sti, Tex	KJBS 1070	KPOF 880	
Columbia, Mo. KFSD 600	KGFJ 1200	San F'ncisco, Cal.	Denver, Colo. KPPC 1210	
San Diego, Cal.	Los Angeles, Cal.	Seattle, Wash.	Pasadena, Cal.	
KFSG 1120	KGFK 1500	ALUN 1290	KPQ 1500 Wanatahaa Waah	
Los Angeles, Cal. KFUL 1290	Moorhead, Minn. KGFL 1370	Blytheville, Ark KLO 1400	Wenatchee, Wash KPRC 920	
Galveston, Texas	Raton, N. M.	Ogden, Utah	Houston, Texas	
KFUO 550	KGFW 1310	I KLPM 1240 I I	KQV 1380 Bittsburgh Pa	
St. Louis, Mo. KFVD 1009	Kearney, Nehr KGFX 630	Minot, N. Dak. KLRA 1390	Pittsburgh, Pa. KQW 1010	
Los Angeles, Cal/90	Pierre, S. D.	Little Rock, Ark.	San Jose, Cal.	
KFVS 1210 Cape Gir'rd'u, Mo	KGGC 1420 San F'ncisco, Cal.	KLS 1440	KRE 1370	
KRWB 950	KGGF 1010	Oakland, Cal. KLX 880	Berkeley, Cal. KREG 1500	
Hollywood, Cal.	Coffeyville, Kans.	Oakland, Cal.	Santa Ana, Cal.	
	KGGM 1230	KLZ 560	KRGV 1260	
St. Louis, Mo. KFWI 930	Albuq'rque, N.M KGHF 1320	Denver, Colo. KMA 930	Harlingen, Texas KRKD 1120	
San F'ncisco, Cal.	Pueblo, Colo.	Shenandoah, Ia.	Los Angeles, Cal.	
		li li b		

