THE DECEMBER 1932

# RADEX INDEX

THE ALLWAVE RADIO MAGAZINE





The Last Word in Battery Sets
Changing to the New Tubes
Short Wave Stations of the World
by Call Letters
Wednesday Time on the Air for all
Stations

#### **DECEMBER 1, 1932**



# RADEX Reg. U. S. Patent Office



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FRED CLAYTON BUTLER

Editor and Publisher

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## THE LAST WORD

## in BATTERY SETS

#### By B. FRANCIS DASHIELL

AST month we discussed radio receivers designed to operate on 110-volt direct current. Now we come to another kind of d.c. set—the battery receiver. There are millions of radio listeners who depend entirely upon battery operated sets, for they either live in outlying regions where a.c. or d.c. power is not available, or they have no desire to change from old, but tried and true, battery sets.

All original radio sets were battery operated, but the advent of more modern a.c. receivers relegated the earlier apparatus to the limbo of undeveloped things. Then came the new types of low-drain battery tubes and a new type of long-life A battery, and the discarding of such ancient tubes as, WD-11, WD-12, -99, -01A, -12A, -22 and -71A in dry and storage battery operated receivers. The Air Cell battery and the twovolt "30" series of tubes rescued the battery set from certain oblivion, and, now, with automatic volume control, tone control, spot and easy tuning, dynamic speakers, superheterodyne and all-wave screen-grid and pentode circuits, and other features of a.c. sets, there is little that the owner of a battery operated set does not have to satisfy his whims.

The Air Cell battery, with a potential of slightly more than two volts and a current output of about 600 amperes, a total of over 1200 watts, permits the use of many tubes in the circuit—types -30, -31, -32, -33 and -34. Some other d.c. battery sets, mostly for automobiles, use the 6.3-volts tubes—types -36, -37, -39 and LA. Nearly all new battery sets require 180 volts B battery and, in a few cases, a separate C biasing battery.

The inherent disadvantage of the battery set remains. The problem of unsightly A and B batteries must be met, usually by using a console type of cabinet, and there is the expense and nuisance of replacements from time to time. These factors are inevitable if we are to use batteries where other electric power is not available.

#### Constant Voltage Necessary

The voltages of all batteries must be maintained at the correct requirements at all times for perfect reception. Distortion may be experienced, due to weakened plate voltages operating in combination with a normal C voltage. In this case it is advisable to reduce the C bias when the B battery voltage drops below the normal battery rating. Failing A batteries are quickly indicated by weak signals; defective cells in B batteries by mysterious static and crackling noises; and distortion by an improper balance between B and C battery voltages.

While space does not permit of the publication of the entire merits and qualifications of all battery sets, we have endeavored to present the important characteristics of a number of new and efficient receivers in the following paragraphs:

The Midwest Radio Corporation offers two new and guaranteed sets. One is a 6-tube superheterodyne (model B-6), and the other is a 9-tube All Wave receiver (model B-9). There is tone control, automatic volume control, dual dial tuning, dynamic speaker, and console cabinet. The small set uses three -30 tubes, one -32 and two -34s. It sells from \$22.50 to \$49.95. The larger set uses four -30 tubes, five -34s, and lists

from \$29.75 to \$59.95. There is a 30-day free trial, but batteries are not returnable.

The Lincoln Radio Corporation has a new 9-tube battery set (model SW-33) which is guaranteed All Wave receiver having an abundance of power. It uses three -30 tubes, five -32s and two -31s in push-pull. The price, with dynamic speaker and deluxe console cabinet, is \$129.00, with the set broadly guaranteed for performance.

Stewart-Warner presents its newest battery 8-tube superheterodyne receiver (model 49), with electrodynamic speaker and console cabinet. Battery replacement is reduced to the lowest minimum and the set uses the entire -30 series of 2-volt tubes with Air Cell battery. The price is \$75.95.



Model 469 Atwater Kent Battery Console, 9-tube battery-operated superheterodyne. Uses 2-volt tubes with air-cell "A" battery.

Atwater Kent has two cabinet sets (models 558 Compact and 469 Console) both of which use a 9-tube superheterodyne chassis and permanent magnet dynamic speaker, 4-gang condenser, automatic volume control and tone control. It contains three -34 tubes, two -32s, four -30s, and a

neon light is used as a pilot light. The compact table set lists at \$68.90 while the Console sells for \$89.75.

E. H. Scott Radio Laboratory furnishes its famous All Wave Console receiver in a newly perfected battery model covering all bands from 15 to 550 meters. It uses ten -30 tubes. It is of the same general appearance as the de luxe a.c. model, but lists at \$80.50 for the chassis alone. This set is guaranteed to bring in 10,000 miles distant stations and for five years against failure. There is a 10-day free trial for testing and comparison.

The Radio Corporation of America has a new battery receiver (model R-71) that uses the -30 types of tubes and Air Cell battery. It is an 8-tube table type superheterodyne and lists at \$62.75. Kolster Radio presents a new 9-tube Console superheterodyne set (model K-114) with their remarkable Rejectostat device. This set uses six -30 tubes and three -34s. Montgomery Ward's Airline set in console cabinet uses four -32 tubes and one -33.

Sparks-Withington offers a new Sparton battery set (model 54) which is an 8-tube superheterodyne with super-control, a tremendous amount of clear volume, and increased battery economy. The dynamic speaker employs an oversize permanent magnet, thus reducing battery drain. The "Country Home Receiver" Console uses two -34 tubes, one -32, four -30s, and one 25-S special purpose detector-automatic volume control tube.

The Philco manufacturers have produced a table type battery set (model 37) using five tubes in superheterodyne circuit and a dynamic speaker with field strength equivalent to any a.c. speaker. The special Philco A battery is used in connection with a ballast tube to provide constant voltage. Philco tubes are used throughout—one type 15, two 32s, one 30, and one 19 push-pull pentode. It sells complete for \$55.00.

General Electric's battery set (model S-42B) is an 8-tube screen-

grid superheterodyne circuit in console cabinet. It uses three -32 tubes and five 30s. Tone control is a feature of the set which is highly sensitive and selective. The price, less batteries, is \$99.50.

Allied Radio presents two new All Wave battery sets, one of 8 tubes (model E-9764), and the other having 5 tubes (model E-9726), both with automatic volume control, noise suppressor, spot tuning and tone control. The 5-tube set is in a midget cabinet and the 8-tube in a console cabinet.

Sears, Roebuck offer the 8-tube Silvertone All Wave battery set in midget and console models, as well as a 5-tube midget of another type. The 8-tube set uses two -30 tubes, four -32s, one -33, and one -31 for filament control. There is microvision tuning, automatic volume control and constant filament voltage regulation. Complete, with guaranteed battery, at prices ranging from \$36.50 to \$59.95.

The Radolek 9-tube superheterodyne cabinet model uses six -30 tubes and three -34s. It lists complete for \$58.95. Lafayette battery receivers come in two models—6 tubes and 9 tubes. Both are furnished in Console cabinets and the smaller set uses three -34 tubes, one -30, one -31 and one -33, while the 9-tube set uses six -30 tubes and three -34s. The 6-tube set lists at \$32.00 and the 9-tube at \$43.50.

Silver Marshall's All Wave receivers (models 728SW and CB1), absolutely guaranteed for performance, are also available in battery circuits using the new 2-volt tubes and Air Cell batteries. Majestic, Stromberg-Carlson, Brunswick and General Motors do not manufacture battery receivers.

#### Battery Sets for Short Waves

In the short wave field National offers a battery set (model SW-34) using one -30 tube, two -34s and two -31s with plug-in coils covering wave ranges from 9 to 850 meters, as desired. These Thrill Boxes are particularly efficient and list at \$75.00.

A small 3-tube receiver (model DC-SW3) lists at \$55.00. Hammarlund, makers of the Comet "Pro," has no battery operated set, but the Pilot Company continues to offer its famous Super-Wasp for battery operation.

The Delco system has developed a 32-volt 6-tube receiver designed particularly to operate on the 32-volt circuit of their home and farm lighting plants. In this set the filaments of six tubes, four -36s and two -38s, are connected in series. It uses a 140-volt separate B battery.

The Crosley Corporation presents two 8-tube Air Cell battery models, "Mayor" and "Chieftain," the former cabinet a midget and the latter a console. This superheterodyne circuit has three type -32 tubes, three -30s and two -31s. There is a hairline shadow dial with neon lamp, vernier drive, stepless tone control, and permanent magnetic dynamic speaker. The table model sells for \$59.95 and the console for \$73.50, with tubes, but less with batteries.

Other battery-operated receivers listed among the 1932-1933 lines are the following: "Lyric" made by the All-American Mohawk Corp., North Tonawanda, N. Y. "Columbia" by the Columbia Phonograph Co., Inc., Fifth Ave., New York City. "Crescent" by the Crescent Radio Mfg. Co., 1026 Second Ave., Minne-"Crosley" by the apolis, Minn. Crosley Radio Corp., Cincinnati. Ohio. "Gulbransen" by the Gulbransen Co., 816 N. Kedzie Ave., Chicago. "Kolster" by the Kolster Radio, Inc., 200 Mt. Pleasant Ave., Newark, N. J. "Pioneer" by the Pioneer Products Corp., Plano, Ill. "Simplex" by the Simplex-Radio Co., Sandusky, Ohio.

A special DX program for Radexers will be given by Station WJAG, Norfolk, Neb., at midnight, Friday, Dec. 9th, until 1:00 a. am. Saturday, CST., on 1060 kcs. with 1000 watts. WJAG is in the center of North American continent. Let's see how far away it can be received.

## A REAL RADIO LABORATORY

### • • • Paradise for DXers

HOW would you like to be turned loose in this home radio laboratory of Philip Cass, located ten miles outside the city of Philadelphia? This most complete DX quarters is located in a separate building near the home of Mr. Cass who is head of a large wholesale electrical supply house in Philadelphia. "We built every piece of our own equipment," writes Mr. Cass, "and do all our own experimental work. After fifteen years of this we have pretty good reproduction."

All reception on the broadcast band is on a loop antenna. The short-wave antenna is Ross flat-braid tinned, very carefully insulated at supports by glass and Wirt porcelain insulators. The aerial enters the building through isolintite tube with brass rod center having nuts at each end. A single-pole, double-throw switch cuts out the aerial as protection against

lightning.

In the photograph, reading from left to right, we find first the input control and charging panel for storage battery current for lighting and heating tubes, the jack box on the wall and condenser for tuning short wave aerial and the loop aerial.

The radio apparatus on the desk is, first, single stage push-pull 112-A tube amplifier for short wave work in

conjunction with a Western Electric speaker, all battery operated; second, the short wave adapter; third, radio frequency stage booster for incoming signals on s. w. adapter (this can also be used with long wave radio receiver); fourth, 4-D Western Electric circuit radio receiver, high-waye. All of the 4-D circuits, which were built by the Western Electric Company for use in the United States Government service, were in wooden cases and shielded on the inside. When Mr. Cass and his associate improved this circuit to reach out all over the country, they built cases of sheet copper. Fifth, a 500-ohm transformer and impedence coupled push-pull amplifier, containing two 112-A tubes and two 210 tubes in push-pull, which are operated from a special power pack which also supplies all the B voltages.

The baffle shown contains a Wright De Coster 2500-ohm d. c. speaker which is operated from the power pack. The lightning switch is shown under the table. The cabinet shown to the right of the amplifier contains a Wright De Coster speaker a. c., which is used in operation in conjunction with the d. c. speaker and gives a slight variation in tone quality.

The Victrola attachment shown in the corner contains the complete W. E. system which is used by movie

houses for reproduction, at 500 o h m s through the amplifier with filters, and condensers are carried in the compartment.

Lastly, the equipment includes RADEX, the radio map of North America and the map of the world with time converter.

When would a DXer ever sleep with a room like this?



## WINS DX PRIZE in

### **NEW ZEALAND**

## • • • Verifies 214 American Stations

READER of this magazine, Frank H. A. Barnett, Dunedin, New Zealand, has just won the DX championship of that far-away coun-Thus it seems that RADEX helps to win championships even on the other side of the world. readers will recall the letter from Mr. Barnett which was published in the September, 1932, issue. Notwithstanding the fact that he is located in South Island, a good 500 miles further from America than many of his competitors, Mr. Barnett won the "Radio Record" Challenge Cup with 291 verified stations to his nearest competitor's 272.

The New Zealand DX Club has a membership of over 800 and holds a DX competition every six months for the largest number of verifications from stations overseas. From the New Zealand Radio Record and the New Zealand Radio Times we quote the following regarding the contest which has just closed.

Although I have been a keen DXer since the days of crystal sets (writes Mr. Barnett in the "Radio Record") I did not trouble to write to any of the stations that I heard except a few who asked for reports.

On seeing the result of the first competition I decided to write to the stations, that I heard, for verification and having the utmost confidence in the particular make of receiver that I use, I said to myself, I'm going to get all these stations I'm hearing verified, and try for the DX Cup. It was easier said than done, and has been hard work, especially as I started late in the field. As I am generally busy during the week, it is seldom that I can, except at the week-ends, listen for DX stations.

However, I set to and listened in at

every opportunity and wrote to all the stations that I heard and was able to identify. I have to date received about 75 per cent replies from the stations that I have logged, and have about another 50 yet to come to hand, and am still logging a few, although conditions for DX reception have not been too good this last month.

The receiver I use is a Majestic Super-Hetrodyne, 7 valves, excluding rectifier and all DX-ing is done with the speaker. I have fitted output device for phones, but do not use them except if someone else wants to get some sleep, as I can hear much better off the speaker.

The set is calibrated exactly in kilocycles from 1500 k.s.'s to 550



Ray Knight and Alice Davenport in their small-town newspaper office. The NBC Wheatana program daily except Friday and Saturday, 7:15 p. m. EST.

K. c.'s, and has 10 k. c. selectivity on all stations except powerful locals. The calibrated dial is a big help in identifying stations, as one knows exactly the frequency, and used in conjunction with a good call book makes DX-ing much easier, 10 k. c. selectivity also enables me to get even a 100 watt American with powerful Americans on either side.

The aerial system consists of: Beverage aerial for American reception an aerial approximately 120 ft. long, average height 25 ft. for Australian, European and Eastern stations. Both are directional. The earth consists of I Laker copper earth tube driven about 3 ft. 6 in. in damp clay.

The receiver, aerial and earth are situated on a rise about 1000 feet above sea level, about 10 miles airline from Dunedin and about 1 mile from the coast. I have experimented with all kinds of aerials and earths, and find that the ones I am now using are the most suitable for my locality. I have tried all the fancy earth systems that I have seen recommended, but find that the one described is just as good for my locality, in fact the set brings in the 100 watt Americans with the earth off, providing the aerial tuning knob is adjusted to suit, just as good as with it on.

#### Their Summer Holidays

I was always of the opinion that the winter was the best time for reception of North American stations, but have changed my mind after listening during Christmas and New Year, about this time I logged about 100 new ones. During the Christmas and New Year holidays I heard 17 100 American stations and 1 100 watt Canadian, as well as dozens of higher powered ones, there was also hardly a click of "static" or interference right through the holidays.

Reception has not been of the best down here of late, only a few new ones have been logged, of course the more one gets the harder he is making it to get more new ones, as there is only a limited number of stations



Introducing the "Three X Sisters" in vocal harmony and rapid-fire comedy skits. CBS at 7:30 p. m. EST, Mon. Wed. Fri.

that can be heard out here, due to the conditions not being suitable for reception when they are on the air. There are also quite a number that will never be heard out here, as they either close down too early for us, or are not on the air at all at a time where reception of them is possible. DX and Test programmes help us to log stations that would not be heard on their usual programmes.

Included in Mr. Barnett's log of verified stations are 3 50-watters and 22 100-watters in the U. S. A. He pulled in one 250-watter in New Jersey, three 100-watters in Michigan, one 250 in Maryland and one 500 in New Hampshire. "Believe it or not."

If New Zealand can tune our stations in, we can tune theirs. Use the RADEX Time Converter for ascertaining the time to tune.

## ON RIDING A HOBBY • •

#### By THE EDITOR

PITY the man who grows old without a hobby. Can anything be more pathetic than a man or woman growing old and just sitting around? No matter if that hobby be merely collecting cigar bands or match-package covers, the interest of it will grip a man and give him a joy and zest in living. While many people make some game like golf or bridge or solitaire their hobby, perhaps the most nearly universal hobby takes the form of collecting something or other. This seems to be an inherited trait because it shows itself so early in life. Did a boy or girl ever live who didn't make a collection of some thing or other?

If their secret lives were known, we would undoubtedly find that many men famous in public life, the arts or business were enthusiastic collectors. Only the other day I was reading a statement by a very famous man of letters regarding philately in which he said in effect: "Some men try to kid themselves that they are collecting postage stamps because it gives them an insight into history or biography; why not let's be honest and admit that we collect stamps because it is fun?" Again I was reading of a millionaire who has a wood-working shop in his house in which he spends much of his time cutting out puzzles on a scroll-saw.

What more intriguing hobby could there be than that which our radio makes possible for which we have no fancy name like philately or numismatics but only the simple code, DX. What greater thrill than picking up a station which we never heard before and for which we may have been trying for months? Can any collector get such a kick out of a mere stamp or coin? No other hobby has such an intimate contact with life as radio. Most collectors are gathering dead things but the DXer collects bits of life.

This magazine receives and publishes many interesting records of achievements in DXing but occasionally we receive letters which give a glimpse of the humanities of radio, of its influence upon the lives of people. Here is a letter from a boy whose mother adds this postscript: "This letter is written to you by a sixteenyear-old boy who, because of a physical handicap, has never attended school but has educated himself practically with the radio." We cannot publish all the letter but the quotations we are making will give a glimpse of what radio means to this young man and how well he has profited by what it has taught.

"I am writing to tell of what little luck I've had—it isn't anything to boast of—but nevertheless, here it is. First, 410 stations comprise my log which originated in December, 1929,



You'd never guess this one because it is Miss Jane Dillon, famous character actress, as "John the Hired Man." In the NBC "Thru Lighted Windows."



Meet "The Hoosier Editor" nee Frederick Landis, brother of Judge Kenesaw Mountain Landis. CBS Sundays at 2:45 p. m. EST.

including 150 100-watters or less with KUJ, KWG, CHML and CMJH, Hope to reach the 500 mark before the current campaign comes to an end. Although I have never had anything farther than British Columbia, I hope to cross the waters via radio during the present winter. My first issue of RADEX dates back to No. 44 and it has been coming into this household consistently ever since. I get almost as great a kick out of reading the DX department as I do in DXing myself and also enjoy reading 'Betty's' pages. I have tried all sorts of aerials and grounds with varying results. now alternating between an upper and a ground-aerial finding that on the upper which is about 65 feet long and approximately 50 feet high, volume is increased on the higher frequencies while on the lower part of the dial, volume is decreased but the tuning isn't so broad. The groundaerial gives its best results on the crowded frequencies." This young friend's name is Tom Shaw and he lives in Tennessee.

And here is a letter from a reader not quite so young but whom radio is helping to keep young. Miss Lilian E. Clarke of Connecticut writes: "I have been buying RADEX for more than a year and find it very useful. I mark them all over beside keeping a big note-book. I have a new Majestic and am experimenting to see what stations I can get. I find the best hours are in the evening although I can use my radio in the night if I wake up, as it is right next to my bed. I am seventy-five years old so I cannot always do things young people might. WWL, New Orleans, is particularly good and through their suggestion, I got Caracas, Venezuela. want to get Honolulu but have not succeeded yet. I wish you all success as you are doing a good work in helping those who are trying to make their radio worth while."

Last is a letter signed "C. M. & D. C. King," from Vermont. It begins: "My father and I are partners in this DX business. We have a three-tube homemade set about seven years old. It covers the b.c. band and extends down into the s.w. band for a few We have been DXing for three and a half years and have used RADEX since 1930. I see by the October number that Charles Kneer of Rochester, N. Y., claims the s.w. record on a b.c. set. It may interest him to know that we have 113 amateurs. 6 experimentals, 2 fire stations, 3 fireboats, 15 police and one ship at sea or a total of 140 s.w. stations on a b.c. set. Our grand total is 724. We have the usual run of Canada, Cuba, Mexico, Porto Rico, Haiti and all the states except North Dakota, Nevada and Wyoming. We are waiting for verification from YV1BC, Venezuela. A few of our best ones are KGU, XEF (then Oaxaca with 105 watts) VONA, CJOC (then 50 watts), KGFJ, KGEK, KORE, KCRC, KFXR, KGFF, KFJZ and KGDA."

Our best wishes for new records to our young friend in Tennessee, to the dear lady in Connecticut and to the firm of "C. M. & D. C. King," a wise father and a loyal son, in Vermont.

## EDITORIAL CHAT and COMMENT • • • The

The Monthly Visit

REVERBERATIONS still echo among the hills following the storm that raged about the question of what was possible in radio and what was not. It is the unexpected in radio that gives it its thrill. If reception could be computed by any formula, DXing as a game would be on a par with mathematics. Imagine being a member of a mathematics club. Here are one or two more instances of the unusual

in reception.

"Judging DX reception on a definite basis doesn't work," says Robert Mc-Garvey, Jr., 627 Jackson Ave., Elizabeth, N. J. "After ten years of listening I'm well aware of that. Many times I've found low-powered stations coming in when 5 KW plants were lost in a maze of static. You can't figure a station's coverage by its wattage, as far as DX is concerned. I have heard WNBX, Springfield, Vt., several times using ten watts. Yet I've read of a listener in Vermont who spent several years trying to log the same call. Peculiar conditions exist even among locals. WODA, Paterson, N. J., is nearer my home than WJBI in Red Bank. Despite this, WJBI, with 100 wats, comes in twice as loud as WODA. with 1000 watts. And a DXer in Irvington, five miles from Elizabeth, can hardly hear WJBI at all. On my set WODA fades like a west-coaster, after dark. On a friend's set in Newark it comes in with perfect volume. Any DXer who says a station can't be heard is offering eloquent proof of his inexperience. I really believe anything is possible. I myself have never heard an Australian or a Japanese, but I haven't given up trying."

"Here is an experience of mine, believe it or not," as I haven't looked for a verification," writes T. P. Mc-Carthy, Tilting, Fogo District, New-

foundland. "On Sunday, September 11th, at 9:30 p. m., EDST, I heard quite plainly and with good speaker volume, the announcement of stations WPAW and WPRO, of Providence, R. I. They had just given a program of old time tunes. I haven't heard these stations since, nor do I expect to hear them again. WPAW and WPRO are listed as 100 watts, and, considering the distance I am situated from Providence, I think you will agree that my reception of these stations was a freak in radio. More so when I say that my set is a 5tube dry cell operated, early model."

#### Two Inquiries

This magazine receives a great many letters from readers of which the two given are typical. From Samuel Stutson, 838 Kelly St., Fox Street Station, New York City: "I



Tony Wons of "Scrap Book" fame. His pleasing philosophies come from CBS each weekday morning at 9:30 EST. "Are you listenin'?"

would appreciate it very much if you give me your opinion of the Norden-Hauck Custom-built receiver manufactured in Philadelphia. I am contemplating buying one but hesitate on account of having seen so few used." And from Joe Whiteside, 720 N. Navajo, Altus, Okla., "I have a friend who is thinking of buying a 12-tube Silvertone Radio. Is it a satisfactory radio?" Readers who are using either of the receivers named will be doing the inquirer a favor if they will write him of their experience with the particular set. But this magazine cannot pass any opinion upon the merits of any receiver. To do this fairly would require careful tests of each set not only in laboratory but in a home under ordinary conditions. Without such exhaustive tests, our opinion This may be would be worth little. illustrated by assuming that one was in the market for an automobile and wrote to several people asking their opinion of the Chevrolet, for ex-The opinions they received ample. would be just opinions.

#### It's Poor DXing

DXers should not try to get a verification from a station unless they are morally certain it was that station they heard. If some listeners pick up a program they cannot understand, they seem to jump to the conclusion that it was a Mexican or Cuban and sit down and send a report to the nearest CM or X to the frequency tuned in. This is pretty childish DXing and tends to bring the whole brotherhood into disrepute with the broadcasters. Some of the Cuban stations report a lot of letters received from listeners in the U.S. A. reporting reception of their stations, in which the report is entirely wrong. Among these listeners, we are sorry to say, are a number of readers of RADEX. They probably just "took a chance." Don't do it, DXers. If you aren't sure beyond a reasonable doubt which station you heard, wait and try again. Don't



The Harding, Sisters, Irene and Mathilde, two of radio's most popular pianists. "Twenty Fingers of Harmony" NBC-WJZ 10:45 p. m. EST Saturdays.

send reports either raw or half-baked; you'll only make it harder for everybody. In the case of Cuba, the stations there are now requiring 10c in American money for verification. This is done in order to head off a lot of inaccurate and guess-work reports.

#### Those Cuban Frequencies

Through the courtesy of the Philadelphia Radio Club, we are enabled to put three special DX programs from Cuba in our Calendar for De-The frequencies given us by the PRC do not agree with those furnished us by the Cuban Government but, as the PRC has a member in Cuba who represents them there, it is possible their frequencies are The official Cuban list correct. shows CMJF on 930 kcs., and CMJE on 1175 while the PRC gives them as 900 and 1150 respectively. PRC also reports two stations, CMJN and CMJK, which the official list does not mention.

Regarding this discrepancy in the Cuban frequencies, one of the most painstaking DXers in the United States has this to say: "It might be helpful if you would put in a brief note suggesting that listeners be not surprised to find some of the Cubans off their assigned frequencies, and that when they are off, they are more likely to be on a lower frequency than on a higher one. For the reputation of RADEX it would be better to have your lists agree with the Official Bulletin of the Cuban Government, no matter what may be the experience of listeners.

"My opinion is that some of the stations do not have frequency control and get off wave unintentionally, but that others deliberately seek the split frequencies, so as to escape interference. I took the matter up with the officials in the case of CMCD listed for 925 but usually received by me on 915. Was assured that they would be ordered back on their wave, and sure enough for a couple nights they were found on 925, then it became 922 and so on, until night after night they would come in on 915. I have also heard on 1150 Cubans that belonged on 1175. CMC comes in regularly on 835, CMK on 725, XED usually on 960, but sometimes on 965, CMX usually on 880 but sometimes on 885, and XEFO on 935. That may mean I am only able to hear them when they are off frequency. CMAF is invariably on 675, and I have a verification from them which gives that frequency. Nevertheless, they are listed in the Bulletin on 660."

#### The BENDX Club

"The Buffalo Evening News DX Club has started its fifth year of DX and plans are going on for an extensive program," chronicles the Secretary-Treasurer, Mrs. M. L. Ellis, 152 Tremont Ave., Kenmore, N. Y. "We insist upon real verifications thus there is small chance of cheating. Stamps are not accepted. Short waves are barred. In order to get

their verifications, our members are more particular as to the data they send in and consequently stations are more apt to verify. Certificates are awarded for different groups of verification and when our members win their 'Ace,' they know they have won a good one." A very interesting feature of the work of the BENDX Club is their "Singleton Log." A singleton is a station verified by one member that up to the time the list is published no other member has verified. Thus A has WINS, KARK and KGNF. As the list is published the last Saturday of the month, no other member, we will say, has sent his verification of either of those stations to the verification committee. A therefore has three The next month B verisingletons. fies KARK so he is called an eliminator and KARK is crossed off the list of singletons. Once in three months the singleton list is published. This list is kept up to date with the latest RADEX and there are now about 140. However we have one member, Mr. Brauner, who has verifications from all but 19 of the stations listed in RADEX but he does not compete, which is very good of him. BENDX Club now sends tips weekly to all members that are unable to get the Buffalo News. The dues are \$1.00.

#### Prohibiting S. W. Sets

The police department at Jacksonville, Fla., is installing short wave radio and G. H. Coyle of that city sends us a clipping from the Jacksonville Journal indicating that the police will try to have an ordinance passed prohibiting citizens from owning a short wave set. We believe a number of cities have passed laws prohibiting the installing of s. w. This regureceivers in automobiles. lation is entirely right and proper for if the crooks and gangsters have radio-equipped cars, the police will be greatly handicapped. But to prohibit the use of s. w. sets in the homes, is unjust and unnecessary and we do not believe such an ordinance would stand in the courts. Readers of this magazine are urged to report to us any such legislation, either enacted or contemplated, and we will take it up with the proper authorities. We believe such legislation would be an infringement upon the proper rights of our readers.

"I have just moved from Pittsburgh, Pa., to Vancouver," advises Richard D. Caddell, 1115 West Pender St., Vancouver, B. C., "and I thought you might be interested



The Skipper of the Show Boat, otherwise Charles Winninger. On the NBC "Red" Thursdays at 9:00 p. in. EST.

to know that radio reception is 100% better here on the west coast than back east in Pittsburgh. I am using, at the present time, a small five Northern Electric midget receiver, and although I haven't had very much spare time as yet to do much DXing, what little I have done has thoroughly convinced me that the west coast has it all over the middle west and east for radio reception, atmospheric conditions, etc. I am using a 300-foot aerial, but expect to erect a longer one soon. I have also no-

ticed a vast difference in the types of aerials used here in the west, nearly all the aerials here being of the umbrella type, while back east the fans use the straight type of antenna. The Japs and Aussies come in like locals, especially the Japs."

#### Static From Pilot Light

One of the writer's receivers recently became very noisy. At certain frequencies, it gave off most annoving crashes. Removing aerial and ground and connecting the two posts with a short piece of wire demonstrated that the noise was in the set for the noise continued with aerial grounded although of course quite reduced in volume. A careful examination of the chassis disclosed nothing wrong. Tubes were checked and found OK. After the most minute inspection it was noticed that the lead wire to the pilot light touched the drum dial lightly as the dial was turned. The pilot light was disconnected and the lead wire examined. It had been rubbing sufficiently to wear through the insulation so that at certain points on the dial, the bare wire made an electrical contact resulting in the crashes. Undoubtedly many so-called service men would have said the set needed new resistances, new transformers and probably new condensers! Moral. in case of trouble look your set over very, very carefully. The trouble is much more apt to be mechanical than electrical.

#### Another Little Kink

"I use no ground on my Philco 7-tube t. r. f.," states Oliver W. Todd, 1619 N. Conestoga St., Philadelphia, Pa., "as I have discovered a wonderful little trick which works much better than any ground I have ever tried. I wound 50 turns of No. 24 d. c. c. wire on a two-inch form. I fasten on my 120 foot aerial in the proper place and then I connect one end of the coil to the control grid cap of the first r. f. stage tube which is a -24 (the other end of coil is left

## The HUMAN SIDE of the STARS

By "BETTY"

RUSH phone calls—usually around midnight—have been the determining factors in the career of Jack Denny. It was a hurry call from the manager of the Mt. Royal Hotel that caused Jack, some five years ago, to leave the old Frivolity Club in New York and journey to Montreal; and it was another rush call that brought him back to New York.

Ted Husing, now radio's ace sports announcer, really "signed" the contract which took Jack and his orchestra up to Montreal. A comparative newcomer to radio at the time, Ted was assigned to announce Denny's broadcasts from the Frivolity Club. One evening around midnight while Denny was broadcasting, Husing answered a phone call for him. Thinking it was from a fan, Ted said he was Jack. The voice at the other end announced himself as Vernon Cardy, manager of the Mt. Royal Hotel in



The telephone brought him fame,

Montreal, and invited Jack to name his own price for an engagement at the hotel. Knowing nothing about dance orchestra rates, Ted looked wildly about, hemmed and hawed a bit, finally caught sight of the telephone number of the Frivolity Club and quoted it as the price. Much to his surprise and further embarrassment, it was accepted on the spot. Fortunately, however, the telephone number happened to be about twice the amount Jack Denny was receiving at the Frivolity, so he accepted a six weeks' contract for performances in Montreal. He stayed five years and two months.

#### Back to New York

The second important phone call in Jack's life caused him to pack up again and bring his orchestra back to Manhattan. When he left the Mt. Royal, an enthusiastic audience of more than seven hundred people were on hand to applaud his farewell performance.

Jack found his way to radio via the vaudeville stage. He was born in the little town of Greencastle, Indiana, where his father was professor of history at de Pauw University. Since both his parents played the piano, Jack early began to try his hand at it. and at the age of six was taking regular lessons from his father. After starring in all forms of athletics in high school and during his college days at de Pauw, Jack decided he was never meant to be a scholar, so at the age of nineteen he left school and home to go to Chicago. Here he found a iob in a music store selling pianos and lasted three weeks at it-until his artistic temperament asserted itself.

The reasons for Jack's sudden artistic ambitions were his natural talent for the piano, and Tom Catalano's idea that "Catalano and Denny" would look well in lights. So Cata-

lano and Denny drifted into a booking office, where they landed a contract for a vaudeville act at \$125 a week. With Catalano doing the tenor solos, Denny playing the piano, and the two combining for comedy songs, they toured the middle west for two years on the Keith circuit. Finally they reached New York with \$6.00 between them. As they walked by the Palace, seeing the sights of the big city, Jack remarked to his partner, "If we ever play this house, I'll quit and go to work!" Two weeks later they were at the Palace. The act. coming second on the bill, was a terrific failure; yet after it, the team found itself booked for 64 weeks on the Keith circuit all around the country. Returning to New York to appear at the Colonial, Catalano and Denny proved a sensation-and two weeks later were out of a job. It was at this time that the salaries of all Keith artists were cut, and the team preferred to split up rather than accept the reduction.

#### Signed Armistic When He Came

A few months later, Jack enlisted at the training camp at Plattsburg, New York, and later was transferred to the 77th Division with which he crossed to Europe, arriving just in time for the Armistice. He returned to vaudeville for a few months and then joined a music publishing house as arranger. Bobby Folsom, one of vaudeville's leading artists, asked Jack to write some songs for her. He not only wrote the songs, but also became her partner and leader of the orchestra in the act.

Tiring of vaudeville, Jack turned to orchestral work as leader of the band at the Astor Roof. Freddie Rich, now one of radio's prominent conductors, was his piano player. A short stay there and Jack went to the Frivolity Club. Then came the call from Montreal, and Jack took his entire aggregation to Canada with him. Back in New York once more, he plays in the Empire Room of the Waldorf-Astoria.

Jack Denny and his orchestra are



Formerly "Olive Palmer."

heard twice weekly over two different networks—the NBC (Red) at 8:45 P.M. EST Wednesday, and the Columbia at 8:45 P.M. EST Thursday.

#### Just a Little Choir Girl

When she was 15, Virginia Rea sang in a church choir in Des Moines, Iowa, and was paid for it. Years later, after an extensive course in voice culture, she went abroad for further study and a concert career.

Miss Rea got the additional training but no recital work. She found that American artists are expected to pay for the chance to sing in Europe, and that condition didn't rest well with an American girl used to making money with her singing. So she came home and promptly signed a contract to appear on the radio at a specified and substantial sum. "America," says Virginia, "is the real land of opportunity for singers."

It was in 1927 that Virginia returned from her European excursion, and her first contract was as soloist on the Ever Ready Hour. Soon she went to the Palmolive program, becoming Olive Palmer in deference to the sponsors of that period. For several years her own identity was sacrificed on the altar of advertising, but

recently she appeared on the N.B.C. networks under the name of Virginia Rea, which was her mother's maiden name.

#### Born in "Ole Kentucky"

Miss Rea was born in Louisville, Ky., and was educated in the public schools there. After graduating from high school she went to Drake University at Des Moines. She has been singing in public ever since she was a child of 5, when she made her debut at a church entertainment. During her attendance at Drake, she sang in church choirs, and when she returned to Louisville she was a member of Mu Phi Epsilon, the honorary musical sorority.

When Miss Rea first came to New York she sought an opera and concert career. For a while she made phonograph recordings, establishing a reputation for herself which led to three concert tours with Gowdowsky. It was shortly after this that she went abroad, and came back, determined to confine her singing to Amer-

ican audiences.

She is a true daughter of the South and speaks with a soft Southern accent. She has black hair, laughing blue eyes and a forehead higher than most girls. She is quiet and well poised. She lives with her parents in Jackson Heights, Long Island, and is decidedly the home-girl type. Her wants and interests are simple and cultural and she finds relaxation at recitals rather than at night clubs. She is colorful without being conspicuous.

#### **Back With Former Partner**

Virginia's preference is for pastels and she won't wear brown even when it is the fashionable color. She is intensely interested in people and in the interval between the time she ceased to be Olive Palmer and became Virginia Rea spent her holiday going places and studying folks. For a while she had a perfectly gorgeous time doing all she always wanted to do but never could because of her broadcasts. Gradually the novelty

wore off and when the call came to return to the N.B.C. studios, Virginia responded with alacrity.

Virginia Rea is now heard with her old partner, Frank Munn (Paul Oliver) with Paul Whiteman and his orchestra over the N.B.C. network each Monday at 9:30 P. M. EST.



Hon. Thomas McLaughlin, Baritone.

Tommy McLaughlin, the most recently acquired baritone of the C.B.S., is Irish through and through. His mother was born in Donegal, his father in Belfast. Though neither parent, to quote Tommy, "could carry a note in a basket," all five children can sing, though none of them professionally, except Tommy.

When Tommy was eleven, and his older brother returned from the war, he sang "Silent Night" for him. In the middle of the song, his voice cracked—he had begun a soprano, and finished a baritone. He's been one ever since.

For two years, on station KFI, Los (Continued on page 33)

## SAILING The SHORT WAVES

### • • • Letters from the Pilots

HE data regarding short wave stations is so voluminous that we are forced to give it to our readers on the installment plan. In each issue of this magazine will be found some information regarding s. w. stations which is necessary for those who would work these higher frequencies. Under the circumstances, therefore, it will be necessary for them to secure each and every copy of RADEX in order not to miss some vital data.

In the September issue, No. 61, there was given a list of the short wave stations outside of North America in geographical order. The time on the air for each station, so far as it was obtainable, was given in

this list.

In the October number, No. 62, a list of all short wave stations was given. These were arranged in the order of their frequencies. In No. 63, the November edition, there was given the s. w. stations of the United States arranged by states and cities, and this issue a similar list is given of the Canadian stations. It will thus be apparent that all four issues are necessary to give the s. w. fan a complete list of all the information of stations in his favorite bands.

In this issue is given also, a list of all s. w. stations arranged in the order of their call letters. This, we believe, is the very first time such a list was ever published and it ought to be of very great help in identifying calls heard. The moral of all this is plain—don't miss a single issue of this magazine or you will lose something you ought to have.

#### Both For and Against

A letter from Bob Purcell of the Editorial Department of the Miami Post, has us puzzled. He started in by intimating that the short waves were a delusion and a snare but he ended up by giving some mighty interesting experiences in the short So we still don't know just where Bob stands. "There is more bunk told and written about s. w. reception than would fill quite a library," he warns us in the very start. "Few people who were induced to buy an all-wave set ever bother with the s. w. dial after the first two weeks of squawks and whistles. They expected to be able to tune in foreign stations and sit back and listen to something interesting." After this dash of cold water he goes on to say: "At 19 meters we get Schenectady, France, Germany and the new Pittsburgh station regularly. At 20, the amateur telephones. At 25 m. France, Pittsburgh, Rome, Mexico, England, France, Winnipeg and Yucatan. At 31 m. Schenectady, Boston-Springfield, Sydney and Melbourne. Rio de Janeiro, and WEF, a telephone. 49 m. are Pittsburgh, Bowmanville, WIW, WENR, Montreal and the new Miami station, W4XD, on 6060 kcs. The Australian stations are the easiest to get as there is nothing else on the air at that time of night or morning. I have picked up Melbourne at 11:30 on Tuesday night. I have listened to Sydney from 2 a. m. to 9 when it went off the air."