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KRLD

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WDRC

BRLD 140 KWAP 110 WCAP 1280 BABAS, TORSA KWAP 850 WASH 270 WCAP 1280 KRND 131 KWEH 850 WCAP 1280 WCAP 1280 KRND 132 KWEC 1270 WCAP 1280 WCAP 1280 Cakland, Cal. EWSC 1220 WBAL 1400 WCAP 1280 KRSC 1120 EWSC 1220 WBAL 766-1600 Burlinzcon, V. Sale Faringbarn, An. Harrisburg, Pa. Carbage, HI. WCBA 1440 Manht'tr, Kana. Evermon, Cal. WHAL Tofo-1600 WBAL 760-1600 WIGBA 1440 SSLD St. Lake City KAP referee, Cal. Wash Evertand, Ore. Fort Worth, Tes. WIGBA 1210 WCGM 1370 St. Lake City KAPT calco, Cal. Wash Evertand, Ore. Wash Evertand, Ore. WigBA 1210 WCCM 120	KRLD 1040	KWKC 1370	WAPI 1140	WCAP 1280
Entrevent, i.a. Difference Cr. Rapids, Mich. Rapid City, S. D. Oskiand, C.al. Divoch, incr. ZAWZ. hi37 J. WCAU City, S. D. KRSC 1120 Divoch, incr. ZAWZ. hi37 J. WCAU City, S. D. KSAC 630 RUMAN. Lafayette, Ind. Burlington, Yt. KSAC 550 KXL 1420 WCAU City, I. Carthage, III. Solut, No. Portland, Ore. Portland, Ore. Portland, Ore. Portland, Ore. WDAY 800 KSL 1420 WDAY 800 WCBU 1300 Solut, Solut, I.	Dallas, Texas	Kansas City, Mo.	Birmingham, Ala.	Asbury Pk., N. J.
Backlam Dataseta, Losin Paragion, Lion Paragion, Lio	Shrevenort Ly		Gr Rapida Mish	Rapid City S D
Oakland, Cal. Decorah, Jowa Zarephath, N. J. Philadelphia, Pa. Seattle, Wash. Pullman, Wash. Lafayette, Ind. Burlington, Vt. Seattle, Wash. Pullman, Wash. Lafayette, Ind. Burlington, Vt. Stanh ttr, Kann. Brownovite, Try. WiAK Burlington, Vt. Stanh ttr, Kann. Brownovite, Try. WiAK Burlington, Vt. Stant ttr, Kann. Brownovite, Try. WiAK WiAK UNAK Statt, Lake, No. Forland, Ore, Fort Worth, N. J. WCBS Lato Statt, Lake City Aberdeen, Wash. Battimore, Md. WiBHC Lidoo Statt Lake City Aberdeen, Wash. Brooklyn, N. Y. Springfield, Ili. Stattake City WCCO WCCO Stattake City WCCO Stattake City WCCO Stattake City WCCO Stattake City WCCO Stattake. WCCO Stattake. WCCO Stattake. WCCO Stattake. WCCO Stattake. WCCO Stattake. Stattake. WCCO Stattake. Stattake. WCCO	KROW 930	KWLC 1270		WCAU 1170
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Phoenix, Ariz. KTATCebu, P. I. KZRMBay City, Mich. WEENChicago, II. WEXKTAT1240KZRM618.5WEEN900WCKY1490Ft. Worth, Tex. KTBSNAA690WattoWatto1400Covington, Ky. WESOWCLO1200Portland, Ore. KTBSRUS664WBHS1200Janesville, Wis. WCLOJanesville, Wis. WCLOJanesville, Wis. WCLOJanesville, Wis. WCLOWCLS1310Shreveport, La. KTHSGuatamala GuatamalaGreenshoro, N.C. Greenshoro, N.C.WCMA1400Cuiver, Ind. WCASWCCSKTM780VAS685WBMS1450WCOC880Houston, Texas KTMHareidia, C. R. VCXS65New York City WBOQMcColHarisburg, Pa. WCOCWCOCKTSM120VCX690WBOV140WcOC1200Los Angeles, Cal. Houston, Texas KTMGlace Bay, N. F. VCXWBOV1310WcOC1360KTSM120VOAS810WERC930WCSC1360San Atonlo, Tex. St John's, N. F. WaladWHSO920WCSC1360Charleston, S. C.KTW120WOAS510WBSO920WCSL1360Kulu1370WAA950Wilke-Barre, Pa. WCSCWCSL1360WalaNass.UWST1370WDAF610WalaWala1410WBT1370WDAF <td>KTAR 620</td> <td>KZRC 937 5</td> <td>WRCM 1410</td> <td>Brooklyn, N. Y.</td>	KTAR 620	KZRC 937 5	WRCM 1410	Brooklyn, N. Y.
KTAT 1240 KZRM 618.5 WEN 900 WCKY 1490 Ft. Worth, De. Manila, P. I. Buffalo, N.Y. WBEO 1310 WCKY 1490 Shreveport, La. Salvador WBIS 1200 WCKY 1200 KTBS 1450 RUS 664 WBHS 1200 WCKY 1310 Shreveport, La. Salvador Huntsville, Ala. Jollet, III WCMA 1400 Culver, Ind. KTHS 1040 TICR 911 WBMS 1450 WCMA 1400 KTHA 130 TIANRH 980 WENN 1350 WCMA 1340 KTM 780 VAS 685 WBOQ 860 WCOL 1200 Los Angeles, Cal. Hackensack, N.J. WERG 930 WCK 1200 Harrisburg, Pasa KTM 780 VAS 685 WBOQ 860 WCCLy 1200 KTSM 1310 VOAS 810	Phoenix, Ariz,	Cebu, P. I.	Bay City, Mich.	Chicago, Ill
Ft. Worth, Tex. Manila, P. I. Buffalo, N. Y. Covington, Ky. WBBO Arlington, Va. RUSS 664 WBAO Waquette, M[ch.] Janesville, Wis, Shreveport, La. Salvador RUSS 664 WBHS 1200 Jolet, II Streveport, La. Guatamala Guatamala WBGO WCAS WCAS 1440 WCM Colver, Ind. WCAS WCAS 1440 WCA 1440 WCA 1340 WCA 1440 1440 WCA 1240 1440 <td>KTAT 1240</td> <td>KZRM 618.5</td> <td>WBEN 900</td> <td>WCKY 1490</td>	KTAT 1240	KZRM 618.5	WBEN 900	WCKY 1490
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KTBS 1450 RUS 664 WBHS 1200 WCLS 1310 KTFI 1240 TGW 570 Huntsville, Ala. Joliet, III WCMA 1400 KTFI 1240 Guatamala Greensboro, N.C. WCMA 1400 Culver, Ind. WCMA 1400 KTLC 1310 Hackensack, N.J. WEMS 1450 Pensacola, Fla. KTLC 1310 Hackensack, N.J. WCOC 880 McCock McCock houston, Texas Herefula, C. R. New York City WCOD 1200 Haifiax, N.S. WCOC 880 KTSA 1290 VOX 690 WSBC 930 WCRW 1210 Yookers, N.Y. KTSA 1290 VOXA 950 WBRE 1310 WCCC 1360 Chicago, II. WBR 1310 VONA 950 WBRE 1310 WCSC 1360 Chicago, II. WUA 1370 VPN 610 WBAS 940 YDA YDA	KTBK 1300	NAA 690	WBEO 1310	WCLO 1200
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Buffalo, N. Y.	Chicago, Ill.	Chicago, Ill.	San Juan, P. R.
WEDC 1210	WGH 1310	WIBU 1210	WKAK 1040
Chicago, Ill. WEEI 590	Newp't News,Va. WGL 1370	Poynette, Wis. WIBW 580	E. Lansing, Mich. WKAV 1310
Boston, Mass.	Ft. Wayne, Ind.	Topeka, Kansas	Laconia, N. H.
WEEU 830	WGN 720	WIBX 1200	WKBB 1310
Reading, Pa. WEHC 1350	Chicago, Ill. WGR 550	Utica, N. Y. WICC 600	Joliet, Ill. WKBC 1310
WEHC 1350 Emory, Va.	Buffalo, N. Y.	Bridgeport, Conn	Birmingham, Ala.
WEHS 1420	WGST 890	II WIL 1200	WKBF 1400
Cicero, Ill.	Atlanta, Ga.	St. Louis, Mo.	Indianapolis, Ind.
WELL 1420 Battle C'k, Mich.	WGY 790 Schenec'dy N Y	WILL 890 Urbana, Ill.	WKBH1380LaCrosse, Wis.
WENC 1420	Schenec'dy, N. Y. WHA 940	WILM 1420	WKBI 1420
Americus, Ga.	Madison, Wis.	Wilmington, Del.	Cicero, Ill. WKBN 570
WENR 870 Chicago, Ill.	WHAD 1120 Milwaukee, Wis.	WINS 1180 New York City	WKBN 570 Youngstown, O.
WERE 1420	WHAM 1150	WIOD 1300	WKBS 1310
Erie, Pa.	Rochester, N.Y.	WIOD 1300 Miami, Fla. WIP 610	Galesburg, Ill. WKBV 1500
WEŚG 1370 Glens Falls, N. Y.	WHAS 820 Louisville Ky	Philadelphia, Pa.	Connersville, Ind.
WEVD 1300	Louisville, Ky. WHAT 1310	WIS 1010	WKBW 1480
New York City	Philadelphia, Pa.	Columbia, S. C.	Buffalo, N. Y.
WEW 760 St. Louis, Mo.	WHAZ 1300 Troy N V	WISN 1120 Milwaukee, Wis.	WKBZ 1500 Ludington, Mich.
WEXI. 1310	Troy, N. Y. WHB 860	WJAC 1310	WKJC 1200
Royal Oak, Mich.	Kansas City, Mo.	Johnstown, Pa.	Lancaster, Pa.
WFAA 800 Dallas, Texas	WHBC 1200 Canton, Ohio	WJAG 1060 Norfolk, Nebr.	WKRC 550 Cincinnati, Ohio
WFAB 1300	WHBD 1370	WJAK 1310	I WKY 900
New York City	Mt. Orab, Ohio	Elkhart, Ind.	Oklahoma City
WFAM 1200 So. Bend, Ind.	WHBF 1210 Rock Island, Ill.	WJAR 890 Providence, R. I.	WKZO 590 Kalamazoo, Mich.
WFAN 610	WHBL 1410	WJAS 1290	WLAC 1470
Philadelphia, Pa.	Sheboygan, Wis. WHBQ 1370	Pittsburgh, Pa.	Nashville, Tenn.
WFBC 1200 Knoxville, Tenn	Momphia Topp	Jacksonville, Fla.	WLAP 1200 Louisville, Ky.
WFBE 1200	Memphis, Tenn WHBU 1210	WJAY 610	WLB 1250
Cincinnati, Ohio	WHBU 1210 Anderson, Ind.	Cleveland, Ohio	St. Paul, Minn.
WFBG 1310 Altoona, Pa.	WHBY 1200 Green Bay, Wis.	WJBC 1200 La Salle, Ill.	WLBC 1310 Muncie, Ind.
WFBL 1360	WHDF 1370	WJBI 1210	WLBF 1420
Syracuse, N. Y.	Calumet, Mich.	Red Bank, N. J.	Kansas City, Ks.
WFBM 1230	WHDH 830 Boston, Mass	WJBK 1370 Detroit, Mich.	WLBG 1200 Ettrick, Va.
Indianapolis, Ind WFBR 1270	WHDL 1420	WJBL 1200	WLBL 900
Baitimore, Md.	TupperLake.N.Y.	Decatur, Ill.	Stevens Pt., Wis.
WFDF 1310	WHEB 740 Bortsmouth N.H.	WJBO 1420	WLBW 1260
Flint, Mich. WFDV 1500	Portsmouth N.H WHEC 1430	WJBU 1210	Oil City, Pa. WLBX 1500
Rome, Ga.	Rochester, N. Y.	Lewisburg, Pa.	L. I. City, N. Y.
WFDW 1420	WHEF 1500	WJBW 1200	WLBZ 620
Anniston, Ala. WFEA 1430	Kosciusko, Miss WHFC 1420	With the second	Bangor, Maine WLCI 1210
Manchester, N.H.	Cicero, Iil.	Gadsden, Ala.	Ithaca, N. Y.
WFI 560	WHIS 1410	WJDX 1270	WLEY 1370
Philadelphia, Pa WFIW 940	Bluefield, W. Va.	Jackson, Miss.	Lexington, Mass.
Hopkinsville, Ky WFLA 620	Cleveland, Ohio		
WFLA 620			
Clearwater, Fla.			

WLIT

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XEG

WLIT 560	WNOX 560	WQDX 1210	WSUN 620
Philadelphia, Pa.	Knoxville, Tenn. WNYC 810	Thomasville, Ga.	St. Petersb'g, Fla.
WLOE 1500 Boston, Mass.	WNYC 810 New York City	WRAK 1370 Williamsport, Pa.	WSVS 1370 Buffalo, N. Y.
WLS 870	WOAI 1190	WRAM 1370	WSYB 1500
Chicago, Ill.	San Antonio, Tex.	Wilmington, N.C.	Rutland, Vt.
WLTH 1400	WOAX 1280	WRAW 1310	WSYR 570
Brooklyn, N. Y. WLVA 1370	Trenton, N. J. WOBU 580	Reading, Pa. WRAX 1020	Syracuse, N. Y. WTAD 1440
Lynchburg, Va.	Charlest'n, W.Va.	Philadelphia, Pa.	Quincy, Ill.
	WOC 1000	WRBL 1200	WTAG 580
Cincinnati, Ohio WLWL 1100	Davenport, Iowa WOCL 1210	Columbus, Ga. WRBQ 1210	Worcester, Mass WTAM 1070
New York City	Jamestown, N. Y.	Greenville, Miss.	Cleveland, Ohio
WMAC 570	WODA 1250	WRBX 1410	WTAQ 1330
Syracuse, N. Y. WMAL 630	Paterson, N. J. WODX 1410	Roanoke, Va. WRC 950	Eau Claire, Wis WTAR 780
Washington, D.C.	Mobile, Ala.	Washington, D.C.	Norfolk, Va.
WMAQ 670	WOI 640	WRDO 1370	WTAW 1120
Chicago, Ill.	Ames, Iowa	Augusta, Maine	College Sta., Tex. WTAX 1210
WMAZ 1180 Macon, Ga.	WOKO 1430 Albany, N. Y.	WRDW 1500 Augusta, Ga.	Springfield, Ill.
WMBA 1500	WOL 1310	WREC 600	WTBO 1420
Newport, R. I.	Washington, D.C.	Memphis, Tenn.	Cumberland, Md.
WMBC 1420 Detroit, Mich.	WOMT 1210 Manitowog Wis	WREN 1220	WTEL 1310 Philadelphia Pa
WMBD 1440	Manitowoc, Wis. WOOD 1270	WRHM 1250	Philadelphia, Pa. WTFl 1450
Peoria Hghts,,Ill.	Gr. Rapids, Mich.	Minneap., Minn.	Athens, Ga.
WMBG 1210 Bishmond Va	WOPI 1500	WRJN 1370	WTIC 660-1060
Richmond, Va. WMBH 1420	Bristol, Tenn. WOQ 1300	Racine, Wis. WRNY 1010	Hartford, Conn. WTJS 1310
Joplin, Mo.	Kansas City, Mo.	New York City	Jackson, Tenn.
WMBI 1080	WOK 710	WROL 1310	WTMJ 620
Chicago, Ill. WMBO 1310	Newark, N. J. WORC 1200	Knoxville, Tenn. WRR 1280	Milwaukee, Wis
Auburn, N. Y.	Worcester, Mass.	Dallas, Texas	Savannah, Ga.
WMBQ 1500	WORK 1000	Dallas, Texas WRUF 830	WTSL 1310
Brooklyn, N. Y WMBR 1370	York, Pa. WOS 630	Gainesville, Fla WRVA 1110	Laurel, Miss. WWAE 1200
Tampa, Fla.	Jeff's'n City, Mo.	WRVA 1110 Richmond, Va.	WWAE 1200 Hammond, Ind.
WMC 780	WOV 1130	WSAI 1330	WWJ 920
Memphis, Tenn.	New York City	Cincinnati, Ohio	Detroit, Mich.
WMČA 570 New York City	WOW 590 Omaha, Nebr.	WSAJ 1310 Grove City, Pa.	WWL 850 New Orleans, La.
WMIL 1500	WOWO 1160	WSAN 1440	WWNC 570
Brooklyn, N. Y.	Ft. Wayne, Ind.	Allentown, Pa.	Asheville, N. C.
WMMN 890 Fairmont, W. Va.	WPAD 1420 Paducah, Ky.	WSAR 1450	WWRL 1500
WMPC 1500	WPAP 1010	Fall River, Mass. WSAZ 580	Woodside, N. Y
Lapeer, Mich. WMRJ 1210	New York City	Hunt'gton, W.Va.	Pittsburgh, Pa. WWVA 1160
	WPAW 1210	WSB 740	WWVA 1160
Jamaica, N. Y. WMSG 1350	Providence, R. I WPCC 560	Atlanta, Ga. WSBC 1210	Wheeling, W. Va WXYZ 1240
New York City	Chicago, Ill.	Chicago, Ill.	Detroit, Mich.
WMT 600	WPCH 570	WSBT 1230	XEA 1000
Waterloo, Iowa WNAC 1230	New York City WPEN 1500	South Bend, Ind WSEN 1210	Guad'l'jara, Mex XEB 1030
Boston, Mass.	Philadelphia, Pa.	Columbus, Ohio	Mexico City
WNAD 1010	WPFB 1370	WSFA 1410	XEC 1000
Norman, Okla. WNAX 570	Hattiesb'g., Miss WPG 1100	Montgomery,Ala. WSIX 1210	Toluca, Mexico XED 965
Yankton, S. D.	Atl'ntic City.N.J.	Springfield, Tenn.	Reynosa, Mexico
WINDE TOUL	WPOR 780	WSJS 1310	XEE 1000
Bingh'mt'n, N.Y.	Norfolk, Va.	WinstSal., N. C.	Oaxaco, Mexico
WNBH 1310 New B'df'd, Mass.	WPRO 1210 Providence, R. I.	WSM 650 Nashville, Tenn.	XEFA 1250 Mexico City
WNBO 1200	WPSC 1230	WSMB 1320	XEFB 1315
Washington, Pa.	State College, Pa.	New Orleans, La.	Monterrey, Mex.
WNBR 1430 Memphis, Tenn.	WPTF 680 Raleigh, N. C.	WSMK 1380 Dayton, Ohio	XEFC 1050 Merida, Mex.
WNBW 1200	WQAM 560	WSOC 1210	XEFD 845
Carbondale, Pa.	Miami, Fla.	Gastonia, N. C.	Tijuana, Mex.
WNBX 1200 Springfield Vt	WQAN 880	WSPA 1420 Spartanburg, S.C.	XÈFE 1000 Laredo, Mexico
Springfield, Vt WNBZ 1290	Scranton, Pa. WQAO 1010	WSPD 1340	XEFI 1000
Sar'n'c L'ke, N.Y.	New York City	Toledo, Ohio	Chihuahua, Mex XEFS 1000
WNJ 1450 Newark, N. J.	WQBC 1360	WSUI 880	
INCWALE, IN, J.	Vicksburg, Miss WQDM 1370	Iowa City, Iowa	Queretaro, Mex.
	St. Albans, Vt.		Mexico, Mex.
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XEH