Mr. Purcell uses a Miami-built set, the Kent All-Wave, which tunes in the 19, 20, 25, 31 and 49 meter bands as well as the regular broadcast band,

all on one 360 degree dial.

"I certainly was glad to learn that RADEX is devoting space to the short-wave fans," says E. P. Palmer, 84 Cornell Street, Williston Park, L. I., New York. "I want to thank you for the excellent list of s. w. stations in the October issue. I have been interested in s. w. reception for nearly two years and since last May have been using a Pilot Dragon with good results. I am enclosing a partial list

of stations received. One of the bugaboos of s. w. reception is trying to identify foreign stations when you are unable to understand their language. Fading is another annoyance that is hard to get used to, particularly the rapid, high-speed type of fading characteristic of the short waves. By the use of a V-shaped antenna, a great deal of this fading can be overcome and I think RADEX would be doing the s. w. fans a very great favor if it would run an article on antennas for s. w. reception." Mr. Palmer's suggestion is respectfully referred to Mr. Dashiell who may be able to dig up some data and experiences regarding aerials for short waves. On the b. c. band, Mr. Palmer says he gets excellent results with absolute ten-kcs. selectivity and plenty of sensitivity. Mr. Palmer submits a fine list of s. w. stations with the dial setting for the Pilot Dragon. In submitting lists of s. w. stations received, may we ask our readers to give the frequency or wave-length, and if possible, the day and hour of the week on which they were received? The time received is of the utmost importance in s. w. work. And, by the way, do our readers feel that it is going to be possible to discuss s. w. work in terms of frequency rather than wave length?

#### Just Getting a Start

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"I have been DXing for seven months," says Harold M. Wheeler, 410 Marston Ave., Madison, Wis., "only about two of which were DX weather, so I am just beginning. But I have a broadcast band log of 310 stations. I have a shortwave log of 231 stations, my best catch on the broadcast band, by far, is 2YA at Wellington, N. Z., on 720 kcys. My shortwave luck with a converter has been fairly good, and all summer I listened to Germany, England, France, Italy, Spain, Portugal, Argentina, Australia, Japan, Mexico, Costa Rica, and amateurs from everywhere. I get the biggest kick, however, out of foreign reception on

the broadcast band, because, after all, that is the real DX. I have a Philco, Model 112, eleven tubes and a Kennedy Converter. I use one of your filtered aerials for broadcast band work, but get best results on shortwave with a double sixteen foot antenna in my attic. I would like to hear from anyone who has tried the Tobe Filterizer kit described in your September issue. I would also like to have someone send me the address of the Transcontinental DX Club and would like to correspond with anyone who would like to help out a beginner."

#### Here's the Address

The address of the Transcontinental Radio DX Club is 4 Vincent Street, Hawthorne, N. J. Ralph H. Schiller is President. This Club reports that a total of 46 stations took part in their "United States on the Air" DX series on October 15th. The Club is now arranging for a similar series for the Canadian stations on Saturday morning, December 3rd. The actual stations taking part are not yet known but undoubtedly DXers ought to be able to add a number of the northern stations to their logs between the hours of midnight and 6 a. m. EST, the morning of December 3rd.

"May I suggest to the shortwave readers of RADEX," writes C. Gates, 514 Ivy St., Pittsburgh, Pa., "that they listen in on the twenty-meter band some Sunday afternoon? It is very interesting, and even with adverse weather conditions, amateur stations from all over the United States can be received. Here is a list of stations I have received on that band: VE1CO, W5QL, VE1BT, G5B1, W9CJJ, W41-, W6CME, VE1DQ, VE1BL, G5BY, CM8QS, CM2QJ, W5AFI, W6EN, W4DJ, W6ACN, W9BRD, VE3BK, W9BRQ, W6QV, W5VA, W6KG, VE1HA, W9LD, W9ENU, W5ASI, W5BOC, W4ADR. Station W9CJJ, of Denver, comes in like a ton of bricks.

"Can you tell me if FYA uses directional antennae for their Asiatic and African transmissions? Have received both. Also, would appreciate identification of two telephone stations on approximately fifteen and fifteen and a half meters that carried on conversation this morning (October 28) from eight till ten. Language sounded somewhat like German, but don't believe it was German. In calling the station on the lower wave repeated 'Allo' three times. Man and woman announcer alternating. I didn't hear any call letters given."

"Just recently I took the Government examination and am now a licensed amateur radio operator and will soon get my station license from the F. R. C.," advises A. R. Van Compernolle, 618-A No. Baker St., Santa "Some other DXers I Ana, Calif. know are also members of the A. R. R. L. and will sooner or later become amateurs. A great many DXers who become shortwave fans are going to become interested in amateur radio when they hear the amateur phone stations talking to each other. According to the latest count there are over 33,000 amateur stations in the U. S. A. Mr. William Kirchmann, your W8BOZ is Raymond M. Rapp. 8 Kenmere St., Warren, Pa., according to my amateur call book, and W3SM is Robert Adams 3rd, 1302 Keswick Ave., Haddon Heights, N. J."

#### We Got Him Into It

"It was entirely due to your articles and information that I decided to purchase a shortwave converter," admits Richard W. Mitchell, 542 Ste. Angele St., Three Rivers, Que. "After trying several makes I got hold of a 1930 Silver-Marshall No. 738 Superhet converter and connected it with my Majestic Model 92. The results have been remarkable. I am able to pick up Rome and Chelmsford eight nights out of ten when I come home from the office at 5:30 p. m. EST."

"I bought a Marconi superheterodyne all-wave set about the end of October last year and started to log about November 1st, and so in less



Irene Taylor, lovely blues singer from Chicago Wednesdays at 8:30 and Saturdays at 11:30 p. m. EST on NBC-WEAF.

than a year, in looking over my log, I find I have 140 b. c. stations to my credit and 26 shortwave," writes E. W. Law, 10439 69th Ave., Edmonton, Alta. "However, I am afraid I have not made very good success as far as the shortwave stations are concerned, as the only ones I have had, outside of the U. S. A., are two in London, England, one in Rome, two in Honolulu, and have lately been getting VE9GW, Bowmanville, Ont."

"I recently logged two shortwave stations on a b. c. set, which I have not read of being picked up by other RADEX readers," reports Stewart Stowell, Rockledge Ave., Fox Chase, Pa. "They are WIXO and WEY. WIXO is the portable station used with WMP, the Massachusetts state police station in Boston. When I picked it up it was testing with WMP. The only time I received WEY was when I heard it sign off early one morning. This brings my total to 13

(Continued on page 32)

## FIRST AID IN TIME OF TROUBLE • • • By the TECHNICAL EDITOR

#### Knife Edge Selectivity

I have a Kolster a.c. model 6 J radio set, a Jensen dynamic speaker and a 90 foot outdoor antenna. How can I get knife edge selectivity on this set, especially in the lower wave lengths?

This set has a variometer tuned input which is not the most selective method in the world, and therefore we do not believe the set can be made much more sensitive than it is at present. You might try placing a small fixed condenser (.00025 mfd. capacity) in series with your antenna, and this should increase the selectivity on the lower wave lengths.

If you wish to change the antenna input circuit in your set, you might experiment by replacing the variometer and antenna inductance with a coil wound on a tube that is about 21/2 inches in diameter and three inches in length. Place 12 turns of No. 28 silk covered wire on one end for a primary, and 1/8 inch away begin a secondary coil consisting of 53 turns. Connect the primary between the antenna and ground, and the secondary between the grid of the first -26 tube and the ground. Tune the secondary with a .0005 variable condenser if that capacity is not now in your set at this point. If all the lower waves are not heard remove a few turns from the secondary coil.

#### Phonograph and Microphone

I would like to know how to use a phonograph pickup on my model 90 Majestic radio set. I have tried but I don't seem to be able to make it work. Also, my microphone does not work with a detector adapter plug, and will not reproduce through the loud speaker.

The phonograph pickup device and microphone output are connected to

the set in identical manners. See the answer to a previous question in this issue showing how to make the attachment to an Atwater Kent receiver. Some changes, however, will be necessary in your case.

There is an input transformer connected to the plate circuit of the detector (-27) tube. It has a split secondary, the center of which is grounded. Open this ground lead and insert the two binding posts as explained in the previous answer. So much for the phonograph attachment.

You must use an output transformer with your microphone. Place the microphone in series with the primary of the transformer and two dry cells of battery. Run two leads from the secondary of the audio transformer and insert them in the two binding posts previously mentioned in the same manner you connect the phonograph pickup leads. In your set it is best to remove the detector tube when the phonograph or microphone is being used, for you do not ground any cathodes as mentioned in the previous answer.

#### Delco System Interferes

Please tell me what I can do to keep my 32-volt Delco electric system from interfering so much with my 6-tube Crosley battery set—1929 model.

The trouble does not lie in the set, although if it were more perfectly shielded the interference would be somewhat less. It is not quite practicable, however, to make such changes in the set. We presume you get this interference when the battery charger is working, or other motors and power devices are operating. You will get certain clicks when switches and starters are turned on, but these cannot well be eliminated. If the trouble is due to sparking of brushes

on the commutators of the generator when charging the storage batteries, or on motors used for power purposes, some remedy is possible. Brushes and commutators should work smoothly and perfectly so as to reduce sparking as far as possible.

It will be necessary to connect condensers across terminals and use certain choke coils to absorb the high frequency sparking that takes place. We suggest that you write the Tobe Deutschmann Corporation, Canton, Mass., for information about their Filterettes which can be connected to your sparking devices and thus absorb a great deal of the interference. This concern is expert at this type of radio noise elimination.

#### Signals Almost Inaudible

I have a My Own midget set that does not give the volume it has had before. The stations are almost inaudible, but there is no noise in the speaker. I have had a new by-pass condenser installed and it helped the volume a bit.

Loss of signal strength may be caused by several sources. The first, of course, is the suspicion of wornout tubes. These should be testedthe two -24s and the two -27s, and replaced if at fault. Next we should suspect any one of the grid resistances and others used in the circuit. A failure of some fixed condenser will give much trouble. A broken or burned out transformer primary or speaker frequently does not stop all signals, but greatly diminishes them in volume. Have the windings tested not only for breaks but for shortcircuits between coils and metal covers.

A breakdown in the power unit may be the cause, for the plates of the tubes may not be getting their proper voltage or the grid bias of a tube may be too negative or too positive. The potentials being supplied each tube should be tested with a voltmeter when the set is being used. It is possible that an electrolytic condenser is defective or the voltage



Ohman and Arden, piano duo, Sundays at 9:45 p. m. EST over NBC and WEAF network.

divider may have a break in the resistance coils at some vital place. All these things should be tested carefully with a voltmeter for proper operating voltages. A careful test of tubes and operating voltages for filaments, grids and plates should soon disclose the source of failure.

#### Power Line Interference

I live beside a high tension power line which interferes with radio reception. The power company has made some tests and suggestions, one being the use of a new design for antennas using transformers in the circuit. They say the electric field around the wires does not extend far enough away to give much trouble. What can you suggest?

If your receiver is well shielded the trouble is picked up almost entirely by your antenna and ground lead wires. Try using a metallic shielded wire for ground and leadin from the antenna. The new type of aerial, suggested by the company, may be of

benefit. The Kolster Radio Corporation is now furnishing all their sets with a new antenna Rejectostatic which is said to eliminate much of the trouble you are experiencing. Write to them at 67 Broad Street, in New York City for information and prices on this new device.

High tension power lines are surrounded by great electrical fields and the lines of force extend out sufficiently far to affect a sensitive radio receiver. We have heard that some success has been had with an antenna curtain, and you might be justified in experimenting with this system. wire is hung parallel to the power line and slightly higher. It should be about 75 feet in length. Hanging down at two-foot intervals are vertical wires that are grounded at their lower ends. The radio antenna is then placed behind this curtain and at right angles to it. The antenna must not be any longer than the curtain, or about 75 feet. The leadin wire must be carefully shielded with grounded metal covering. The antenna must not be as high as the top of the curtain. If space is available this device, at least, will be an inexpensive and interesting experiment.

#### Phone Adapter Changes Tuning

I use the I.C.A. headphone adapter in my Atwater Kent a.c. set but it changes the tuning somewhat when between 1300 and 1500 kilocycles. It seems to me, also, that the telephones do not have as much power as they should.

The I.C.A. adapter connects to the grid input circuit of one of the power amplifier tubes, and therefore the gain due to power amplification, such as the -47 tube in your set, is lost. It is likely that the change in tuning characteristics is due to the added circuit in the grid caused by the introduction of the adapter. Are you using it, perhaps, in the detector tube socket? Try attaching a 0.5 fixed condenser in series at each phone cord tip and then connecting them to the plates of the two power tubes. This

is a capacity coupling and will eliminate the change in tuning on the dial.

#### Slow Heating and Noisy

My model 52 Zenith receiver does not start to work perfectly until some time after it has been turned on. Also, there is some noise when the volume control knob is turned. Why is this trouble experienced?

All sets require some moments to warm up, that is, the tube filaments heat cathode heaters surrounding the filament, and they do not start emitting electrons until very hot. This takes about 20 to 30 seconds with some older tubes. New quick heating tubes are now available.

The noise is in your volume control. Inspect and clean it, if possible, and place a bit of clock oil on the wire resistance, if of that type. If it is a carbon resistance, the parts may be packed and this will require a new control.

#### Phonograph Attachment

I have a model 89 Atwater Kent radio receiver but it is not equipped with a phonograph connection. Is it possible to make a change in the set so that I can use a phonograph attachment?

The model 89 Atwater Kent receiver does not have the phonograph outlet connections and switch that are provided on the model 89-P. Otherwise the two sets are identical.

Your set, the model 89, has a volume control which is a potentiometer with moving arm to vary the resistance. This arm connects to the grid of the first audio tube—a -27. One end of the resistance in the control is grounded to the chassis. Cut or open this grounded circuit and run a separate wire from the resistance to a binding post placed at a convenient place in the cabinet. It must be well insulated from the chassis, of course. Place another binding post adjacent to the first and connect it to some grounded point on the chassis.

When the phonograph attachment (Continued on page 33)

## LOOKING OVER The MARKET

## As Radio Develops

All-Wave Set with the Magic Dial is the intriguing of "the new 11-tube Stewart-Warner Superheterodyne Receiver. The dial is of entirely new design with the four scales for the four bands being printed one above the other. Only one of these scales may appear at a time, however, in the arc-shaped window in the panel. The four scales are 15 to 30 meters, 30 to 75, 75 to 195 and 550 kcs. to 1600. A single band-selector switch moves any one of these scales into view and at the same time changes the coils accordingly. The main control knob or station-selector controls the tuning for all four scales. advantage of the Magic Dial lies in its simplicity and the fact that the scale for the particular band in use is the only one visible thus eliminating the confusion due to several different scales visible at the same time.



Stewart-Warner Master All-Wave.

The Stewart-Warner has two-speed tuning, that is by pushing in or pulling out the tuning knob, the gear ratio is changed from 8 to 1 down to 50 to 1. First speed enables the operator to turn from one end of the scale to the other very rapidly while second speed enables him to tune to hairline limits for razor-edge selectivity so essential in the short waves. Automatic volume control and automatic tone control are provided. The former keeps the volume level automatically regardless of the proximity of station or strength of signal. The latter automatically increases the base response at low volume levels so that it registers on the ear. By pulling out or pushing in the volume control knob a local-distance switch changes the sensitivity of the set.

The circuit is said to be entirely new; the tube equipment includes four -56, one -57, three -58, two PZ output pentodes and one -80 type rectifier.

#### Succeeds the "Thrill Box"

Our readers will recall that a large number of the excellent records in short wave reception of which they have read in this magazine, were made on the National receiver. old SW-45 made by the National Company, Inc., of Malden, Mass., has been superseded by the new SW-58. In the new set the type -58 pentodes are used in the r. f. and detector circuits (-34 in the d. c. model). The new tubes, the manufacturers say, contribute materially to the high efficiency of the circuit, and permit a degree of selectivity and sensitivity that have heretofore not been realized. The coils are available in various sets covering from 12 to 2000 meters and bandspread coils can be obtained for special portions of the frequency spec-A special tuning condenser makes it possible to isolate completely the input and output circuits of the



The National SW-58 is made in both A.C. and D.C. models.

r. f. stage which is said to result in a perfectly stable system even at the highest frequencies. This manufacturer thinks that switching devices necessarily introduce losses and therefore equips the SW-58 with plug-in coils in both a. c. and d. c. models. The receiver is constructed for use with a separate power-pack to prevent the excessive shielding otherwise necessary in the r. f. and detector circuits. The dial is full vision or open scale arrangement. The scale is seven inches long permitting greater accuracy in reading. The pointer moves across the entire length horizontally.

#### Apartment House Aerial

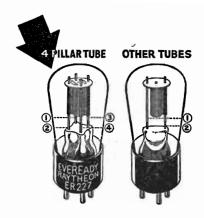
An aerial for the roofs of apartment houses where it is not possible to erect a long wire, is being produced by The Radio Service Co., of South Bend, Indiana. This antenna system uses a metal shielded lead-in wire with two transformers for elimination of

man-made static. The standard for the antenna is of threaded pipe construction. At a height of 15 feet or more two cross arms are supported which carry the aerial wire. cross arms are 42 inches apart and four feet long. The aerial is woven back and forth through the cross arms using 42 feet of Belden chap One of the transformers is mounted on a cross arm and connected to the aerial and to the shielded lead-The latter then runs to the other transformer at the set. This device can be furnished with multiple outlets so that five different radio sets may be used on the same aerial.

#### The Four-Pillar Tubes

The accompanying drawing illustrates the patented four-pillar construction of the Eveready Raytheon tubes manufactured by the National Carbon Co., New York. The elements in these tubes are held rigidly in position by four pillars instead of the two usually found in other tubes. Because of this construction these tubes will stand shipment in the set, and are particularly desirable in automobile radios where tubes are subject to constant jolts and vibration. points claimed for the Eveready tubes are: large clearances between electrodes which help to insure uni-

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form characteristics; large radiating area to dissipate heat, contributing to safe operating temperature and long life. All of the latest type tubes are furnished with this construction.

#### An Automobile Radio

The new Models 88 and 61 "Motorola" Auto Radios, manufactured by the Galvin Mfg. Co., 847 West Harrison St., Chicago, are eight and sixtube sets respectively. The power supply and receiver are in the same housing, the size being but 8x8x91/2 inches. No B batteries are necessary. The station selector is mounted on the steering post. Both models are superheterodyne with automatic volume con-The dynamic speaker can be mounted on the cowl. It is claimed that the set is so thoroughly shielded that it could be mounted in the engine compartment with little or no chassis pick-up. The set comes ready to install with all cables connected.



The "Motorala" Superheterodyne.

## NEW TUBES ... for OLD?

In most radio sets the new tubes, types 46, 56, 57 and 58, may be used to replace types -45, -27, -24 and -35, respectively. While there is not always an advantage in replacing these older tubes with newer types, there is some economy of current, for all of the new tubes, with the exception of the type 46, draw only 1.0 ampere while the older tubes use 1.75 amperes. The filament requires a potential of 2.5 volts in all the tubes.