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10-BQ

							and the second second
XEH 1132		XEQ 750		XETQ 1230	1	XFC 810	
Monterrey, Mex.		Juarez, Mexico		Mexico, Mex.		Aguascal'ntes, M.	
XEI 1000		XER 735		XETR 610		XFF 875	
Morelia, Mexico		Villa Acuna, Mex.		Mexico City		Chihuahua, Mex.	
XEJ 1000		XES 890		XETZ 1500		XFG 683.3	
Juarez, Mexico		Tampico, Mexico		Coyoacan, Mex.		Mexico City	
XEK 990	-	XET 690		XEU 1000		XFI 818	
Mexico City		Monterrey, Mex.		Veracruz, Mex.		Mexico City	
XEL 1000		XETA 1140		XEV 1000	1	XFX 867	
Saltillo, Mexico		Mexico City		Puebla, Mexico		Mexico City	
XEM 1300		XETB 1380		XEW 910		10-AB 1200	
Tampico, Mexico		Torreon, Mex.		Mexico City		Moose Jaw, Sask.	
XEN 711		XETC 1000		XEX 1210		10-AT 1155	
Mexico City		Jalapa, Mex.		Mexico City		Trail, B. C.	
XEO 940		XETF 630	-	XEY 1000	-	10-BP 1200	
Mexico City	L	Veracruz, Mex.		Merida, Mexico		Wingham, Ont.	
XEP 1400		XETG 1000		XEZ 780		10-BQ 1200	
Laredo, Mexico	- 0	Torreon, Mex.		Mexico City		Brantford, Ont.	
		· · · ·				1	

INDEX BY LOCATIONS WITH MAP KEY

(Continued from page 59)

v	Watts		Kcys.	Cienfuegos W-25 Colon W-24	40 30	CMHJ CMGI	1125 1150
Guadalajara, Jal. X-10	101	XEA	1000	Guantanamo X-28	20	CMKJ	1300
MICHOACAN				Havana W-23	150 150	CMBC CMBD	965 965
Morelia, Mich. Y-12	101	XEI	1000		225	CMBG	1070
					30	CMBI	1444
NEUVO LEON					20	CMBL	1444 1444
Monterrey, N. L. U-13	50	XEFB	1315		30 50	CMBN CMBO	1444
	1000	XEH	1132		15	CMBR	1500
OAXACA	500	XET	690		150	CMBS	790
		WEE	1000		150 150	CMBT CMBW	790 1140
Oaxaca, Oak. AA-14	105	XEE	1000		350	CMBY	1235
PUEBLA					150	CMBZ	1010
Puebla Z-13	101	XEV	1000		500	CMC	840
					$150 \\ 150$	CMCA CMCB	1235 1070
QUERETARO					250	CMCD	925
Queretaro X-12	40	XEFS	1000		250	CMCF	890
TAMAULIPAS			1		30 20	CMCG CMCH	1395 1395
N. Laredo S-13	101	XEFE	1000		250	CMCJ	630
N. Laredo 3-15	200	XEP	1400		15	CMCM	1395
Reynosa, Tams. T-14	10000	XED	965		250	CMCN	925
Tampico, Tams. W-14	500	XEM XES	730		250 1000	CMCO CMCO	660 1140
	500	AES	890		150	CMCR	1345
VERA CRUZ					150	ČMCU	1270
Jalapa Y-14	100	XETC	1000		150	CMCW	1270
Veracruz, Ver. Z-14	500	XETF	630		250 40	CMCY CMDB	1345 1395
	101	XEU	1000		500	CMDC	660
YUCATAN					3150	CMK	730
Merida, Yuc. X-19	105	XEY	1000		250	CMQ	630
					1400 500	CMW CMX	588 890
WEST	IND	IES		Matanzas W-24	30	CMGB	1205
BAHAMA					30	CMGC	820
Nassau, U-26	500	VPN	610		50 150	CMGF CMGH	987 1040
	000		010	Pinar del Rio W-22	20	CMAB	1249
CUBA		~		Santa Clara W-25	30	CMHI	1030
Caibarien W-25	250 75	CMHD CMJC	950 1382	Santiago X-28	150	CMKC	1034
Camaguey W-26	20	CMJE	856	Tuinucu	250	CMHC	790
	225	CMJF	930	DOMINICAN RI	FDUR		
	50	CMJG	1050	Santo Domingo X-31		HIX	630
Cardenas W-24	50 30	CMJL CMGE	960 1375	Santo Donningo A-51	1000		000
Ciego de Avila W-26	15	CMIGE	1017	HAITI			
	5	CMJI	1260	Port au Prince X-30	1000	HHK	920