Type 56 may be substituted for type -27 without change, for both tubes use 5-prong bases which fit all -27 sockets. The circuit wiring of the set needs no alterations. The use of the 56 tube in replacing the 27 is recommended because of the greatly improved performance of the newer type.

Type 57 cannot be substituted for type -24 unless a special adapter is used, for the 57 tube has a 6-prong base that will not fit the 5-prong receptacle used by the -24. Both tubes have the control-grid caps at the top. The suppressor-grid and cathode of type 57 are connected together and brought down through the new adapter to the cathode prong of its base. Simply remove the -24 tube, insert the adapter, and fit the 6-prong 57 tube into the top.

The same adapter is used to substitute the 58 type tube for the type -35 or -51. The new 58 is an improvement over the -35. And while the 58 can also be substituted for the -24, it is not alawys to be recommended. Many circuits were improved when type -35 tube replaced the -24 in radio and intermediate frequency circuits a year or so ago, and the electrical balance of those circuits may not always permit the combination of -24s and 58s; the re-

(Continued on page 32)

## CIRCLING THE GLOBE with

### the DXers •••

Records Great and Small

HAT a "grand and glorious feeling" when you sit down at the dials and suddenly bring in your first real foreigner. Like that fellow in the "Lost Chord"—"seated one day at the organ, I was weary and ill at east"—you know how it goes. Well, our first letter this month tells about just such an experience. It has a moral too. If this listener hadn't just got the October RADEX the day before with the foreign broadcasters arranged by frequencies, she would not have tuned in 635 kcs. and got the big thrill of her DX life.

Let us repeat here what we have already said in the article on the short waves: The data regarding stations is voluminous enough to fill half a dozen books of our size. It is absolutely necessary for us to subdivide this information and publish a part of it in each issue. In October there was the list of trans-Pacific stations arranged by frequencies. In November, we gave a list of all the world stations in the broadcast band arranged by frequencies. The world broadcasters were published by countries and cities in April, No. 58. This list with corrections will appear again in an early number.

Now let's see what our DXers have been doing and—"Women first."

my "Received first Australian broadcaster, 5CK, this morning," records Mrs. L. R. Ledbetter, 1109 Grammar Street, Vicksburg, Miss. "I certainly was surprised; I had expected to have to strain my ears if I should hear an Australian whereas it was too loud for more than half volume on the speaker (excepting the times, of course, when it faded away) and reception got decidedly better from 4:30 a. m. until 5:30. I kept this station on 635 kcs. until the sun could be seen shining at 6:10 when the signal was drowned by local interference. I give credit to the October RADEX—I bought it yesterday—and that was my first attempt at real DX.

"I have a Fada Model 45 Superhet with about 110 feet of aerial and a water-pipe ground. The aerial isn't over 45 or 50 feet high. Now that I know I can, under not very exceptional conditions, get a 7500 watt station that far away, I feel sure that patience, good radios and aerials under better conditions would bring in even that 'absurd 2-ZI.' How is this for selectivity—CFCN on 985 with WBZ on 990 and KDKA on 980 both coming in and also KNX on 1050 and XES on 1055 with no interference with each other?"

#### 31 New Ones in 31 Days

"I started off this season with a bang," gloats Nancy Lee Saxton, 317 N. Sergeant St., Joplin, Mo. "From September 15th to October 16th, I logged 31 new stations. I thought this rather good for the first of the season and it brings my total up to 405 stations with 185 verified. Some of my best are CKPR, CMBG, CMBY, CMAF, CMQ, KDFN, KOAC, WAAF and 10-AB. I have every state but Maine, New Hampshire, Vermont, Rhode Island and Delaware and every channel from 540 to 1500. September 11th, I tried to see how many days straight I could get KFI and I went from then to June 19th without missing a day. I agree with you that anything may happen in Tonight I couldn't get either WLW, WMAQ or WGN but both CMK and CMAF were coming in fine." Miss Saxton adds this P. S.: "How about printing more letters from the women DXers?" We have a great many women readers and have published a number of their records but we will be delighted to receive more of them.

"I have been a DXer for over two

years," says E. Lloyd Whitmer, 121B S.E. 4th St., Evansville, Ind. "As I live in an apartment in the heart of the business district, reception conditions are very bad, and I have no choice of antenna installations. However, under these conditions I have logged 230 stations; 219 in the U.S. A., 4 in Canada, 3 in Mexico, and 2 in Cuba. I have heard stations in 40 states and my cities total 158. 39 of my stations logged have been ones using 100 watts power or less. I have used Atwater Kent radios exclusively in my DXing (Models 10, 32, 35 and 55) and am well pleased with their performance. At present I am using a Model 55, but am contemplating procuring a Model 72. I would appreciate hearing, through RADEX, from owners of either of these two models as to their results."

#### Nine JO's in One Day

"On the morning of Sunday, September 25th, I picked up these Japanese: JOAK, JOBK, JOCK, JOFK, JOIK, JOJK, JOLK, JQAK, JFAK, JOHK," reports Don Townsend, 1421 Arch St., Berkeley, Calif. "All of these came in loud enough to be heard across the room. JQAK was weakest. 5CK of Crystal Brook, Australia, came in very good. All talking distinctly heard and music good, almost no interference. It came in better than most of the Japanese. All of these were received between 3:30 and 4:05 a. m. PST. I got dope for verifications on JQAK, JOLK, JOJK, JOBK, JOHK and JFAK. I have already verified 5CK and the Japs. I have written twice before for verifications to JFAK, JOBK, JOHK, but they did not answer."

#### With a One-Tuber

"I use a home-made one-tube a.c. receiver, using a 227 tube with 22½ volts B battery for the plate voltage," advises Robert Loucks, 1048 Alcott Ave., Toledo, Ohio. "I built the set on August 3, 1932, and my total stations is 209 to October 9th, with 28 verified. I only write to the stations of 250 watts and under or those which are

over 1000 miles. I have had 50 stations of 250 watts and under, the best of which are: KGEK, Yuma, Colo., 100 watts; CKPR, Fort William, Ont., 50 watts; KFJZ, Fort Worth, Texas, 100 watts; WENC, Americus, Ga., 100 watts; WRBL, Columbus, Ga., 100 watts; WHET, Troy, Ala., 100 watts; KCMC, Texarkana, Ark., 100 watts. All of these are verified."

#### It Made a Big Difference

"I picked up RADEX a year ago today and believe me I haven't found one yet that will beat it," writes George E. Lowrey, David St., Brampton, Ont. "I only had about 75 stations then, half of them I didn't know just where they were located. But now I have 303 stations, with 112 verified. My very best catches are KGEK, Yuma, Colo., a 100-watter; KFPM, Greenville, Texas, a 15-watter; KRMD, Shreveport, La., a 50-watter, now 100 watts; KFJZ, Fort Worth, Texas, a 100-watter. These I have never heard twice and never expect to again. I would like to correspond with another DXer in Ontario, using a Rogers 400 model, 7-tube."

#### Tuning Amateurs on B. C. Set

R. M. Ballard of Visalia, Calif., offers this suggestion to owners of the Majestic 52: The amateurs can be received on this set by opening the aerial compensator very wide. This will drop you into the 160 meter amateur band. Tune until the greatest signal of the amateur is heard. Mr. Ballard has received ten amateurs by this method. He uses 300 feet of aerial and this may play some part. Mr. Ballard wants to know which Havana station was broadcasting on 1235 kcs. the morning of October 16th at 3:30 a.m. EST. The last number was a woman singing. The announcement was Havana but a station in the West drowned out the call letters.

"I have a Scott and specialize on the broadcast band," writes Abe Cohen, Library Dept., Seattle Post Intelligencer, Seattle, Wash. "Since April 14, 1931, when I received my set, I have logged 282 stations in 42 states and 96 out of 97 channels. With the exception of a small station in Portland, which just broadcasts a couple of hours during the afternoon (and I hope to get that this winter) I have completely logged Washington, Oregon, Idaho, Montana, Wyoming, Utah, Nevada and Alaska. I now have logged about 90% of the stations in and west of the Rockies."

#### Another Singleton

"I have read a lot in your magazine about small set DXers, so I've decided to write you about my activities," says Harvey Reid, 371 Willard Ave., "I made a one-tube Toronto, Ont. regenerative receiver, using a UY224, which sure pulls in the DX. With it I have logged 175 stations and am adding to this each day. I have four 50-watters, and about twenty 100watters. I have received KFI, KXA. CMK, XEW, XER, XED, CFRN and many other distant stations. I started buying RADEX in February, 1932, and haven't missed an edition. I would be glad to communicate with fellow DXers about 15 years old."

"I have, I think, some good DX for my set that will compare with any comers," writes L. A. Brodhecker, Box 82, Brownstown, Ind. "I have a six cylinder General Motors outfit, midget job, with which I have logged 162 stations so far. Ten of them are from California, one from Washington State, one from Oregon, one from Nevada, one from Utah, Porto Rico, also several in Havana, also from Florida and Texas in the south, to Canadian stations in the north, and from Connecticut to California. use an L type aerial, about 160 feet in length."

#### XFC is Holding Out

"I have been a DX hound for about twelve years," admits Myron A. Sturm, 922 Eastwood Ave., Chicago, Ill. "I have gone in for the elusive verification only since the first of this year. I have no record about which to brag, having logged only 170 stations since that date. However, I can boast a total of 169 verifications, the

only hold-out being XFC down in old Aguascalientes. The reception was logged three months ago and I have written three times, but I have just 'begun to fight.'"

"The DX season here started off with a bang on October 2nd and 3rd," advises Robert E. Moran, 1309 Wellington St., Ottawa, Ont. "That evening and morning I was very successful in pulling in YV1BC, Caracas, Venezuela, which came in like a local, and also WKAQ at San Juan, using a temporary power of 700 watts, due to conditions through storm damage. WPRO on 1200 kcys., 100 watts, comes booming in here with the strength of a 100-watt local, and this is in the daytime I'm talking about. Queer, eh?"

#### Back After Eight Years

"I have just rejoined the DXers," informs Gordon S. White, Rt. 4, Monroe, Mich., "having been gone since the early days in 1923. Am now working nights with plenty of opportunity to DX. So far have 38 states in about two weeks, also Canada, Mexico, Porto Rico, on a Model 20 Philco, built in 1928. I get a lot of 100-watters early in the morning as far as the west coast, but am bothered a lot with man-made static. I am going to buy a short-wave converter later on. Are they practical or would you recommend an all-wave set?"

As will be seen from many letters published in the short-wave department, many excellent records are being made with converters. An all-wave set is practically only a broadcast set and converter housed in the same cabinet and with the advantage of changing from band to band by turning a knob.

"I commenced logging last February and to date I have 175 stations which cover 34 states, District of Columbia, Mexico, Cuba and Canada," writes Harold Tynes, Russellville, Ky. "I expect to log at least six more states during the coming winter and also to enlarge my log to 500 stations. I have a Majestic, Model 20, 8 tubes, and it sure does speak well of itself.

I would like to correspond with DX fans over the United States, or any other place for that matter, and promise to answer every letter I receive."

#### Tries the Ground Waves

F. Martyn, 695 Nassau St., Winnipeg, Man., has been doing some experimenting with underground aerials, having tried successfully both an iron pipe driven seven feet into the earth and also 200 feet of copper wire buried 24 inches deep. He has a total of 306 stations with 130 verified.

"'DX as a Hobby' in the October issue was fine for a beginner," thinks Reeve Owen, 113 West Wall St., Calhoun, Ga. He has logged 251 stations from 46 states and six countries on his Crosley "Buddyboy" and thinks this is nearly a record for this set.

Every state but Delaware, is the record of Rexford Newcomb, Jr., 605 Nevada St., Urbana, Ill. With the time on the air now given in RADEX, he ought to be able to log WILM or WDEL before long. Rex wants information about "The Flying Dutchman," an orchestra on 920 kcs. which he received the evening of October 2nd. His total log is 364 most of which he has had to pull in between his classes in Ceramic Engineering at the University of Illinois. Other DXers in college, please write.

#### Who Uses This One?

"I'm wondering if any other DXer uses an 'Autocrat'," remarks Glenn E. Mitchell, 1088 East 16th Ave., Columbus, Ohio. "It was built by Shaffer-Mann Co., of Detroit. It is a remarkable receiver. I have had WWL and WFAA at high noon." The first week of the new season adds ten stations to Glenn's list, which now totals 533.

"What was the Spanish-speaking station on 796 kcs. Sunday, Sept. 25th, from 12:15 to 12:50 a.m. EST, with a program of military music by a Spanish orchestra?" asks Earl R.

Roberts, 105 Gomber Ave., Cambridge, Ohio. "KGO interfered somewhat at times and the station was weak, fading entirely out at intervals."

#### Wants Help With Short Waves

Chas. K. Burkinshaw, 2856 Holt Street, Rosemount, Quebec, has an Echophone Super, 9 tubes, long and short wave. He is very much pleased with the set but does not get the results on the short waves which he thinks he should because of his lack of experience in tuning. He would appreciate any hints he may receive from other users of the Echophone.

Leonard Trisdorfer, 2056 East 24th St., Brooklyn, N. Y., has a tentube Sparton No. 737 which he thinks ought to give him better results than it does and would like to hear from other owners of this model.

"On January 15, 1932, I bought a Model 62 Kennedy radio, and to date have a log of 384 stations, covering 44 states, Canada, Cuba and Mexico," reports Roy V. Heater, 7805 S. Peoria St., Chicago, Ill.

"Received CMBY at 2:08 this morning, October 23rd, and CMCA at 2:48 a. m., both on 1225 keys., and signing in English," says R. H. Corson, Fern Hall, Cleveland, Ohio.

#### Some Possible Foreign DX

In addition to the "Canada on the Air" DX programs for Saturday, December 3rd, the Transcontinental Radio DX Club is negotiating with the following stations for special programs. It is not yet possible to say how many of them will cooperate but it will do no harm for DXers to try to tune them in on the dates and at the hours given.

LT3. Sunday, Dec. 11th, from 3 to 4 a. m.; CPX, Monday, 12th, 3 to 4; LS5, Tuesday, 13th, 2 to 3; PRAK, Wednesday, 14th, 2 to 3; CX26, Thursday, 15th, 2 to 3; OAX, Friday, 16th, 3 to 4; and HJN, Saturday, 17th, 3 to 4. All times are given in Eastern Standard and the hours are a. m.

## The PUZZLE CORNER

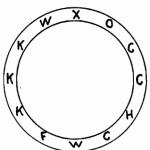
That was a pretty stiff puzzle that Messrs. Welsh and Moyer gave us in the November number. If you couldn't solve it, here is the answer: Stations around the rim, WTOC-CKGW-WSMK-KWLC-CHCK-KFPW; on the spokes, WOWO, CKMO,

KSOO, CFBO and KFUO.

"The following problem in long division," writes the originator, George Raba, of Stevensville, Michigan, "is based upon a favorite dramatic team heard in this section of the U.S.A., 'Dan and Sylvia.' Change the letters into numbers from naught to nine inclusive.

> AND SYLVIA  $\mathtt{DAN}$ SITA IVVI ILTN TOVA TOVA

And here is one contributed by . Fred Pheasey, Inverness P. O., Skeena River, British Columbia. The letters arranged around the adjoining circle conceal three radio calls. Starting at a certain letter count round and round the circle clockwise, striking out every eleventh letter and the station calls will appear.



#### Chat And Comment

(Continued from page 13)

open). This makes the volume control act as a regeneration control. The increase in sensitivity that this arrangement gives is simply amazing. Just the other morning I had little CKPR in Fort William with only 50 watts so loud and clear at 2:05 a.m. you could have heard it outside the (That's too loud for two a. m.—Ed.) The same morning I had 26 stations over 2000 miles away in three hours-14 in California alone. But the increase in selectivity is even greater. On any night after six p. m., I can cut out the locals and get WBBM, WBAP, WCCO, WENR, WCFL and WJJD." WBBM,

Mr. Todd has been DXing since April 1931 and has logged 467 stations in seven different countries. He would like to hear from other owners of Philco No. 20. He is now taking the course in the National Radio Institute and hopes before long to be a full-fledged radio engineer.

#### Those Filipinos

Station KZRM in Manila, Philippine Islands, advises us that they are on the air daily from 6:30 to 7:30 a. m., from 12:15 to 1:15 p. m. and from 3:00 to 10:30 p.m. They are using 50,000 watts in the antenna and broadcasting on 618.5 kcs. According to the RADEX Time Converter, listeners would have to pick up these programs the day before they were sent! In the Eastern Standard Zone, the above times would be 5:30 to 6:30 p. m., 11:15 p. m. to 12:15 a. m., and 2:00 to 9:30 a. m. respectively. Unfortunately KZRM states that they do not verify reception. Neither do they have stamps.

Carroll H. Weyrich, 6 N. Gorman Ave., Baltimore, Md., and several other readers, ask why we no longer list the Philippine stations in the Index by Frequencies. These stations, although they belong to the U.S., are so far away as to be really foreign stations. We try to include in

the frequency list only those stations that ought to be heard more or less regularly in this country. Many of our readers try to complete our different channels and it is hardly fair to list stations therein (and thus keep them from achieving 100%) which cannot be tuned in. By the way, how many have heard KZRM?

#### Need Uniform Rules

A debate is now raging over the position of this magazine in making the rule that stations are not to be counted the second time when they change call letters but may be counted again if they change locations. The correspondence on this subject will be analyzed and published in the January issue. In the meantime, we will be glad to receive arguments pro and con on this rule.

### They Want to Know ...

CAYS Paul Cintrat, 640 Washington Ave., New York City: "I have been DXing for almost three years and have over 300 stations. Can you tell me what station I hear nearly every night between 920 kcs. and 910. I tune in on XEW on 910 and WWJ on 920 and between them comes a station, the language of which seems to be Span-Is it possible that this station is TICR the 50-watter of San Juan, Costa Rica?" And from Raymond M. Bell, 616 S. Allen Street, State College, Pa., is this inquiry: "I've been hearing regularly a Spanish station on 915 between XEW and WWJ. Who, what and where is it?" any other reader identified this mysterious stranger? A number of our readers have heard TICR and perhaps this is the station although it hardly seems likely that this little and distant station should come in so distinctly.

"On October 23rd I picked up a station coming in on from 1620 to 1640 kcys.," advises Edgar Lane, Clark, S. D. "It was broadcasting on a chain when I heard the following: A

talk on the choice of a world polo team; a talk by Gar Wood; one by Mr. Johnson of the American Legion, and then someone asked Babe Ruth what he thought of the Chicago Cubs. At one announcement I thought I heard the call letter as 'K.' If you can help me out on this I would appreciate it very much."

"Have any Arizonians tuned in foreign stations on the b.c. band?" inquires H. Cowan Drachman, Box 1870, Tucson, Ariz. "The general contention here is that southern Arizona is very bad for reception due to the extreme difficulty of getting a damp ground and naturally bad atmospheric conditions together with many ore deposits. I was wondering if this was just propaganda or if southern Arizona is naturally a bad place for DX. We have one advantage in being 500 miles away from any really powerful stations." How about it, Arizonians?

"Wonder if any RADEX readers have heard a station on about 1065 kcys., which comes in between WTIC and WTAM?" inquires Olin Coleman, Young Harris, Ga. "The two latter stations interfered with it so that I couldn't get the location. I would like to hear from any DXers and promise to answer all letters. I would especially like to hear from someone in Alaska or Hawaii."

"What is the possibility of receiving a harmonic of CKAC (730) on about 1250 kcys.?" inquires Ben Van Wormer, 664 Valley Road, Upper Montclair, N. J. "Tonight (October 14th) I heard a French speaking announcer on 1250. Please tell me if you think this might be a harmonic. I think I heard the announcer say something about the Canadian Pacific."

We are asking Mr. Dashiell to write a short article for the January number regarding this phenomenon of harmonics explaining to us in simple terms just what may be expected and what may not.

"I picked up YV1BC, Caracas, on their DX program, and since then have been able to pick them up almost every night and as early as 6:00 p. m. EST," writes Joseph J. Connolly, 14203 231st St., Rosedale, N. Y., and asks, "Can any of your readers identify a Spanish speaking station on 625 kcys.? I picked it up October 17th at 9:00 p. m. EST."

"On the morning of October 23rd I listened to a program on 1360 kcys., somewhere between 2:30 and 3:30 a. m. It was presenting the Wilson Oil program with phonograph records. I believe this was KGIR or KGER. Could you help me?" asks Jack Aird, 12600 Pinehurst, Detroit, Mich. "I am 12 years old, and use a U. S. 5-tube superheterodyne."

"How is this for one aerial 75 feet long, with two sets on it—one set playing WCCO and the other EAQ in Spain?" Charles Horton, 1329 South Jefferson St., Saginaw, Mich. Well, if you ask us, we would say that it was some feat and ought to go in "Believe It or Not."

"Can you tell me," inquires Ermin David, RR 2, Gering, Nebr., "what station interferes with KLZ, Denver? This interference starts about 5:45 p. m. MST, and continues until midnight, at which time KLZ signs off."

#### New Tubes For Old

(Continued from page 25)

placement of -35s by 58s is better. The type 46 tube can be used to replace the -45. An adapter has been designed to make the necessary connections between the 5-prong receptacle on the top of the 4-prong base beneath. The grid nearest the plate and the plate are connected together and brought down through the adapter to the plate prong. The 46 may be substituted when one -45 is used, or in a push-pull combination with two -45s.

It must be remembered that when substituting new tubes for older types the expected advantage may not be noticed. Some good radio circuits are carefully designed around the characteristics of certain tubes, and the introducing of new types with slightly different characteristics may tend to upset the balance sufficiently to offset the beneficial results that otherwise might be obtained. In the average circuit, however, using types 56, 57 and 58 to replace types -27, -24 and -35 should prove generally satisfactory. The increased height of the new tubes because of the adapter will necessitate new shielding cans when types 57 or 58 are substituted.

Among the manufacturers of adapters are Alden Products Co., Brockton, Mass., and the Insuline Corp. of America, 25 Park Place, New York, N. Y. Dealers who should have them in stock are Federated Purchase, 25 Park Place, N. Y. City. Wholesale Service, 100 Sixth Ave., N. Y. City, Radolek Company, 601 W. Randolph St., Chicago, and Allied Radio Co., 831 W. Jackson Blvd., Chicago.

#### On The Short Waves

(Continued from page 19)

shortwave stations heard on a b. c. set."

"When the combination sets were first mooted a few years ago," writes Jim Hedley, 121 23rd W., North Vancouver, B. C., "I made up my mind to have one as soon as they came out. I bought a Stewart-Warner and while I didn't get quite the thrill I received when I built my first crystal set, it was enough to satisfy me that, sooner or later, the S. W. will come into its own with a bang once the public is educated to its oddities."

"I have had my radio for a year and a half and have tuned in on many stations from Russia to PRDA, Brazil, which is a rather wide range," says Edward Collins, 16 Balsam St., St. John's, Newfoundland. "I have an Atwater Kent, model 84, midget, and an A. K. model 93 shortwave converter."

"I have been DXing for about a year now and have been able to hear 257 stations in four countries," reports Bruce Levitt, 45 York St., St. Catharines, Ont. "Included in this list are nine police shortwave stations. Not included in this list are eight amateur broadcasters. All these stations were heard on a b. c. set (Earl 31A)."

"I use the larger part of my radio time on the shortwave," says Fred B. Tuck, 15 Eaton Place, Bangor, Maine. "I am listening now to a program coming from Rome, Italy, 3:05 p. m. EST. I have tuned in Australia 45 times since June 4, 1932, Melbourne and Sydney, also many others."

#### The Human Side

(Continued from page 16)

Angeles, Tommy was billed as "The World's Youngest Baritone." During this period he attended concerts and recitals by eminent baritones, among them Reinald Werrenrath. He would sit with pencil and paper, eagerly take down notes, and return home to attempt those selections himself. His first professional appearance was at the Pacific Coast Radio Show, where aged fifteen, with a great big voice he sang "Toreador."

He played football at Loyola College, and starred in their entertainments. The family moved to Detroit in 1926, and he enrolled in the University there. Thereafter, he renewed radio connections, singing and announcing at stations WMBC and WJR. A serious illness interrupted his work, and after a great struggle to regain his health he went to New York to search for a suitable teacher, and found one in William Whitney. The latter spent much of his time at the New England Conservatory, and urged Tommy to take a complete course there. Tommy assented, and determined then and there his profession.

Having completed his course, he sang with Vincent Lopez and accompanied him on tour. Returning he joined Major Bowes at the Capitol Theatre. After an appearance at the Roxy, Tommy heard of the sudden

death of his favorite brother, whom he had always adored. He returned to Detroit, and sang his Requiem. After this disheartening experience, he returned to New York and absorbed himself in work.

He sums himself up as "just a crazy Irishman who likes to sing." He is stocky, grey-eyed, and has an infectious grin. . . . loves classic music best and is convinced people are slowly becoming educated to it. . . . his favorite book is "Story of San Michele". ... has great regard for the work of Andre Kostelanetz, who conducts the Threads of Happiness Orchestra. . . . would rather eat potatoes and gravy than anything else. . . . favorite colors are black, brown, and grey. . . .won't sing without ring on little finger. . . . is a bachelor. . . . raves about football, and is an incurable fight fan.

At present Tommy may be heard over the C.B.S. each Tuesday at 9:15 P. M. EST.

#### First Aid

(Continued from page 22)

is used the two wires leading from it are connected to the two binding posts. When the radio set is to be used only these two leads are removed and the two binding posts connected together with a short piece of wire, or a switch can be arranged to connect the binding posts when the phonograph is not in use.

Locate the -24 automatic volume control tube, which is the front left-hand tube when looking down upon the set from the front. A wire should be run from the cathode connection of this tube's socket to a small switch and then grounded. Close the switch so as to ground the cathode when the phonograph is used, and open when the radio is used.

Last Minute Dx Programs

Monday, Dec. 5th, 11:00—Mid. AST WKAQ, 1240, Puerto Rico Saturday, Dec. 10th, Mid.—2:00 EST CFLC, 915, Prescott, Ont.

## DECEMBER DX CALENDAR

A. M. time is given as of the night before. Thus early Monday morning programs are listed under Sunday night. See time conversion table on page 66.

Standard Time: Eastern E; Central C; Mountain M; Pacific P.

	SUNDAY NIGHT	Dec. 9th	1:00
	Mid2:00 E—CMCH, 1405, Havana, Cuba. Mid2:00 P—KPCB, 650, Seattle, Wash.	Mid1:00 C—WJAG, 1060, Norfolk, Nebr. 1:00-3:00 M—10BI, 1200, Prince Albert, Sask. 2:00-4:00 C—WHBF, 1210, Rock Island, Ill.  Dec. 9th  Dec. 9th  Dec. 9th  Dec. 9th	2,00 3,00
	Dec. 4th. 11th. 18th. 25th	Dec. 16th	
	11:30-Mid. C—KSOO, 1110, Sioux Falls, S. D. Mid1:00 E—WSAZ, 580, Huntington, W. Va. Mid2:00 C—WGES, 1360, Chicago, Ill.	3:00-4:00 M—KGCU, 1240, Manian, N. D. 5:00-6:00 E—WJBU, 1210, Lewisburg, Pa.	5100
	MONDAY NIGHT	WKAQ 11:00-Mid.M—CFCN, 985, Calgary, Alta.	
	Dec. 19th 4:30-6:30 M—10BI, 1200, Prince Albert, Sask. Dec. 26th	Dec. 2nd, 9th, 16th, 23rd, 30th Dec. 2nd, 9th, 16th, 30th,	
	2:00-3:00 M—KPOF, 880, Denver, Colo. 2:00:5:00 E—WAGM, 1420, Presque Isle, Me.		
rive	Dec. 5th, 12th, 19th, 26th  Mid P—CFJC, 1120, Kamloops, B. C.	SATURDAY NIGHT Dec. 3rd	
शास्त्रक	Mid2:00 M—KOY, 1390, Phoenix, Ariz.	Mid2:00 CWILL, 890, Urbana, Ill. 2:00-3:00 ECHML, 880, Hamilton, Ont.	
(anail	Mid2:00 M—KOY, 1390, Phoenix, Ariz. Mid2:30 E—WMIL, 1500, Brooklyn, N. Y. Mid4:00 C—WBAZ, 1200, New Orleans, La. 5:00-6:00 E—WAWZ, 1350, Zarephath, N. J.	2:30-3:30 A—CHGS, 1120, Summerside, P. E. I. 4:00-5:00 C—CKX, 930, Brandon, Man.	
	5:15-5:30 E—WHP, 1430, Harrisburg, Pa.	Dec. 10th	FLC
	TUESDAY NIGHT Dec. 6th	1:00-3:00 E—CMCY, 1325, Havana, Cuba 1:00-3:00 M—XEJ, 1000, Juarez, Mex. 3:00-4:00 E—WTEL, 1310, Philadelphia, Pa. 4:00-5:00 E—CFBO, 890, St. John, N. B.	2-2
	3:00-6:00 E-WOPI, 1500, Bristol, Tenn.	3:00-4:00 E—WTEL, 1310, Philadelphia, Pa. 4:00-5:00 E—CFBO, 890, St. John, N. B.	
	Dec. 13th 1:00-2:00 C-WJMS, 1420, Ironwood, Mich.	Dec. 17th	
	Dec. 27th 1:30-2:30 C-WCLO, 1200, Janesville, Wis.	2:00-3:00 E—WTOC, 1260, Savannah, Ga. 3:00-4:00 E—WHAZ, 1300, Troy, N. Y. 3:00-5:00 C—KGFI, 1500, Corpus Christi, Tex.	
	Dec. 6th, 13th, 20th, 27th 11:00-Mid. C—XEH, 1132, Monterrey, Mexico.	Dec. 24th	
407	Mid1:00 P—CFJC, 1120, Kamloops, BC. Mid3:00 C—WSUI, 880, Iowa City, Iowa.	10:30-6:00 C—WHBQ, 1370, Memphis, Tenn. 2:00-2:30 E—WFAS, 1210, White Plains, N. Y.	
4.00	2:00-3:00 C—KFGQ. 1310, Boone, Iowa.	2:00-3:00 C—KDLR, 1210, Devils, Lake, N. D.  Dec. 31st	
	WEDNESDAY NIGHT Nov. 30th	11:00-3:00 C-WIBW, 580, Topeka, Kans.	
	Mid2:00 C—KFJZ, 1370, Fort Worth, Texas.	Mid2:00 C—KUSD, 890, Vermilion, S. D.	
-	Dec. 14th Mid2:00 P—KIT, 1310, Yakima, Wash. 1:00-3:00 C—WHET, 1210, Troy, Ala.	4:30-6:00 E—10BP, 1199, Wingham, Ont.  Dec. 3rd, 10th, 17th	
	3:00-5:00 C—KFBI, 1050, Abilene, Kans.	10-20 0-20 M 10AD 1000 M I CI-	
ear.	Dec. 7th, 14th, 21st, 28th 10:30-Mid. C—KFUO, 550, St. Louis, Mo. 11:00-Mid. C—WHBL, 1410, Sheboygan, Wis. 11:30-1:30 P—CKWX, 730, Vancouver, B. C. Mid. ~ M—KFXJ, 1310, Grand Jet., Colo. 1:30-3:30 C—KGFF, 1420, Shawnee, Okla.		
illand	1:00-Mid. C—WHBL, 1410, Sheboygan, Wis.	11:30-2:30 P—CKWA, 730, Vancouver, B. C. 11:30-2:00 C—WBBZ, 1200, Ponca City, Okla.	
Pinne reprise	Mid. ~ M—KFXJ, 1310, Grand Jct., Colo.	Mid-12:30 C—WKY, 900, Oklahoma City, Okla. Mid-1:00 P—CFCT, 630, Victoria, B. C.	
	1. W -4 50 THURSDAY NIGHT	Mid. 100 P—KDB, 1500, Santa Barbara, Cal. Mid. 100 P—KFXM, 1210, San Bernardino, Cal.	
-	Dec. 1st 11:00-Mid. P—CHWK, 665, Chilliwack, B. C. 2:00-4:00 E—CMJF, 900, Camaguey, Cuba.	Mid1:00 C-WGBF, 630, Evansville, Ind. Mid1:00 E-WJBK, 1370, Detroit, Mich.	
all the	•2:00-4:00 E—CMJF, 900, Camaguey, Cuba.  Dec. 8th	M 2 200 P—CKOV, 1200, Kelowna, B. C. M d2 00 C—KRLD, 1040, Dallas, Texas,	
مين	2:00-4:00 E—CMJN, 1270, Camaguey, Cuba.	Mid2:00 E—WCAH, 1430, Columbus, Ohio, Mid2:00 E—WGBI, 880, Scranton, Pa.	
NO KING	Dec. 1st, 15th 11:30-3:00 E-WMBC, 1420, Detroit, Mich.	Mid. 2:00 C—WGES, 1360, Chicago, III. Mid. 2:30 C—WOW, 590, Omaha, Neb. 12:01-3:00 E—CMCD, 925, Havana, Cuba. Mid. 3:00 E—WWRL, 1500, Woodside, N. Y.	
	2:00-4:00 C—KASA, 1210, Elk City, Okla.	12:01-3:00 E—CMCD. 925, Havana, Cuba.	
-	Dec. 1st, 15th, 29th 2:00-4:00 C—KGFK, 1500, Moorhead, Minn.	Mid5:00 E—WTFI, 1450, Athens, Ga.	
_	2 ~ 3 Dec. 1st, 8th, 15th, 22nd, 29th Mid1:00 M—CFAC, 690, Calgary, Alta.	12:30-2:00 C—WOM1, 1210, Manitowoo, Wis. 12:30-2:00 C—KMAC, 1370, San Antonio, Tex.	
	Mid1:00 M—CFAC, 690, Calgary, Alta. Mid1:00 E—WTEL, 1310, Philadelphia, Pa. Mid2:00 P—CKOV, 1200, Kelowna, B. C.	1:00- E—KQV, 1380, Piitsburgh, Pa.	
Î	Mid2:30 E-WMIL, 1500, Brooklyn, N. Y.	1:00-2:00 M—KFXF, 920, Denver, Colo24-1:00-3:00 E—WIBG, 930, Glenside, Pa.	
	FRIDAY NIGHT Dec. 2nd	Mid3:00 E—WRL, 1500, Woodside, N. Y. Mid5:00 E—WTFI, 1450, Athens, Ga. 12:15-1:30 C—WOMT, 1210, Manitowee, Wis. 12:30-2:00 C—KMAC, 1370, San Antonio, Tex. 12:30-3:00 M—1081, 1200, Prince Albert, Sask. 1:00 E—KQV, 1380, Piitsburgh, Pa. 1:00-2:00 M—KFXF, 920, Denver, Colo. 72.—4-6. [201-3:00 E—WIBG, 930, Glenside, Pa. 1:00-5:00 C—WTRC, 1310, Wolf Point, Mont. 1:00-5:00 C—WTRC, 1310, Likhart, Ind. 2:00-3:00 C—WKBZ, 1500, Ludington, Mich. 2:200-3:00 M—KQCX A 1260 Tucson, Ariz.	
2	2:00-4:00 E—CMJE, 1150, Camaguey, Cuba. 2:00-4:00 E—10BQ, 1200, Brantford, Ont.	2:00-3:00 C—WKBZ, 1500, Ludington, Mich. 2:00-4:00 M—KVOA, 1260, Tucson, Ariz.	

# 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	Call	Dial	Call	Dial

Call	Dial	Call	Dial	
				-
			1	

TIME-E Eastern Standard; C Central Standard; M Mountain Standard; P Pacific Standard. RADEX is the only publication listing stations in alphabetical order for your convenience. KOMA KSCJ KSL KVOR WAAB WACO WADC WBCM WBIG WBRC

### MONDAY

E-10:15 a.m., C-9:15, M-8:15, P-7:15 B -- Clara, Lu 'n' Em KDKA\_KFYR\_KOA KOIL KPRC WEAL WBZ WBZA WCKY WDAY
WBAL WBZ WBZA WCKY WDAY
WEBC WFAA WFLA WGAR WHAM
WIBA WIOD WIS WJAX
WJR WJZ WKY WMC WOAI WPTF
WREN WRVA WSB WSM WSMB WREN WRVA WTMJ WWNC

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

C — Columbia Revue
CFRB CKOK KFAB KFBK KFH
KFJF KFRC KHJ KLRA KLZ KOL
KRLD KSCJ KTRH KVOR WABC
WBBM WBIG WBT WCAH WCAO
WDBJ WDBO WDOD WDRC WDSU
WEAN WFAN WFBL WFEA WGR
WGST WHAS WHEC WIBW WIP
WISN WIAS WKBH WKRN WIRW WGST WHAS WHEC WIBW WIF WISN WJAS WKBH WKBN WLBW WNAC WNAX WNOX WODX WOKO WORC WOWO WPG WQAM WREC WSFA WTAQ WTAR WTOC WWVA B—National Farm and Home Hour KDKA KFYR KOA KOIL KPRC KESTD WESS KEYS KOOL WROD

KDKA KFYR KOA KOIL KPRC KSTP KTBS KTHS KVOO KWCR KWK KYW WAPI WBAL WBZ WBZA WCKY WDAF WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX V WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WLW WMC WOAI WOC WOW WPTF WRC WREN WRVA WSB WSM WSMB WTMJ WWNC

E-5:45 p.m., C-4:45, M-3:45, P-2:45 B — Little Orphan Annie CKGW KDKA WBAL WBZ WBZA WCKY WGAR WHAM WIS WJAX WJR WJZ WRVA WWNC

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C - Irene Beasley CFRB CKOK KFAB KFH KFJF KLRA KMBC KSCJ KTRH KVOR WAAB WABC WBBM WBIG WBRC WBT WDAE WDBJ WDBO WDOD WDRC WDSU WFAN WFBL WFEA WGST WHAS WIBW WIP WISN WJAS WKBH WKBW WILDW WNAX WNOX WOKO WORC WOWO WQAM WREC WSFA WTAQ WTAR WTOC

R — Waldor-Astoria Orchestra KSD KYW WBEN WCAE WDAF WEAF WEEI WFBR WGY WIOD WJAR WMAQ WRC WSM WTAG WWJ WWNC

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

CFRB CKOK KFH KLZ KMBC

WFBL WGR WISN WJAS WDRC WDSU WFAN WHP WIP WISN WHEC WKBH WLAC WLBW WLBZ WMT WNAX WNOX WODX WOKO WORC WQAM WREC WSBT WSJS WTAQ WTOC

WCAO WDAE WDBJ WDBO WDOD

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

KIRA WAAB WABC WBIG WBRC WDAE WDBJ WDBO WDOD WDSU WFEA WGST WORC WREC WSFA WTAR WTOC

R — Harding Sisters, Piano Duo KSD KSTP WCKY WEAF W WFI WHO WIBA WIOD WEAF WFBR WMAQ WMC WOC WRC WRC