Shortwave Broadcasters of the World

Fill in your dial and coil numbers for these foreign stations

2000 METERS

Keys.	Power	Call	City	Country
155	7000	RYK	Kovno	Lithuania
160 160	7000 6400	PFBI PH9	Amsterdam, Hilversum Amsterdam	Netherlands
100	0400	PH9	Huizen	Netherlands
162		TNU	Carthage	Tunisia
167	40000		Lahti	Finland
174	13500		Paris	France
188	10000	RW14		Russia
193	25000	G5XX	Daventry	England

1500 METERS

203	25000		Warsaw	Poland
203	100000	RW1	Moscow	Russia
222	30000	SBG	Motala	Sweden
229	300	VK5AD	Adelaide	Australia
230	100000	RW49	Moscow	Russia
230	4000	RW6	Novo Sibirsk	Russia
235	500	TUA	Tunis	Tunisia
238	10000	RW8	Baku	Russia
238	1200	RW43	Baku	Russia
240	21000		Reykjavik	Iceland
244 -	500		Besel	Switzerland
246	500		Berne	Switzerland
250	100		Tallinn	Estonia
250	600	SBE	Boden	Sweden
256	25000	RW11	Tashkent	Russia
268	4000	RA33	Novorossiisk	Russia
2 69	40000	RW58-	Moscow	Russia
271	4000		Rostov on Do	n Russia
273	40000	RW58	Moscow	Russia
273	8000	RV58	Imeni Pop	Russia
279	75000	LKO	Oslo	Norway
280	2000	PCF	Scheveningen	Netherlands
280	10000	RW7	Tiffis	Russia
290	36000	RW9	Kiev	Russia

1000 METERS

300	20000	RW3	Leningrad	Russia
	100000	RW 53	Leningrad	Russia
309			Soro	Denmark
310	10000	RW60	Alma Ata	Russia
320	16000	RW4	Kharkov	Russia
320		RV49	Stchelkovo	Russia
334	4000	RW19	Achkabad	Russia
338	1200	RA41	Vologda	Russia
343		RV21	Erivan	Russia
343		RW18	Samarkand	Russia
354	4000	RW12	Rostov on Don	Russia
364	36000	RW5	Sverdlovsk	Russia
368		RW9	Kiev	Russia
370	1200	RW26	Stalino	Russia
375	250	RA9	Sevastopol	Russia
386		RW25	Voronezh	Russia
394	4000	RW42	Nizhni Novgorod	Russia
395	1200		Geneva	Switzerland

750 METERS

417	20000	RW2	Moscow	Russia
421	2000	RW47	Tashkent	Russia
429	4000	RW10	Minsk	Russia
435	1000	RW35	Astrakhan	Russia

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Kcys.	Power	Call	City	Country
441			Lausanne	Switzerland
444	2000	RW22	Oufa	Russia
462	1000	RW45	Orenburg	Russia
469	1200	RW29	Petrozavodsk	Russia
472	1200	RW44	Omsk	Russia

600 METERS

511	800	LKH 1	Hamar	Norway
511	4000	RW30	Dueipropetrovsk	Russia
521	1000	RA34	Koursk	Russia
522	1200	RW16	Samara	Russia
527	300		Freiburg	Germany
530	300		Hanover	Germany
531	2000	RW24	Smolensk	Russia
536	300		Augsburg	Germany
541		RV53	Sverdlovsk	Russia
545	20000		Budapest	Hungary

200 METERS

1515	250		Biarritz	France
1530	200	SCJ	Karlskrona	Sweden
1635	35000		Berlin	Germany
1764	20	OA6U	Arequipa	Peru
2142	500		Surabaya	Netherland
				East Indies
3030	30000	SBG	Motala	Sweden
3446	2500		Haiphong	French Indo-
				China
3750	9000	12RO	Rome	Italy
3998	500	PK1AA	Batavia	Netherland
				Fast Indies

75 METERS

4262	1500	F8GC	Paris	France
4273	20000	RW54	Kharbarovsk	Russia
4776		ZL2XX	Wellington	New Zealand
5000		XCTE	Shanghai	China
5169	2000	OK1MPI		Czechoslovakia
5170	1000	IBR	Bandoeng	Netherland
				East Indies
5515	300	RW38	Moscow	Russia
5552	500	1	Tananarive	Madagascar
5837		HKD	Barranquilla	Colombia
5879		AIN	Casablanca	Morocco
5965	10000	HVJ	Vatican City	Italy
5996	500	PK2AF	Djokjakarta	Netherland
				East Indies

50 METERS

	26	12		
6000	1000	VQ7LO	Nairobi	Kenya
6000	250	ZL3ZC	Christchurch	New Zealand
6000	20000	RW59~	Moscow	Russia
6000		EAJ25	Barcelona	Spain
6005		VE9DN	Montreal, Que.	Canada
6005		VE9DR	Monteal, Que.	Canada
6015		VE9CX	Wolfville, N. S.	Canada
6030		VE9CA	Calgary, Alta.	Canada
6040			Surabaya	Netherland East Indies
6045	$0 \sim 0$		Tandjonk Priok	

Kcys.	Power	Call	City	Country
6050		HKD	Barranguilla	Colombia
6050		VE9CF	Halifax, N. S.	Canada
6057		OXO-		
		OXZ	Copenhagen	Denmark
6061	400	YV2BC	Caracas	Venezuela
6065	30000	SBG	Motala	Sweden
6070		VE9CS	Vancouver, B. C.	Canada
6072	15000	UOR2	Vienna	Austria
60 80		VE9EH	Charlottetown, P.	E. I., Canada
6090		VE9BJ	St. Johns, N. B.	Canada
6095		VE9GW		Canada
6098	15000	ZTJ	Johannesburg	South Africa
6110		VE9CG	Calgary, Alta.	Canada
6114	3000	VUB	Bombay	India
6119	12000	F31CD	Saigon	French Indo-
				China
6124	40000	\mathbf{FL}	Paris	France
6124		EAR25	Barcelona	Spain
6130		VE9BA	Montreal, Que.	Canada
6134	1000	VQ7LO	Nairobi	Egypt
6150		VE9CL	Winnipeg, Man.	Canada
6160		HKA	Barranquilla	Colombia
6275	50	HKC	Bogota	Colombia
6420	100	RW62	Minsk	Russia
6662	250		Surabaya	Netherland East Indies
6667	200	F8KR	Algiers	Algeria
6667		I1AX -	Rome	Italy
6726	200	VRY	Georgetown	British Guiana
6875		F8MC		Morocco
6877	2000		Rabat	Morocco
6976		EAR100		Spain
6995	2000	C'T1AA	Lisbon	Portugal