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

C-The Funnyboners
CFRB CKOK KFAB KFH KFJF
KLRA KLZ KSCJ KTRH WAAB
WABC WBBM WBIG WBRC WBT
WCAH WCAO WCAU WDAE WDBJ
WDBO WDOD WGST WHAS WHP WISN WIAS WKBH WKBN WKBW
WLBW WNAX WNOX WOKO WORC
WOWO WQAM WREC WSFA WSPD
WTAQ WTAR WTOC WWVA
B — Lowell Thomas

CKGW KDKA WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW R - G. E. Circle

WBEN WCAE WCSH WEAF WFBR WFI WSAI WTAG WTAM WTIC WWJ

E-7:00 p.m. C-6:00 M-5:00 P-4:00 R — G. E. Circle

KDYL KFI KFYR KGO KGW KHQ KOA KOMO WDAF WDAY WEBC WGY WIBA WMAQ WOW WTMJ

CC — Myrt and Marge
CKOK KRLD WABC WADC WBT
WCAO WCAU WDRC WEAN WFBL
WGR WHK WJAS WKRC WNAC
WOKO WSPD WWVA

B - Amos 'n' Andy

CKGW KDKA WBAL WBZ WBZA WCKY WFLA WGAR WHAM WIOD WJAX WJR WJZ WLW WPTF WRC WRVA

E-7:15 p.m., G-6:15, M-5:15 P-4:15 R — Wheatenaville, Ray Knight KHQ WDAF WEAF WEEI WGY WHO WJAR WLIT WMAQ WOC WOW WRC WTAM

B — Tastyeast Jesters KDKA WBAL WBZ WBZA WCKY WJZ

 Buck Rogers in Year 2432 CKOK WABC WGR WHK WNAC

E-7:30 p.m. C-6:30 M-5:30 P-4:30 C — Three X Sisters WABC WCAO WCAU WDRC WEAN WFBL WFEA WGR WHEC WHP WJAS WLBZ WNAC WOKO WORC

WJAS WLBZ WNAC WORD WORD
R—Billy Jones and Ernie Hare
WBEN WCAE WCSH WDAF WEAF
WEEI WFBR WFLA WGY WIOD
WIS WJAR WLIT WMAQ WOW
WRC WRVA WSAI WTAG WTAM
WTIC WWNC

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

R—The Goldbergs
KSD WBEN WCAE WCSH WDAF
WEAF WEEI WENR WFBR WGY
WJAR WLIT WOW WRC WSAI
WTAG WTAM WWJ

B — Johnny Hart in Hollywood WBZ WBZA WGAR WHAM WJZ WMAQ

- Popular Classics C—Popular Glassics
CFRB CKOK KFH KMBC KMOX
KOMA KSL KVOR WACO WADC
WBBM WBCM WBIG WBRC WBT
WCAO WCCO WDAE WDBJ WDBO
WDOD WDRC WDSU WYAN WFBL
WFBA WFEA WGR WHEC WHK
WHP WIBW WIP WISN WIAS WLAC
WIRW WHRZ WMT WNAX WNOX WLBW WLBZ WMT WNAX WNOX WODX WOKO WORC WQAM WREC WSJS WTAQ WTAR WTOC WWVA

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

C-O-Whispering Jack Smith
CKOK KMOX WABC WADC WCAO
WCAU WEAN WFBL WFBM WGN
WGR WHAS WHK WJAS WJSV
WKRC WNAC WOKO WSPD

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

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Singin' Sam

CKOK KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBM WGN WGR WFBL WHK WJAS WKRC WNAC WOKO WSPD

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Kate Smith, La Palina CKOK KFAB KFH KFJF KMBC KMOX WABC WADC ABCM WCAH WCAO WCAU WCCO WFBL WFBM WGN WGR WHAS WHEC WHK

# MONDAY—Continued

WISN WJAS WKBN WKRC WOKO

WSPD

R — The Revelers, Quartet
CFCF CKGW KPRC KSD KTBS
KTHS KVOO WAPI WEEL WAA
WCSH WDAF WEAF WEEL WFAA
WFBR WFLA WGY WHO WIOD
MIS WJAR WJAX WJDX WKY
WLIT WMAQ WMC WOAI WOC
WOW WPTF WRC WVA WSAI
WSB WSM WSMB WTAG WTAM
WTIC WWJ WWNC
B — Red and Ramona

Red and Ramona KDKA KFYR KÖIL KWCR WBAL WBZ WGAR WHAM WIBA WJZ WLS WREN WTMJ

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C — Fu Manchu Mystery Drama CFRB CKOK KMBC KMOX KRLD WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WSPD

E-9:00 p.m., C-8:00 M-7:00, P-8:00 R — A. & P. Gypsies KSD WBEN WCAE WCSH WEAF WEEI WGY WHO WJC WSAI WTAG WTAM WTIC WWJ

WTAG WTAM WITC WWJ

B— Sinclar Wiener Minstrels

KDKA KFYR KOIL KPRC KSTP

KTBS KVOO KWCR KWK WBAL

WBZ WBZA WDAY WEBC WFAA

WFLA WGAR WHAM WIBA WIOD

WIS WJAX WJDX WJZ WKY WLS

WMC WOAI WPTF WREN WRVA

WSB WSM WSMB WTMJ WWNC

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

C-WINDS OF THE WINDS WADC WADC WCAO WCAU WDRC WEAN WFBL WGN WHAS WHEC WHK WJAS WKBW WKRC WNAC WOKO WSPD

E-9:30 p.m., C-8:30, M-7:30, P-8:30 C — Evening in Paris Mystery CKOK KMBC KMOX WABC WADC WBT WCAO WCAU WCCO WEAN WFBL WGN WHAS WHEC WHK WKBW WKRC WNAC WOKO WOWO WSPD

WSPD

R — Paul Whiteman; Rea-Munn

KDYL KFI KFSD KFYR KGHL

KGIR KGO KGW KHQ KOA KOMO

KSD KTAR KTHS WBEN WCAE

WCSH WDAF WDAY WEAF WEBC

WEEI WFAA WFBR WFLA WGY

WHO WIOD WJAR WJAX WJDX

WKY WLIT WMAQ WOAI WOC

WOW WRC WRYA WSAI WSB WSM

WSMF WYAG WTAM WTMI WWI WSMB WTAG WTAM WTMJ WWJ

E-10:00 p.m., C-9:00, M-9:00, P-7:00
R — Carnation Contented Program
CFCF CKGW KFYR KPRC KSD
WBEN WCAE WEAF WEBC WENR
WFAA WGY WIOD WJAX WKY
WMC WOAI WRVA WSAI WSB WSM
WTAM WTMJ WWJ

MUST That Striffer

C — Music That Satisfies
CKOK KDB KERN KFBK KFH
KFJF KFPY KFRC KGB KHJ KLRA
KLZ KMBC KMJ KMOX KOH
KOIN KOL KRLD KTRH KTSA KVI KWG WABC WADC WBRC WBT

WCAO WCAU WCCO WDBJ WDRC
WDBU WEAN WFBL WFBM WGN,
WGST WHAS WHEC WHK WISN
WJAS WKRW WKRC WLAC WLBZ
WMBG WMT WNAC WOKO WOWO
WPG WREC WRUF WSPD WTAR
B — Phillips Lord, Country Doctor
CFCF CKGW KDKA KOLL KWCR
KWK WBAL WBZ WBZA WCKY
WGAR WHAM WJR WJZ WMAQ
WREN

WREN

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

E-10:15 p.m., C-3:15, M-3:15, F-1:15
C— Easy Aces
CFRB CKOK KDB KERN KFBK
KFPY KFRC KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KSL KVI
KWG WAAB WABC WADC WCAO
WCAU WCCO WDRC WEAN WFBL
WFBM WGN WHAS WHK WJAS
WKBW WKRC WOKO WOWO WSPD

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Charles Carlile, Tenor KLRA. WAAB WABC WDAE WDBJ WDBO WDOD WDRC WDSU WFEA WGST WLAC WLBZ WORC WQAM WREC WSFA WSJS WTAR WTOC

R — Alice Joy KSD WBEN WCAE WEAF WEEI WFBR WGY WJAR WMAQ WTAM

W W J

B — Radio Rubes—Hill Billies
CFCF KDKA KFYR KOIL KTBS
KWCR KYW WBAL WBZ WBZA
WCKY WGAR WHAM WIBA WIOD
WIS WJAX WJDX WJR WJZ WKY
WMC WREN WSB WSM WWNC

E-10:45 p.m., C-9:45, M-8:45, P-7:45
C — Myrt and Marge
KDB KERN KFBK KFPY KFRC
KGB KHJ KLZ KMBC KMJ KMOX
KOIN KOL KSL KVI KWG WBBM
WCCO WDSU WFBM WHAS
C — Col. Stoopnagle and Budd
CFRB CKOK WAAB WABC WADC
WBCM WDRC WFBL WFEA WHEC
WHK WJAS WKBW WLBZ WOKO
WORC
B — Mildred Bailey

WORD

B — Mildred Bailey

CFCF KDKA KSTP KTBS KWCR
WBAL WCKY WGAR WHAM WIBA
WIOD WIS WJZ WKY WMAQ WMC
WREN WWNC

R — Roger Wolfe Kahn Orchestra
KSD WCKY WEAF WFBR WHO
WOC WRC WTAG WWJ

B — Pickens Sisters CFCF WBAL WFLA WGAR WHAM WIOD WIS WJAX WJZ WRVA

E-11:15 p.m., C-10:15, M-9:15, P-8:15
B — National Opera
CKGW KWCR KWK WBAL WCKY
WENR WGAR WHAM WIS WJR WJZ
WREN WWNC

WREN WWNG

R — Billy Jones and Ernie Hare

KDYL KFI KFSD KGO KGW KHQ

KOA KOMO KTAR

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

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Guy Lombardo and Orchestra
CFRB CKOK KFH KLRA KLZ
KMBC KSCJ KTRH KVOR WAAB
WABC WACO WADC WBCM WCAH
WCAO WCAU WCCO WDAE WDBJ
WDBO WDOD WDRC WDSU WGST
WHAS WHEC WHK WHP WIBW
WISN WKEW WKRC WLAC WLBZ
ZMBD WMT WNAX WOKO WORC
WPG WQAM WREC WSBT WSFA
WSJS WTAR WTOC
R — Clyde McCoy and Orchestra
KSD WBEN WCAE WDAF WEAF
WENR WFBR WJAR WRC WTAG
WTAM WWJ

E-12:00 p.m. C-11:00 M-10:00 P-9:00
R — Donald Novis Tenor
KFYR KGO KOA KPRC KSD KSTP
KTBS WOAE WDAF WEAF WEBC
WFBR WFLA WHO WIBA WIOD
WJAR WHAQ WMC WOC WSB
WSMB WTAM WWNC
B— Jeep Represent Orthostic

B — Jack Denny and Orchestra KDKA KWCR KWK KYW WBAL WBZ WBZA WGAR WJZ WRC WREN

WBZ WBZA WGAR WJZ WRC WREN
C — Eddie Duchin and Orchestra
CKOK KFAB KFBK KFH KFJF
KLRA KMBC KMOX KOL KRLD
KSCJ KTRH KVOR WABC WBCM
WBRC WBT WCAH WCAU WCCO
WDAE WBJ WDBO WDOD WDSU
WEAN WFBL WFBM WGL WGST
WHAS WHEC WHIP WIBW WISN
WKBN WKBW WLBW WMBD
WNAC WNAX WNOX WOKO WPG
WQAM WREC WSFA WSPD WTAR
WTOC WWVA

E-12:30 a.m., C-11:30, M-10:30, P-9:30 B — Lew Diamond's Orchestra KOIL KTBS KWCR KYW WBAL WHAM WJR WJZ WKY WLW WRC WREN

### TUESDAY

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

E-12:30 p.m., C-11:30, M-10:30, P-9:30 C — Columbia Revue, See Monday

B — National Farm and Home, See Mon.

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

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C — Current Events, Kaltenborn CKOK KYFH KGB KLZ KMBC KOH KSCJ KTRH KVOR WAAB WABC WACO WBIG WBRC WBT WCAH WOAE WDAE WDBJ WDBO WDOD WDRC WFAN WFBL WFEA WHAS WHEC WIBW WIP WISN WJAS WKBW WKBW WKBW WLAC WLBW WBZ WMT WNAX WNOX WOKO WORC

# TUESDAY—Continued

WOWO WQAM WREC WSBT WSFA WSJS WTAQ WTAR WTOC WWVA R — Waldorf-Astoria Orch., See Mon.

E-6:30 p.m., C-5:30, M-4:30, P-3:30 C — Jack Miller and Orchestra KLRA WABC WBIG WBRC WDBJ WDBO WDOD WDSU WFEA WGST WMOX WORC WREC WSFA WTAR

E-6:45 p.m., C-5:45, M-4:45, P-3:45 R — Back of the News in Washington KFI KFSD KGHL KGIR KGO KOA KSD KTAR WAPI WEAF WFBR
WFI WIOD WIS WJAR WJDX
WMAQ WOW WPTF WRC WSM
WSMB WTAG WWNC

B — Lowell Thomas, See Monday
 C — Keenan and Phillips

U — Keenan and Phillips
CKOK KFH KLZ KMBC KSCJ
KTRH KVOR WAAB WACO WADC
WBCM WCAH WCAO WDAE WDBJ
WDBO WDOD WDSU WFBM WFEA
WGST WHAS WHP WISN WJAS
WKBW WKRC WLAC WLBW WLBZ
WMT WNAX WORC WQAM WREC
WSBT WSJS WTAQ WTAR WTOC

E-7:00 p.m., C-6:00, M-5:00, P-4:00
R — Mid-Week Hymn Sing
KFI KGIR KGO KOA KSD KTAR
WAPI WBEN WEAF WJAR WJDX
WMAQ WSAI WSMB WTAG
C — Myrt and Marge, See Monday
B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15 R — Ray Knight, See Monday C — Buck Rogers See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30 B — Betty Boop KDKA KDYL KGO KOA KPRC KVOO KWK WBAL WFAA WGAR WIOD WIS WJZ WMC WREN WRVA WSB WSM WSMB WWNC

R — Ray Perkins KSD KYW WE WEAF WEEI KSD KYW WBEN WCAE WCSH WEAF WEEI WFBR WFI WGY WHO WJAR WOC WOW WRC WSAI

E-7:45 p.m., C-8:45, M-5:45, P-4:45 C — Chase & Sanborn, Georgie Price CKOK KMBC KMOX WABC WBBM WCAO WCAU WGR WHK WJAS WKRC WNAC WOKO

R — The Goldbergs, See Monday B — Johnny Hart, See Monday

WTAG WTAM WWJ

E-8:00 p.m., C-7:00 M-6:00, P-5:00 R - Blackstone, Sanderson-Grumit
KSD KSTP KYW WBEN WCAE
WCSH WDAF WEAF WEBC WEEL
WFI WGY WHO WJAR WOC WOW
WRC WSAI WTAG WTAM WWJ

WRU WSAI WIAG WIAM WWJ
B — You and Your Government
CFCF CKGW KDKA KDYL KEX
KFSD KGIR KJR KOA KOIL KPX
KTSB KWCR KWK WBAL
WBZ WBZA WCKY WENR WFLA WGAR WHAM WIOD WIS WJZ WKY WMC WPTF WREN WSB WSM WWNC

C — Abe Lyman and Orchestra CKOK KMBC KMOX WABC WADC

WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WKRC WNAC WOKO WSPD

E-8:15 p.m., C-7:15, M-6:16, P-5:15
C — Magic Voice Drama
CFRB CKOK KFH KLZ KMBC
KOMA KSCJ KTSA KVOR WABC
WACO WADC WBBM WBCM WBIG
WBRC WBT WCAO WCCO WDAE
WDBJ WDBO WDDO WDRC WDSU
WFBL WFEA WGR WHEC WHK
WHP WIBW WISN WJAS WKBH
WLAC WLBW WLBZ WMT WNAX
WNOX WODX WOKO WORC WPG
WQAM WREC WSBT WSJS WTAQ
WTAR WTAR WTOC

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Kate Smith, See Monday B — Adventures in Health

KDKA KOIL KWCR KWK WBAL WBZ WBZA WHAM WJR WJZ WLS WREN

R — Wayne King and Orchestra KSD WBEN WCAE WCSH WEAF WEBC WEEI WFBR WFI WGY WHO WJAR WOC WOW WRC WRVA WSAI WTAG WTAM WTMJ WWJ

E-8:45 p.m., C-7:45, M-6:45, P-5:45 C - The Columbians CFRB CKOK KFH KLZ KMBC KMOX KOMA KRLD KSCJ KSL KMOX KOMA KRLD KSCJ KSL KTSA KVOR WABC WADC WBCM WBIG WBRC WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WFBM WFEA WGR WHEC WHK WHP WIBW WISN WJAS WKBH WLAC WLBW WLBZ WMT WNAX WNOX WODX WOKO WORC WQAM WREC WSJS WTAQ WTAR WTOC

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Music That Satisfies C — Music That Satisfies
CKOK KDB KERN KFBK KFH
KFJF KFPY KFRC KGB KHJ KLRA
KLZ KMBC KMJ KMOX KOH KOIN
KOL KRLD KSL KTRH KYI KWG
WABC WADC WBRC WBT WCAO
WCAU WCCO WDBJ WDRC WDSU
WEAN WFBL WFBM WGN WGST
WHAS WHEC WHK WISN WIAS
WKEW WKRC WIAC WLBZ WMBG
WMT WALC WOKO WOWO WPG WMT WNAC WOKO WREC WSPD WTAR WOKO WOWO WPG

 Ben Bernie and Orchestra KFYR KOA KPRC KSTP WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEEI WFBR WFI WGY WHO WJAR WKY WLS WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ

W HAM WJR WJZ WMAQ WREN

E-9:15 p.m., C-8:15, M-7:15, P-6:15
C — Threads of Happiness
CKOK KDB KERN KFBK KFH
KFJF KFPY KFRC KGB KHJ KLRA
KLZ KMBC KMJ KMOX KOIN
KOL KRLD KSL KTRH KVI KWG
WABC WADC WBRC WBT WCAO
WCAU WCCO WDOD WDRC WDSU
WEAN WFBL WFBM WGN WGST
WHAS WHK WJAS WKBW WKRC
WLAC WNAC WOKO WOWO WSPD
WTAR WTAR

E-9:30 p.m., C-8:30, M-7:30, P-6:30
R — Ed Wynn-Don Voorhees
CFCF KFI KFSD KFYR KGHL
KGIR KGO KGW KHQ KOA KOMO
KPRC KSD KSL KSTP KTAR KTBS
KVOO WBAP WBEN WCAE WCSH
WDAF WDAY WEAR WEBC WEEI
WFBE WFI WGY WHO
WIBA
WIOD WIS WJAR WJAX WJDX
WKY WMAQ WMC WOAI WOC
WOW WPTF WRC WRVA WSAI
WSB WSMB WTAG WTAM WTMJ
WWJ WWNC
B — Friendship Town

B — Friendship Town
KDKA KOIL KWK KYW WBAL
WBZ WBZA WGAR WHAM WJR
WJZ WREN

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

C — Jay C. Flippen-cies CFRB CKOK KFAB KFBK KFB CFRB CKOK KFAB KFBK KFH
KFJF KFPY KHJ KLRA KLZ KMBC
KMOX KOL KRLD KTRH KVOR
WABC WACO WBCM WBIG WBRC
WBT WCAH WCAO WCAU WCCO
WDAE WDBJ WDBO WDOD WD C
WDSU WFBL WFBM WFEA WGL
WGST WHAS WHEC WHP WIBW
WISN WJAS WKBH WKBN WKBW
WNAC WNAX WNOX WODX WORC
WOAM WREC WRUF WSPD WTAQ
WTAR WTOC WWVA

- Lucky Strike Dance Hour

WTAR WTOC WWVA

R — Lucky Strike Dance Hour
KFI KFSD KFYR KGO KGW KHQ
KOA KOMO KPRC KSD KSL KSTP
KTAR KTBS KTHS KVOO WBAP
WBEN WCAE WCSH WDAF WDAY
WBAF WEBC WEEJ WENR WFBR
WFI WFLA WGY WHO WIBA WIOD
WIS WJAR WJAX WJDX WKY
WMC WOAI WOC WOW WRC WRVA
WSAI WSB WSM WSMB WTAG
WTAM WTMJ WWJ WWNC

B — Phillips Lord, See Monday

E-10:15 p.m., C-9:15, M-8:15, P-7:15 B — Sigmund Spaeth, Tune Detective  $\overline{\mathrm{CFCF}}$  KWCR WBZ WBZA WGAR WIZ.

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Edwin C. Hill C — Edwin C. Hill
CFRB CKOK KFH KLZ KMBC
KOMA KSCJ KTSA KVOR WAAB
WABC WACO WADC WBCM WBIG
WBRC WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDOD WDRC
WDSU WFBL WFBM WFEA WHEC
WHP WIBW WISN WJAS WKBH
WKBW WLAC WLBW WLBZ WMBD
WMT WNAX WNOX WOKO WORC
WPG WQAM WREC WSBT WSFA
WSJS WTAR WTOC
B — Radio Rubes See Monday

B - Radio Rubes See Monday

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

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C — Columbia Symph. Orch., See Mon. B — Amos 'n' Andy, See Monday B — Pickens Sisters See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15 R — Jack Denny and Orchestra KDYL| KEX KGA KGHL KJR KPOKSD WBEN WCAE WEAF WFBR WFI WGY WHO WJAR WOC WOW WTAG WTAM WWJ

B - National Opera See Monday

TUESDAY—Continued E-11:30 p.m., C-10:30, M-9:30, P-8:30 E-11:30 p.m., C-10:30, M-9:30, P-8:30
C- Isham Jones and orchestra
CFRB CKOK KFH KLRA KMBC
KSCJ KTRH KVOR WAAB WABC
WACO WADC WBCM WCAH WCAO
WCAU WCCO WDAE WDBJ WDBO
WDOD WDRC WDSU WGST WHEC
WHP WISN WKBW WKRC WLAC
WLBC WMBD WMT WNAX
WOKO
WORC WPG WQAM WREC
WSFA WSJS WTAR WTOC

E-12:00 m., C-11:00, M-10:00, P-9:00 C — Don Redman and Orchestra C— DOO NEGERIA AND CROSS VACUATION OF THE WORLD WAS COMMON WORLD WAS WEED WHO WISN WHAS WHEC WHAP WIBW WISN WKBW WKC WLAC WMBD WMT WAAX WOKO WPQ WREC WSBT WTOC

R — George Olsen and Orchestra WCAE WEAF WFBR WGY WMAQ WTAM WWJ WWNC

E-12:30 a.m. C-11:30, M-10:30 P-9:30 R — Ben Bernie and Orchestra KDYL KFI KFSD KGO KGW KHQ KOA KOMO KTAR

## WEDNESDAY

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

E-12:30 p.m., C-11:30, M-10:30, P-9:30 C — Columbia Revue, See Monday B — National Farm and Home, See Mon.

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

R-8:00 p.m., C-5:00, M-4:00 P-3:00 R — Waldori-Astoria Orch, See Monday C — Vaughn DeLeath CFRB CKOK KFH KLZ KSCJ KTRH KVOR WAAB WABC WACO WADC WBCM WCAH WCAO WADE WDBJ WDBO WOOD WDDC WDSU WFAN WFBL WFEA WGST WHAS WHEC WHK WIP WISN WJAS WKBH WKBW WLAC WLBW WLBZ WMT WNAX WOKO WQAM WREC WSBT WSFA WSJS WTAQ WTAR WTOC WWVA WWVA

E-6:30 p.m. C-5:30 M-4:30 P-3:30 B - Sheer Romance KDKA KOIL WBAL WHAM WJZ WMAQ WREN

R — Harding Sisters See Monday

€ — Connie Boswell WORC WQAM WREC WSJS WTAR WTOC

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

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

B — Amos'n' Andy, See Monday R — G. E. Circle, See Monday

E-7:15 p.m. C-6:15, M-5:15, P-4:15 8 — Royal Vagabonds, Ward Wilson KDKA KFI KGO KGW KHQ KOA

KOIL KOMO KPRC KWK WAPI WBAL WBZ WBZA WCKY WEBC WGAR WIOD WJAX WJDX WJZ WKY WMAQ WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC

C — Buck Rogers, See Monday R — Ray Knight, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Three X Sisters, See Monday R — Jones and Hare, See Monday

B — Jack Fulton, Tenor KDKA KDYL KFYR KGO KOA KPRC KTBS KWK WBAL WCKY WENR WGAR WHAM WIBA WJZ WKY WOAI WREN

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Angelo Patri CKOK KMBC KMOX WABC WCAO WCCO WFBL WGR WHAS WJAS WKRC WNAC R — The Goldbergs, See Monday B — Johnny Hart, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00 R — The Shadow WBEN WCSH WEAF WEEI WFBR WGY WJAR WLIT WRC WTAG WTIC

C — Jack Smith, See Monday

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Singin' Sam, See Monday

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

E-8:45 p.m., C-7:45, M-6:45, P-5:45
R — Whitman's Sampler, Jack Denny
KPRC KSD KTBS KVOO WBEN
WOAE WCKY WEAF WFAA WFBR
WFLA WGY WHO WIOD WIS WJAX
WJDX WKY WLIT WMAQ WM
WOAI WOC WOW WRC WRVA WSAI
WSB WSM WSMB WTAM WWJ WWNC

WWNC

C — Edwin C. Hill

GFRB CKOK KFH KMBC KMOX

KOMA KRLD KSL KTSA KVOR

WABC WADC WBCM WBIG WBRC

WOAO WCAU WCCO WDAE WDBJ

WDBO WDOD WDRC WDSU WFBM

WFEA WGR WHK WIBW WISN

WJAS WKBH WLAC WLBW WLSD

WMT WNAX WNOX WODX WOKO

WORC WQAM WREC WSJS WTAQ

WTOC WTOC

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — Guy Lombardo-Burns and Allen
CKOK KFJF KMBC KMOX KTRH
KTSA WABC WADC WCAO WCAU
WCCO WDRC WEAN WFBL WFBM
WGN WHK WJAS WKBW WKRC
WHK WJAS WKBW WKRC
WHA WJAS WKBW WKRC
WNAC WOKO WOWO WRR WSPD
B.— Sherjock Holmes

B — Sherlock Holmes
CFCF CKGW KDKA KWCR KWK
WBAL WBZ WBZA WGAR WHAM
WJR WJZ WLW WREN

E-9:30 p.m., C-8:30, M-7:30, P-6:30 R — The Pridgets, Gomedy Sketch KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KVOO WBEN WOAE WCSH WDAF WDAY WEAF WEBC WEEL WENR WFAA WFBR WFLA WGY WHO WITH WHOD WIS WIAP WIAY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMC WOAI WOC WOW WRC WSAI WSB WSM

WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

WWJ WWNG
C— Eno Crime Club
CKOK KMBC KMOX WABC WADC
WCAO WCAU WDRC WEAN WFBL
WGN WHK WJAS WJSV WKBW
WKRC WNAC WSPD

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Music That Satisfies, See Monday
R — Corn Cob Pipe Club
KFI KGHL KGIR KGO KGW KHQ
KOA KOMO KSD KSL WBEN WCAE
WCSH WDAF WEAF WEEI WENR
WFBR WGY WHO WJAR WLIT
WOC WOW WRC WRVA
WTAG WTAM WTIC WWJ
B — Phillips Lord, See Monday

E-10:15 p.m., C-9:15, M-8:15, P-7:15 C — Easy Aces, See Monday

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Charles Carlile See Monday B -Radio Rubes See Monday

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

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C — Columbia Symph. Orch., See Mon. - Nellie Revell CFCF CKGW KSD WEAF WGY WLIT WRC WWJ B — Amos 'n' Andy, See Monday

B — Pickens Sisters, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Angelo Patri KDB KERN KFBK KFPY KFRC KGB KHJ KMJ KOIN KOL KSL KVI KWG R - Jones and Hare, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Isham Jones, See Tuesday

E-12:00 m., C-11:00 M-10:00 P-9:00 C — Don Redman, See Tuesday B — Cab Calloway and Orchestra KPRC KTBS WAPI WEBC WJZ WKY WMC WOAI WSB WSM WSMB

E-12:15 a.m., C-11:15, M-10:15, P-9:15 B — Sherlock Holmes KDYL KFI KFSD KGHL KGIR KGO KGW KHQ KOA KOMO KTAR

### THURSDAY

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

E-12:30 p.m., C-11:30, M-10:30, P-9:30 C — Columbia Revue, See Monday B — National Farm and Home See Mon.

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

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C — H. V. Kaltenborn, See Tuesday R - Waldorf-Astoria Orch., See Monday

E-6:30 p.m., C-5:30 M-4:30, P-3:30 B — Old Songs of Church KEX KFSD KGA KJR KOA KOIL
KPO KTBS KWCR WBAL WGAR
WJZ WKY WLW WMAQ WREN
R Raph Kirbery, Baritone
KEX KGA KJR KOA KPO KSD THURSDAY—Continued

WCKY WDAF WEAF WFI WIOD WIS WJAR WMAQ WMC WRC WSMB WTAG WWNC

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

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

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C — Buck Rogers, See Monday R — Ray Knight, See Monday B — Ward Wilson, See Wednesday

E-7:30 p.m., C-6:30, M-5:30, P-4:30 B — Louise Bernhardt, Contralto KDKA KDYL KFI KFSD KFYR KGO KOA KPRC KTBS KWK WBAL WCKY WEBC WENR WGAR WHAM WIBA WIOD WIS WJZ WOAI WREN WSMB

R — Ray Perkins, See Tuesday

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C — Georgie Price, See Tuesday R — The Goldbergs, See Monday B — Johnny Hart, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00 R — Fleischmann, Rudy Vallee CFCF CKGW KFI KFYR KGO KGW CFCF CKGW KFI KFYR KGO KGW
KHQ KOA KOMO KPRC KSD KSL
KSTP KTAR KVOO WAPI WBAP
WBEN WCAE WCKY WCSH WDAF
WDAY WEAF WEBC WEEI WFBR
WFI WFLA WGY WHO WIOD WJAR
WJAX WJDX WKY WMAQ WMC
WOAI WOC WOW WPTF WRC
WRVA WSAI WSB WSM
WTAG WTAM WTMJ WWJ
E— Ahe iyman Soe Tiggday

C — Abe Lyman, See Tuesday B — Regimentalists, Male Chorus KDKA KOIL KWCR KWK WBAL WENR WGAR WHAM WJZ WREN

E-8:15 p.m., C-7:15, M-6:15, P-5:15 B — Sigmund Spaeth, Song Sleuth KDKA KOIL KWK WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WREN

C — Canada Dry, Jack Benny
CFRB CKAC CKOK KMBC KMOX
WABC WACO WADC WCAO WCAU
WCCO WDRC WEAN WFBL WFBM WGN WHK WJAS WKRC WOKO WOWO WPG WSPD WNAC

E-8:30 p.m., C-7:30, M-6:30, P-5:30 B — Rin Tin Tin Thriller KDKA KOIL KWK WBZ WBZA WGAR WHAM WJZ WLS WLW

E-8:45 p.m., C-7:45, M-6:45, P-5:45
C — Whitman's Sampler, Jack Denny
CKOK KMBC KMOX WABC WADC
WBIG WBRC WBT WCAO WCAU
WDAE WDBJ WDBO WDOD WDRC
WDSU WEAN WFBL WFBM WGN
WGR WGST WHAS WHK WJAS
WJSV WKRC WLAC WMBG WNAC
WDKOW WOKO WOW WAAM WREC WJSV WKRU WLAC WMBG WNAC
WNOX WOKO WOWO WQAM WREC
WSFA WSPD WTAR WTOC
B — Howard Thurston, Magician
KDKA KWK WBAL WBZ WBZA
WGAR WHAM WJR WJZ WLS WLW

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C — Music That Satisfies, See Tuesday R — Maxwell House Show Boat KDYL KFI KFSD KGO KGW KHQ KOA KOMO KPRC KSD KTAR KTBS WAPI WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WFLA WGY WHOD WIS WIAB WIAY WHO WIOD WIS WJAR WJAX WKY WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

B — Death Valley Days KDKA KOIL KWCR KWK WBAL WBZ WBZA WENR WGAR WHAM WJR WJZ WLS WLW WREN

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

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — Omar Khayyam CKOK KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KBMC KMJ KMOX KOIN KOL KSL KVI KWG WABC WADC WCAH WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WHAD WHAS WHK WIAS WISV WKBW WKRC WNAC WOKO WOWO WSPD

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Andre Kostelanetz Presents C — Andre Kostelanetz Presents
CFRB CKOK KLRA KLZ KMBC
KMOX KSCJ KTRH KTSA KVOR
WAAB WABC WADC WBT WCAO
WCCO WDAE WDBJ WDBO WDOD
WDRC WDSU WEAN WFBL WFBM
WFFA WGST WHAS WHEC WHP
WIBW WICC WJAS WKBH WKBW
WLAC WLBZ WMBD WMT WNAX
WODX WOKO WORC WPG WQAM
WREC WSBT WTAR WTOC
R — Lucky Strike, See Tuesday
B — Phillips Lord, See Monday

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Edwin C. Hill, See Tuesday B — Red and Ramona KWK WBAL WCKY WGAR WHAM WJR WJZ WREN

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

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C — Columbia Symph. Orch., See Mon.

B— Amos 'n' Andy, See Monday

R— Art Jarrett-Don Bestor

WCAE WCKY WEAF WFBR WFI
WGY WHO WJAR WOC WRC WTAG

E-11:30 p.m., C-10:30, M-9:30, P-8:30 R — Ben Bernie and Orchestra KPRC KSD KTBS KTHS KVOO WCAE WCKY WDAF WEAF WFBR WFI WHO WJR WKY WMAQ WOC WOW WTAG WWJ

C — Isham Jones, See Tuesday

E-12:00 m., C-11:00, M-10:00, P-9:00 C — Eddie Duchin, See Monday R — Donald Novis See Monday

E-12:15a.m., C-11:15, M-10:15, P-9:15 B — Howard Thurston, Magician KDYL KFI KGO KGW KHQ KOA KOMO

### FRIDAY

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

E-12:30 p.m., C-11:30, M-10:30, P-9:30 C — Columbia Revue, See Monday B — National Farm and Home, See Mon.

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

E-6:00 p.m., C-5:00, M-4:00, P-3:00 C — Irene Beasley, See Monday R — Waldorf-Astoria Orch., See Monday B — Don DeForest and Orchestra KFYR KOIL KSTP KWCR WBAL WGAR WHAM WIBA WJZ WLW WMAQ WREN

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

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

E-7:15 p.m., C-6:15, M-5:15, P-4:15 C — Buck Rogers, See Monday R — Kremlin Art Quintet WCFL WDAF WEAF WFBR WOW

B — Ward Wilson, See Wednesday

E-7:30 p.m., C-6:30, M-5:30, P-4:30 C — Three X Sisters, See Monday

R - Jones and Hare, See Monday B — Jack Fulton, See Wednesday

E-7:45 p.m., C-6:45, M-5:45, P-4:45 R - The Goldbergs, See Monday B — Johnny Hart, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00 R - Cities Service Orchestra

B — Nestle's Program

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

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C - Singin' Sam, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — March of Time

CKOK KFPY KHJ KLRA KLZ KMBC KMOX KOH KSCJ KTRH KVI WABC WADC WBCM WBIG WBRC WBT WCAH WCAO WCAU WDAE WDBJ WDBO WDRC WEAN WFBM WJBJ WJBO WDRC WEAN WFBM WFEA WGR WHEC WHK WHP WIBW WISN WJAS WLAC WLBZ WMT WNAC WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSPD WTAQ WTAR WTOC

B — Adventures in Health, See Tuesday

E-8:45 p. m., C-7:45, M-6:45, P-5:45 B — Howard Thurston, See Thursday

E-9:00 p.m., C-8:00, M-7:00, P-6:00 R — Cliquot Club WEAF WEEL WFBR WGY WHO
WJAR WLIT WMAQ WOC WOW
WRC WSAI WTAG WTAM WTIC

## FRIDAY—Continued and SATURDAY

B — First Nighter
KDKA KDYL KFI KFSD KGO KGW KHO KOA KOIL KOMO KPRC KSTP KTAR KTBS KWK WBAL WBZ WBZA WCKY WEBC WGAR WHAM WJZ WKY WOAI WREN WBAL

E-9:30 p.m., C-8:30, M-7:30, P-6:30 R — Pond's Program KSD WBEN WCAE WCSH WDAF

WEAF WENR WFBR WGY WHO WJAR WLIT WOC WOW WRC WSAI WTAG WTAM WWJ

B — Armour Program, Eddie & Ralph
KDKA KFI KGO KGW KHQ KOA
KOIL KOMO KPRC KSL KSTP
KWK WAPI WBAL WBZ WBZA
WEBC WFAA WGAR WHAM WIOD WJAX WJR WJZ WKY WMAQ WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Music That Satisfies, See Monday B — Phillips Lord, See Monday R — Big Six with Al Jolson

KDYL KFI KFSD KFYR KGHL KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS KYOO WBEN WOAE WCSH WDAF WBAY WEAF WEBC WCSH WENR WFAA WFBR WFLA WGY WHO WIEA WHOD WIS WJAR WJAX WJDX WKY WLIT WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

E-10:15 p.m., C-9:15, M-8:15, P-7:15 C - Easy Aces, See Monday

C - EASY ACES, SEE MODICAL

B - CONCEPT Orchestra

CKGW KPRC WBAL WCKY WFLA

WGAR WHAM WIOD WIS WJAX

WJZ WKY WMAQ WMC WOAI

WREN WRVA WSB WSM WWNC

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

E-10:30 p.m., G-9:30, M-8:30, P-1:30

R — Elgin—Floyd Gibbons

CFCF CKGW KDYL KFI KFSD

KFYR KGHL KGIR KGO KGW

KHQ KOA KOMO KPRC KSD

KSTP KTAR KTBS WAPI WBEN

WCAE WCSH WDAF WDAY WBEAF

WEBC WEEI WENR WFAA WFBR

WFLA WGY WHO WIBA WIOD WIS

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

C - Charles Carlile, See Monday

E-10:45 p.m., C-9:45, M-8:45, P-7:45 R — Lanny Ross Tenor KSD WEAF WFBR WGY WRC WTAG WWJ

WIAG WWJ C — Myrt and Marge, See Monday C — Stoopnagle & Budd, See Monday B — Mildred Balley, See Monday

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

B—Amos: W Anoy, See Monday

R—Anson Weeks and Orchestra

CFCF KSD WEAF WEEI WFBR

WFLA WGY WIOD WIS WJAR.