43 METERS

7005		F8KR	Constantine	Tunisia
7025		EAR125	Madrid	Spain
7055		VS3AB	Johore Baru	British Malaya
7139	25	HKT	Manizales	Colombia
7143		HKF	Bogota	Colombia
7211	500	EAR58	Teneriffe	Canary Islands
7260		VS1AB	Singapore	British Malava
7300	2500	HSP2	Bangkok	Siam
7317	2000		Paris	France
7463	500	YR	Lyon	France
7538			El Prado	Ecuador
7590		JFAB	Taihoku, Form	
7616		HKF	Bogota	Colombia
7995		JHBB	Hirasio	Japan
8105		JIAA	Tokyo	Japan
8692		HKF	Bogota	Colombia
8820	100	VK3UZ	Melbourne	Australia

33 METERS

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			1	
9110		SUS	Cairo	Egypt
9125		ĤAT	Szekesvehervar	Hungary
9230	1000	VK2BL	Sydney	Australia
9300	6		Rabat	Morocco
9369	1000	VK3LO	Melbourne	Australia
9410	30	PLE	Bandoeng	Netherland East Indies
9488		0X0-		
		OXZ	Copenhagen	Denmark
950 0			Melbourne	Australia
9500	2500	JSP2	Bankok	Siam
9555		VE9DR	Montreal, Que.	Canada
9560	30000		Berlin	Germany
9580		VE9DN	Montreal, Que.	Canada
9590		VK2ME	Sydney	Australia
9590		PCJ	Amsterdam.	
			Hilbersum	Netherlands
9616	1000	VQ7LO	Nairobi	Kenya

Kcys.	Power	Call	City	Country
9772		EAM	Madrid	Spain
9810	1111	LSOR	Buenos Aires	Argentina
9836	1500		Poznan	Poland

30 METERS

10000			Belgrade	Jugoslavia
10167	500	HS2PJ	Bangkok	Siam
10382	20000	LSX	Buenos Aires	Argentina
10520	1000	VK2FC		Australia
10527		VK2ME		Australia
10710		F8MC	Casablanca	Morocco
10710	150	CT1BO	Lisbon	Portugal
10990		ZLW	Wellington	New Zealand

27 METERS

11308		FYA	Paris	Prance
11700		YV4BV	Valencia	Venezuela
11705		VE9BA	Montreal, Que.	Canada
11712	7.5	HKN	Medellin	Colombia
11720		VE9JR	Winnipeg, Man.	Canada
11750			Chelmsford	England
11760		SAS	Karlsborg	Sweden
11780			Montreal, Que.	Canada
11801		UOR2	Vienna, Rosen-	
			huegel	Austria
11810	9000	I2RO	Rome	Italy
11810		VE9GW	Toronto, Ont.	Canada
11860		VE9CA	Calgary, Alta.	Canada
11870	3000	VUC	Calcutta	India
11895		VE9DN	Montreal, Que.	Canada
11899		FYA	Paris	France
11993	500	PK6KZ	Makassar	Netherland East India

25 METERS

12010		FZR	Saigon	French Indo- China
12830	6000		Rabat	Morocco
13100		FZG	Saigon	French Indo- China
14420		VPD	Suva	Fiji

20 METERS

15112	10000	нуј	Vatican City	Italy
15190		VE9BA		Canada
15235		FYA	Paris	France
15300	500	OXO-		
		OXZ	Copenhagan	Denmark
16330		VK2ME	Sydney	Australia
17640		PLF	Malabar	Netherland East Indies
17775	40000	PHI	Amsterdam, Hujzen	Netherlands

17 METERS

18860	30	PLE	Bandoeng	Netherland East Indies
$24380 \\ 51724$	750	VE9GW RW61	Toronto, Ont. Moseow	Canada Russia
59964	240		Semarang	Netherland East Indies

Their Time On the Air

	ien i	mite	Un u		•
Your Zone	EST	Where Ti CST	me is Give MS	n as FP	ST
EST CST MST PST	Subt. 1 h Subt.2 h Subt.3 h	Add 1 r. Subt. 1 s. Subt. 2	hr. Add 2 Add 1 hr. hrs. Subt.	Add	3 hrs. 2 hrs. 1 hr.
State		City	Cail	Kcys.	Watts
Alaska	Ke Thur	etchikan	KGBU	900 DST	500
California Daily	Be 7 a.m1	everly Hill local sunse	ing, 1-3 a.r s KMPC et; 9 p.m	710 1 a.m., PS' 1010	500 Г.
Sund	Sa w 10.15 a	n Jose m -12:30	KQW n.m.: 7:30-	1010 9:30 p.m. H	500 ST
Daily	, 7 a.m1 St	0 p.m. (Sil ockton	ent 3:30-4: KWG	9:30 p.m., I 30 p.m.) 1200	100
Sunda Daily Colorado	iy, 8 a.m , 7:30 a.m G	11 p.m., r 11 p.m. rand Iune	SI. 'n UFXI	1310	100
DX 1	hursday I	nornings, i	l-3 a.m., M	IST.	500
Daily Delaware	, 5 a.mm W	idnight, N ilmington	WILM	1420	100
Daily Illinois	, 7:30 a.m C	10 p.m., hicago	EST. WIBO	560	1000
Sund: Daily	ay, 7:30-10 6:25 a.m.) a.m.; 12: -1:30 a.m.	EST. WIBO 30-7 p.m., WSUI -3 a.m., Ci	CST.	
Iowa Every	Ic 7 Tuesday	wa City , Midnight	WSUI -3 a.m., Cl	880 ST.	500
Sund	Si ay, 8 a.m	oux City -7:30 p.m.,	CST.	1330	1000
Tues Balar	lay, 6:30 a ice week, 6	m12 mi :30 a.m8	dnight. :30 p.m.; 9:	880 ST. 1330 30-12 midn 580	ight.
Kansas DX S					
Sund	W ay, 8-10 a.	ichita m.; 1-7 p.	rting midr KFH m.; 9-11 p.	1300 m., CST. m.; 11:30-2	1000
Mon,	ay, 8-10 a. Thurs., p.m.; 10 day, 7-8-30	7-8:30 a.m -11 p.m.	n.; 9-11 a.	m.; 11:30-2	2 p.m.;
Tues Wed.	lay, 7-8:30 , Fri., 7-8) a.m.; 9-11 :30 a.m.;	.a.m.; 11:3 9-11 a.m.;	0-2 p.m.; 3- 11:30-2 p.n [1:30-2 p.m	11 p.m. m.; 3-6
Satur Satur	day, 7-8:3 n.; 11-12 r	30 a.m.; 9	-11 a.m.; 1	1:3 0-2 p.m	.; 3-10
Michigan	1.1	letroit	WJBK	1370	50
Missouri	June - Ju	a.m., EST	WMB1	H 1420 B:45 p.m., C	100 ST.
Satur	day, 12 no	oon-2 p.m.	; 6-7 p.m.	3:45 p.m., C 0 n m	
Nebraska	L 7 a m al	incoln	p.m.; 6-9:3 KFOR	1210	100
DX, nig	1st and 3r	d Friday	of each mo	nth, startir	ng mid-
New York	c B	uffalo -12 midnig	WBEN ht. EST.	1 900	1000
Daily Ohio	7, 6:4 5 a.m C	12 mid. (leveland	Tues. and WJAY	Sat. on till 610	1 a.m.) 500
Dany	, o a.mo D	orthand	. KEIR	1300	500
Mon 7-8 Tuos	p.m. PS Wed	Sat., 10:3 F. Fri 10:30	0 a.m2:3	0 p.m.; 5-6) p.m.;
Sund Mon	ay, 7:30 a Thurs., 6	.m12 mid -10:30 a.m	l., PST. .; 2:3 0-5 p.	, 1300 m.; 6-7 p.m	n.; 8-1 2
mı Tues Satur	a. ., Wed., Fi day, 6-10:			-5 p.m.; 6-7 ; 6-7 p.m.;	
1 a.n Pennsulu	n. ania R	eading	WEEU		1000
Daily	7, 8 a.m3 E	p.m. ES	WERF	1420 FST	100
Porto Ric	, 8 a.m1 o S	an Juan	WKA(p.m., EST.	500
Ever Virginia	y Sunday	morning 3- lorfolk	WTAI	1. (test pro	500
Sund Daily	ау, 9 а.т. :, 7:30 а.ш	-12 mid., l 112 mid.	• I Cid		
					r

CANADA

State	City	Call	Kcys.	Watts
Alberta	Edmonton	CHMA	580	250
Sundays	only, 7 p.m10:30	p.m., MST		
British Colu	mbia Kelowna	CKOV	1200	100
Every F	'riday and Sunday	morning,	12 mid	2 a.m.,
PST.				
Ontario		CKCL	580	500
Every S	aturday morning, 1	:30-3 a.m.,	EST.	
-	Toronto	CKNC	960	500
Daily, 8	a.m11:15 p.m., E	ST.		
Mexico	Mexico City	$\mathbf{X}\mathbf{E}\mathbf{Z}$	780	500
DX ever	y Sunday morning	, 1-1:30 a.n	n., CST.	
	Monterrey	XEH	1132	1900
Daily, 9	a.m11 p.m., CST			

The Month's Changes

Frequencies

570	WPCH	New York City, from 810.
590	WGCM	Gulfport, Miss., from 1210.
595	CJGC	London, Ont., from 910.
	CNRL	London, Ont., from 910.
630	CMQ	Havana, Cuba, from 1150.
810	ŴŇŶĊ	New York City, from 570.
856	CMJE	Camaguey, Cuba, from 1180.
890	CMX	Havana, Cuba, from 885.
987	CMGF	Matanzas, Cuba, from 977.
1030	CMHI	Santa Clara, Cuba, from 1110.
1040	CMGH	Matanzas, Cuba, from 1050.
1050	CMJG	Camaguey, Cuba, from 1200.
1125	CMHJ	Cienfuegos, Cuba, from 645.
1140	CMBW	Havana, Cuba, from 1010.
	CMCQ	Havana, Cuba, from 1150.
1200	KFXD	Nampa, Idaho, from 1420.
1210	KGY	Olympia, Wash., from 1200.
1235	CMBY	Havana, Cuba, from 1225.
1270	CMCW	Havana, Cuba, from 1285.
1310	KFYO	Lubbock, Texas, from 1420.
1330	KMO	Tacoma, Wash., from 860.
1395	CMCG	Havana, Cuba, from 1345.
	CMCH	Havana, Cuba, from 1405.
	CMCM	Havana, Cuba, from 1405.
1440	KDFN	Casper, Wyo., from 1210.
1444	CMBI	Havana, Cuba, from 1405.
* 1 1 1	CMBL	Havana, Cuba, from 1500.
	CMBN	Havana, Cuba, from 1405.
	0	

618.5 KZRM

645 CHRC

Power

		Lower
540 588 590	CKWO CMW WGCM	Windsor, Ont., 1000 to 5000. Havana, Cuba. 2000 to 1400. Gulfport, Miss., 100 to 1000.
690	6 KZRM CFRB	Manila, P. I., 1000 to 50000. Toronto. Ont., 7000 to 10000.
790	CMBT CMHC	Havana, Cuba, 500 to 150. Tuinucu, Cuba, 100 to 250.
820 840	WHAS	Louisville, Ky., 10000 to 25000. Toronto, Ont., 5000 to 10000. Havana, Cuba, 1000 to 500.
890	CMX WKAQ CMJF	San Juan, P. R., 250 to 500. Camaguey, Cuba, 50 to 225.
930 965 1030	CMBD CMBD	Havana, Cuba, 250 to 150. Santa Clara, Cuba, 15 to 30.
1050 1050 1070	CMJG CMBG	Camaguey, Cuba, 30 to 50. Hayana, Cuba, 150 to 225.
1140 1230	CMCQ KFQD	Havana, Cuba, 600 to 1000. Anchorage, Alaska, 100 to 250.
1240 1270	KTFI CMCU	Twin Falls, Idaho, 250 to 500. Havana, Cuba, 250 to 150.
1330 1345	KMO CMCY	Tacoma, Wash., 500 to 250. Havana, Cuba, 50 to 250.
1382 1395	CMJC CMCH	Camaguey, Cuba, 150 to 75. Havana, Cuba, 15 to 20.
$\begin{array}{c}1420\\1440\end{array}$	WENC KDFN	Americus, Ga., 50 to 100. Casper, Wyo., 100 to 500.

Owners

Manila, P. I., to Radio Corp. of Philippines. Quebec, Que., to CHRC, Ltd.

720	WGN	Chicago, Ill., to WGN, Inc.
1010	WPAP	New York City, to Calvary Baptist Church
1120	KTRH	Houston, Texas, to KTRH Broadcasting
		Co.
1140	WAPI	Birmingham, Ala., to WAPI Broadcast Co.
1210	CFCO	Chatham, Ont., to John Beardall.
		New
630	CHCS	Hamilton, Ont.
960	ČMJL	Camaguey, Cuba.
1260	CMJI	Ciego de Avila, Cuba.
1300	ĊMKJ	Guantanamo, Cuba,
1395	CMDB	Havana, Cuba.
		Location
1000	KEVD	Los Angeles, from Culver City, Calif.
1310	KFYO	Lubbock, Texas, from Abilene, Texas.
		Permit to Change Frequency
890	WKAQ	San Juan, P. R., to 950.
1340	KFPW	Fort Smith, Ark., to 1210,
1420	KGVÖ	Missoula, Mont., to 1200.
		Permit to Increase Power
890	WKAQ	San Juan, P. R., 500 to 1000.
1200	WFBC	Knoxville, Tenn., 10 to 100.
1340	KFPW	Fort Smith, Ark., 50 to 100.
		Permit to Change Location
1200	WFBC	Knoxville, Tenu., to Greenville, S. C.
1210	WCOH	Yonkers, N. Y., to White Plains, N. Y.
1420	KFXY	Flagstaff, Ariz., to Yuma, Ariz.
1110	KICK	Red Oak, Iowa, to Carter Lake. Iowa.
		Chains
540	CKWO	Windsor, Ont., new CBS,
820	WHAS	Louisville, Ky., NBC to CBS.
		Reinstated
1210	WPAW	Providence, R. I.
		Deleted
12 30	WBIS	Boston, Mass.

With the Radio Commission

HE old feud between WNYC, the A new YORK City internet of and WMCA, over the sharing of New York City municipal station. time has finally been settled (?) by the Radio Commission. WMCA in association with WPCH becomes a full time station on the 570 channel and WNYC is moved to 810 kcs., formerly used by WPCH. This will enable WNYC to have continuous operation every day in the week from 6:00 a.m. until as late as 10:00 p.m. during the summer months. WPCH goes out of existence although the call letters may be used in combination with WMCA. Like most orders of the Commission, this one probably will be carried to the courts yet, on the strength of the order, we are making the changes in this issue of RADEX.

The Commission has given special license to WCMA, Culver, Ind., to operate from 10:30 to 11:00 p.m. on Thursdays, Fridays and Sundays, from May 1st to September 24th, inclusive, provided station WKBF remains silent. WMBH, Joplin, Mo., has been given authority to operate from 9:30 to 10:45 p.m. CST, on the following dates: May, 29th, 30th, June 1st to 7th inclusive. June 27th to 30th inclusive and from 2:30 to 5 p.m. June 5th to 19th inclusive.

The Radio Commission has authorized WNAD, The University of Oklahoma station, to discontinue operation from 9:15 p.m., May 26th, until 7:15 p.m., October 4th. Station KGGF will use WNAD'S time.

KOB, State College, New Mexico, has been granted permission to discontinue broadcasting between April 24th and August 1st or sooner, in order to move transmitter from State College to Albuquerque.

Station WNBO, Washington, Pa., has been ruled off the air by Chief Examiner Yost because of its alleged serious interference with WHBC, Canton, Ohio. Wonder if the deletion will stick.

KFBI, Milford, Kansas, has entered protest against the removal of KGGF from South Coffeyville, Okla., to Coffeyville, Kansas, and the application has been set for hearing.

KGKX, Sandpoint, Idaho, has been given authority to discontinue operation to July 1st, pending the action of the Commission on its application to move station to Lewiston, Idaho.

WHOM, Jersey City, N. J., has been granted a renewal of its license in conformity with the mandate of the Court of Appeals in the case of WNJ, Newark, N. J.

The Commission has extended to June 1st, the temporary license for synchronization of WBAL, Baltimore, with WJZ and of WTIC, Hartford, with WEAF.

The special authorization of WABC-WBOQ to operate on 800 and 900 kes. experimentally with 50,000 watts has been extended.

WJKS, Gary, Ind., has been granted renewal of license by mandate of the Court of Appeals.

In September Mr. Dashiell will survey the All-Wave Receiver Field.

Good News and New Goods

Continued from page 11



aerial gives sufficient range and volume.

The chassis, completely assembled, less tubes, sells for only \$37.50, including large, specially matched dynamic speaker. Complete with 11 matched tubes, the price is \$47.95. Installed in an art console, the prices are \$57.50 and \$63.50, and in the de luxe model which is illustrated herewith, \$77.50. Even at these low prices, terms are given as low as \$10.00 down. Midwest receivers are sold on 30 days' trial with a guarantee of satisfaction or money back.

Readers may obtain more complete information in regard to any of the articles described above, by addressing the manufacturers and calling their attention to this page in RADEX.

For Summer Reception

Most good DX records in summer time must be made with head phones in order to reduce the volume below the noise or static level. If our readers do not want to make any more-or-less risky changes in their wiring, they should use a phone adapter in the socket of the last or power tube.

These adapters can now be furnished for either four- or five-prong tubes. Price of either is \$1.50 postpaid. They come complete with cord and connector into which tips of your headphones can be inserted.

For \$2.75 we can furnish you with a set of the I.C.A. head phones made especially for radio DX work. Phones and either adapter complete. \$4.25 postpaid.

STATEMENT OF THE OWNERSHIP, MANAGE MENT, CIRCULATION, ETC., REQUIRED BY ACT OF CONGRESS OF AUGUST 24, 1912

Of Radio Index, published monthly except July and August, at Cleveland, Obio, for April 1, 1932. State of Ohio

County of Cuyahoga | 88.

Before me, a notary public in and for the State and before me, a notary puole in and for the State and county aforesaid, personally appeared Fred C. Butler, who, having been duly aworn according to law, deposes and says that he is the Editor and Publisher of the Radio Index, and that the following is to the best of his knowledge and belief. a true statement of the ownership, management, etc., of the aforeaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor managing editor, and business managers are:

Publisher, Fred C. Butler, 5005 Euclid Ave., Cleveland, O.

Editor, Fred C. Butler, 5005 Euclid Ave., Cleveland, O. Managing Editor, Fred C. Butler, 5005 Euclid Ave.. Cleveland, O.

Business Manager, Fred C. Butler, 5005 Euclid Ave., Cleveland, O.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation. the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Fred C. Butler, doing business as The Radex Press.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is. (This information is required from daily publications only.)

Fred C. Butler.

Sworn to and subscribed before me this 1st day of April, 1932.

S. S. Long.

(My commission expires March 29, 1933.)

f Seal 1

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a