WWLIT WOW WRC WTAG WTAM

WWJ WWNC

E-11:15 p.m., C-10:15, M-9:15, P-8:15 R - Jones and Hare, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Guy Lombardo, See Monday

E-12:00 p.m., C-11:00, M-10:00, P-9:00 B — Cab Calloway, See Wednesday

E-12:15 p.m., C-11:15, M-10:15, P-9:15 B — Howard Thurston, See Thursday

## SATURDAY

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

E-6:00 p.m., C-5:00, M-4:00, P-3:00 R — Waldorf-Astoria Orch., See Monday B - Little German Band

KDKA KEX KFSD KFYR KGA KJR KOA KPO KTAR KTBS KWCR WBAL WFLA WGAR WIBA WIOD WJZ WKY WREN WSB WWNC

C — The Funnyboners CFRB CKOK KFH KLZ KSCJ KTRH COUNTY OF THE CASE WIDC WHK WHP WIBW WICC WISN WJAS WKBH WKBW WKRC WLAC WLBW WLBZ WMT WNAX WOKO WORC WQAM WREC WSBT WSFA WSJS WTAQ WTAR WTOC WWVA

E-6:30 p.m., C-5:30, M-4:30, P-3:30 R — Harlem Fantasy KEX KFSD KGA KJR KOA KRO KEX KFSD KGA KJR KOA KPO KTBS WCAE WEAF WIBA WKY WMC WRC WSM WWNC

E-6:45 p.m., C-5:45, M-4:45, P-3:45
C-Jack Miller and Orchestra
CFRB CKOK KFH KLZ KMBC
KMOX KSCJ KTRH KVOR WAAB
WABC WACO WADC WBCM WBT
WCAH WCAO WCCO WDAE WDBJ
WDBO WDOD WDRC WDBU WEAN
WFBL WFBM WFEA WGST WHAS
WHEC WHP WISN WJAS WEBW
WKRC WLAC WLBW WLBZ WMT
WNAX WOKO WORC WQAM WREC
WSBT WSFA WSJS WTAQ WTAR
WTOC WWVA
B-Lee Sims-Ilomay Bailey

B — Lee Sims-Ilomay Bailey WAPI WBAL WENR WFLA WHAM WIOD WISWJZ WMC WRC WSB WWNC

R - G. E. Circle, See Monday

E-7:00 p.m., C-8:00, M-5:00, P-4:00
C—Frederic William Wile
KFBK KFPY KGB KHJ KMBC
KMOX KOH KTRH KVI KVOR
WABC WACO WADC WBCM WBIG
WBRC WBT WCAH WCAO WCAU
WDAE WDRC WFBM WFEA WGL
WGN WGR WJAS WLAC WLBW
WMT WNAX WNOX WOKO WQAM
WSFA WSPD WTOC WWVA
R—G.E. Circle. See Monday R - G. E. Circle, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15 R — George Olsen and Orchestra WBEN WCKY WDAY WEAF WFBR WFI WGY WHO WJAR WOW WRC WTAG- WTAM

B — Jack Fulton, Jr., Tenor KDKA KOIL KWCR KWK WBAL WENR WFLA WHAM WIOD WIS WJR WJZ WREN WRVA WWNC E-7:30 p.m., C-6:30, M-5:30, P-4:30 B — Guckoo Program, Ray Knight CKGW KEX KGA KJR KOA KTBS KWCR WBAL WFLA WGAR WHAM WIBA WJDX WJR WJZ WRVA WSB WSM WWNC

- Connie Boswell C — Connie Boswell
CFRB CKOK KFH KMBC KMOX
KOMA KSCJ KSL KTRH KVOR
WABC WACO WADC WBBM WBCM
WBIG WBRC WBT WCAO WCAU
WDBJ WDBO WDOD WDRC WDSU
WEAN WFBL WFBM WFEA WGL
WGR WGST WHK WHP WICC WISN
WIAS WKRH WIAC WIRW WIRZ WJAS WKBH WLAC WLBW WLBZ WMT WNAC WNAX WNOX WOKO WORC WQAM WREC WSFA WSJS WSPD WTAQ WTAR WWVA

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C — Abe Lyman, See Tuesday
R — Archer Gibson, Organist
CKGW KFSD KGO KGW KHQ KOAI
KPRC KSD KTBS WBEN WCSH
WEAF WEBC WEEI WFBR WFI
WFLA WHO WIBA WIOD WIS
WJAR WKY WMAQ WOC WRC
WSAI WSMB WTAG WTAM WWJ WWNC

E-8:15 p.m., C-7:15, M-6:15, P-5:15
B — Anson Weeks and Orchestra
KDKA KEX KFSD KFYR KJR KOA
KPO KPRC KTAR KTBS KWCR
KWK WBAL WCKY WFLA WGAR
WHAM WIBA WIOD WIS WIZ WMC
WOAI WRC WREN WSB WSMB WWNC WRC

C - Magic Voice, See Tuesday

E-8:30 p.m., C-7:30, M-6:30 P-5:30
R — Economic World Today
CFCF CKGW KDYL KFI KFSD
KFYR KGO KGW KHQ KOA KOMO
KPRC KSD KSTP KTBS KYW WCAB
WOSH WDAF WDAY WEAF WEBC
WFBR WFI WFLA WGY WHO WIBA
WIOD WIS WJAR WKY WOC WOW
WRC WSAI WSB WSM WSMB WTAG
WTAM WWI WWNG WTAM WWJ WWNC

B - Road to Romany CKGW KWCR KWK WBAL WBZ WBZA WFLA WGAR WHAM WIOD WIS WJRWJZ WLW WREN WWNC

C—Isham Jones and Orchestra
CGRB CKOK KFBK KFBK KFH KFJF
KFPY KFRC KGB KHJ KLRA KLZ
KMBC KMOX KOH KOL KSCJ
KTRH KVI KVOR WABC WBCM
WBIG WBRC WBT WCAH WCAO
WCAU WCCO WDAE WDBJ WDBO
WDOD WDSU WEAN WFBL WFBM
WFEA WGL WGST WHEC WHK
WHP WIBW WISN WJAS WKBW
WLBW WNAC WNAX WNOX WOKO
WORC WPG WQAM WREC WSFA
WSPD WTAQ WTAR WTOC WWVA C — Isham Jones and Orchestra

E-9:00 p.m., C-8:00 M-7:00, P-6:00 C - Music That Satisfies, See Tuesday

R — Erno Rapee and Orchestra CFCF CKGW KFI KFYR KGO KGW KHQ KOA KPRC KSD KSTP KTAR KTBS WBEN WCAE WCKY WCSH WDAF WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WKY WMAQ WMC WOAI WOC WRC WSAI WSB WSMB WTAG WTAM WWJ WWNC

### SATURDAY—Continued and SUNDAY

B — Gus Van, Pickens Sisters KDKA KOIL KPRC KWCR KWK WAPI WBAL WBAP WBZ WBZA WGAR WHAM WJDX WJR WJZ WLS WMC WREN WSB WSM WSMB

E-9:15 p.m., C-8:15, M-7:15, P-6:15 C — Do Re Mi Girls

C — Do Re Mi Girls
CFRB CKOK KFH KLRA KLZ
KMBC KSCJ KTRH KTSA KVOR
WAAB WABC WADC WBCM WBT
WCAH WCAU WCCO WDAE WDBJ
WDBO WDRC WDSU WEAN WFBL
WFBM WFEA WGST WHAS WHP
WIBW WISN WJAS WKBH WKBW
WLAC WLBW WLBZ WMBD WMT
WNAX WOKO WORC WQAM WREC
WSBT WSFA WJS WTAR WTOC

E-9:30 p.m., C-8:30, M-7:30, P-6:30 B — S.R.O., Comedy Sketch CFCF CKGW KDKA KWCR WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW WMAQ WREN

C - Carborundum Band CKOK KMBC KMOX WAAB WABC WCAO WCAU WCCO WGN WHAS WHK WJAS WKBW WKRC WSPD

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

E-10:15 p.m., C-9:15, M-8:15, P-7:15 C — Public Affairs Institute KFBK KFH KFJF KFPY KFRC KGB KHJ KLRA KLZ KMBC KMOX KOH KOL KSCJ KTRH KTSA KVI KOH KOL KSCJ KTRH KTSA KVI
KVOR WAAB WABC WBBM WBCM
WBIG WBRC WBT WCAO WCCO
WDAE WDBJ WDBO WDOD WDSU
WEAN WFBM WFEA WGST WHAS
WHEC WHP WIBW WJAS WKBH
WKBW WLBW WNAX WNOX WOKO
WORC WOWO WPG WQAM WREC
WSFA WSPD WTOC

E-10:30 p.m., C-9:30, M-8:30, P-7:30 B — Three Jesters

CFCF CKGW KDKA KOIL KWCR WBAL WBZ WBZA WHAM WJZ WREN

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Vaughn DeLeath CFRB CKOK KFAB KFBK KFH KFJF KFPY KFRC KGB KHJ KLZ KMBC KOH KOL KSCJ KTRH KVI KVOR WABC WACO WBCM WBIG WBRC WCAO WCAU WCCO WDBJ WDBO WDOD WDSU WEAN WFBL WFEA WGR WGST WHP WJAS WKBH WNAC WNAX WNOX WOKO WORC WOWO WQAM WSFA WSPD WTAQ WTAR WTOC WWVA

B — Twenty Fingers of Harmony CFCF CKGW KDKA WCKY WGAR WHAM WJZ WREN

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Guy Lombardo and Orchestra
CKOK KFAB KFBK KFJF KFPY
KFRC KGB KHJ KLRA KLZ KMBC
KMOX KOH KOL KRLD KSCJ
KTRH KTSA KVI KVOR WABC
WBCM WBRC WBT WCAH WCAO
WCAU WCCO WDAE WDVJ WDBO
WDOD WDSU WEAN WFBL WFBM
WGL WGST WHAS WHEC WHK
WHP WIBW WISN WKBW WLBW
WMBO WNAC WNAX WNOX WODX

WOKO WQAM WREC WSPD WTAR WTOC WWVA

R - Art Jarrett See Thursday

E-11:15 p.m. C-10:15 M-9:15 P-8:15 B — Lew White, Organist CFCF CKGW KDYL KEX KFSD

KFYR KGA KGHL KJR KOIL KPO KPRC KTBS KWCR KWK WBAL WCKY WEBC WFLA WGAR WHAM WIBA WIOD WIS WJR WJZ WMC WOAJ WREN WSB WSMB WWNC

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Harold Stern and Orchestra R — Paul Whiteman and Orchestra

KSD WCAE WCKY WEAF WEEI WFI WGY WJAR WMAQ WRC WTAM WWJ

C — California Melodies
KFBK KFPY KLZ KMBC KOH
KTRH KVOR WABC WADC WBCM
WBRC WBT WCAH WCAU WFBL
WFBM WCL WHAS WISN WKBW
WLAC WMBD WMT WNAX WNOX WOKO WPG WSPD WWVA

E-12:00 p.m., C-11:00, M-10:00, P-9:00 C — Ted Fiorito and Orchestra

C — Ted Fiorito and Orchestra
CKOK KFAB KFH KLZ KMBC
KOMA KRLD KSCJ KSL KTRH
KVOR WABC WBGM WBRC WBT
WCAU WCCO WDAE WDBJ WDOD
WDSU WEAN WFBL WGL WGST
WHP WIBW WICC WISN WKBW
WLAC WLBW WLBZ WMBD WMT
WNAC WNAX WOKO WPG WREC
WSBT WSPD WTOC

### WING WAS WOKO WFG WREC
WSBT WSPD WTOC

WSBT WSPD WTOC

R—Roger Wolfe Kahn Orchestra

KDYL KFSD KFYR KGA KGHL

KJR KPO KFPC KSD KSTP KTBS

KVOO WBEN WCAE WCKY WDAF

WEAF WEBC WFBR WFLA WGY

WHO WIBA WIOD WIS WJAR

WMAQ WMC WOAI WOC WRC WSB

WSMB WTAG WTAM WWNC

B—Jack Denny, See Monday

B — Jack Denny, See Monday

E-12:30 a.m., C-11:30, M-10-30, P-9:40
R — Vincent Lopez and Orchestra
KDYL KEX KFYR KGA KJR KPO
KPRC KSD KSTP KTBS WCAE
WCKY WEAF WEBC WFBR WHO
WIBA W10D WJAR WKY WMC
WOAJ WOC WRC WSB WSMB WTAG
WWNC

### SUNDAY

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

R — Major Bowes Family

KEX KFYR KGA KJR KOA KPO

KSL KSTP KTBS WAPI WCSH WDAF

WEAF WFLA WGY WIOD WLIT

WMAQ WMC WPTF WRC WSM

WTAM WWJ WWNC

E-12:00 m., C-11:00, M-10:00, P-9:00 C — Salt Lake Tabernacle Choir CFRB CKOK KFAB KFBK KFPY KGB KLZ KMBC KOH KSCJ KVOR MAB WABC WADC WBIG WCAO
WCCO WDBJ WDOD WFBL WFEA
WGR WHAS WHEC WHK WISN
WJAS WKBN WLBZ WMBD WMT
WNAX WNOX WOKO WORC WPG
WCAM WREC WSBT WSJS WTAQ
WTAR WWVA

E-12:30 a.m., C-11:30, M-10:30, P-9:30 R — Russin Symphonic Choir CKGW KDYL KEX KFSD KFYR

KGA KGHL KGIR KJR KOA KPO KPRC KTAR WBEN WCKY WDAF WDAY WEAF WFBR WGY WHO WIOD WIS WJAR WJAX WLIT WOC WPTF WSMB WTAG WTAM WWJ WWNC

E-12:30 p.m., C-11:30, M-10:30, P-9:30 . R — Legion of the Lost C — Reis and Dunn

C — Reis and Dunn
C — Emery Deutsch and Orchestra
CFRB CKOK KFAB KFBK KFJF
KFRC KHJ KLRA KMBC KOL
KRLD KSCJ KTRH KVOR WAAB
WABC WBBM WBCM WBRC WCAB
WCAU WCCO WDAE WDBJ WDBO
WDDD WDSU WFBL WGR WGST
WHAS WHEC WIBW WISN WJAS
WKBH WKBN WLBW WMBD WODX
WOKO WORC WOWO WPG WQAM
WREC WSFA WTAQ WTAR WWVA

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

C—Cathedral Hour
CFRB CKOK KFH KLRA KLZ
KMBC KSCJ KTRH KTSA KVOR
WABC WACO WADC WBCM WCAH
WCAO WCAU WCCO WDAE WDBJ
WDBO WDOD WDRC WDSU WFBL
WFEA WGR WGST WHAS WHEC
WHK WHP WIBW WISN WKBH
WLAC WLBZ WMT WOKO WORC
WQAM WREC WSBT WSJS WTAQ
WTAD WTOC WTAR WTOC

E-1:30 p.m., C-12:30, M-11:30, P-10:30 C — Columbia Church of the Air CFRB CKOK KFAB KFBK KFPY KLZ KMBC KOH KSCJ KTRH KVI KLZ KMBC ROH KSCJ KTRH KVI KVOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDBJ WDOD WDRC WFBL WGR WHEC WHK WISN WJAS WLBW WLBZ WMT WOKO WOWO WPG WQAM WSBT WSJS WTAQ WTAR WWVA

E-2:00 p.m. C-1:00 M-12:00 P-11:00
R — Clyde Doerr and Orchestra
CFCF CKGW KFI KFSD KGO KGW
KHQ KOA KOMO KPRC KSD KTAR
KTBS KTES KVOO WAP! WBEN
WOAE WCKY WDAF WEAF WEE!
WFAA WFBR WFI WFLA WGY
WIOD WIS WJAR WJAX WJDX
WKY WLIT WMC WOW WRC WRVA
WSB WSM WTAG WTAM WWJ WWNC

E-2:15 p.m., C-1:15 M-12:15, P-11:15 C — Victor Arden and Orchestra CKOK KMBC KMOX WABC WBBM WCAO WCAU WGR WHEC WHK WJAS WKRC WNAC WOKO WOWO

E-2:30 p.m., C-1:30, M-12:30, P-11:30
R — Moonshine and Honeysuckle
KSD WCAE WCKY WCSH WDAF
WEAF WEEI WFBR WGY WHO
WJAR WLIT WMAQ WOC WOW
WRC WTAG WTAM WWJ
B — Yeast Foamers
KDRA KEIL WERD KEVEN KCHI

B — Yeast Foamers
KDKA KF! KFSD KFYR KGHL
KGO KGW KHQ KOIL KOMO KSTP
KTAR KTHS KVOO KWCR KWK
KYW WAP! WBAL WBZ WBZA
WDAY WEBC WFAA WFLA WGAR
WHAM WIBA WIOD WIS WJAX
WJDX WJR WJZ WLW WPTF WREN
WDYA WSD WSM WGMD WTM! WRVA WSB WSM WSMB WTMJ

SUNDAY—Continued

E-2:45 p.m., C-1:45, M-12:45, P-11:45 C — Hoosier Editor, Frederick Landis CKOK KDB KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMOX WIND WHAS WHK WJAS WKRC
WNAC WOWO WRR

E-3:00 p.m., C-2:00, M-1:00, P-12:00 R — Wayne King and Orchestra KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS RUBA KUMU KEPRC KSD KSTP KTBS KTHS KVOO KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WGY WHO WIBA WJAR WKY WLIT WOAI WOO WOW WRC WSAI WTAG WTAM WTMJ WWJ C - N. Y. Philharmonic Orchestra

CFRB CKOK KFH KLRA KLZ KMBC CFRB CROK KFH KLRA KLZ KMBC KRLD KSCJ KTRH KVOR WABC WACO WADC WBCM WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIP WISN WKBH WKBW WKRC WLAC WLBW WLBZ WMBD WMT WOKO WORC WQAM WREC WSBT WSFA WSJS WTAQ WTAR WTOC WWVA

B — Our American Music KOIL KWCR KWK WBAL WFLA WGAR WIOD WJAX WJZ WMAQ WREN WRVA WSB WSM WSMB

E-3:30 p.m., C-2:30, M-1:30, P-12:30 R — Dr. S. Parkes Cadman KDYL KFSD KFYR KGHL KGO

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

B — Manhattan Merry-Go-Round KDKA KOIL KWCR KWK WBAL WBZ WBZA WHAM WJZ WMAQ

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

Father Coughlin

KMOX KSTP KYW WCAO WCAU

WDRC WEAN WFBL WFEA WGAR

WGR WHB WICC WJAS WJR WLBZ

WLW WMT WNAC WNBH WOC WOL WOKO WOR WORC

R — Iddent Program KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSL KTAR KTBS KTHS KVOO WAPI WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

B - Temple of Song KDKA KOIL KWCR WBAL WBZ WBZA WCKY WFLA WHAM WJZ WMAQ WREN

E-4:15 p.m., C-3:15 M-2:15, P-1:15 R — Wildroot-Vee-Lawnhurst K — WIGFORY-VEE-LAWMINST KDYL KFI KGO KGW KHQ KOA KOMO KSD WBEN WCAE WCSH WDAF WEAF WEEL WFBR WGY WJAR WLIT WMAQ WOW WRC WSAI WTAG WTAM WWJ E-4:30 p.m., C-3:30, M-2:30 P-1:30 R — International Radio Forum

CFCF CKGW WBEN WCAE WCKY WCSH WDAF WEAF WEEI WFBR WFI WGY WJAR WMAQ WOW WRC WSAI WTAG B — National Youth Conference

KDKA KDYL KFSD KFYR KGHL KGO KGW KHQ KOA KOIL KOMO KYU KAWA KULI KUMO
KWCR KWK WAPI WBAL WBZ
WBZA WCKY WDAY WEBC WENR
WFLA WGAR WHAM WIBA WIOD
WIS WJAX WJDX WJR WJZ WKY
WLW WMC WOAI WPTF WREN
WRVA WSB WSM WWNC

E-4:45 p.m., C-3:45, M-2:45 P-1:45 R — LeTrio Charmante CKGW WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG

E-5:00 p.m., C-4:00, M-3:00, P-2:00 C — Roses and Drums CKOK KMBC KMOX KRLD WAAB WABC WADC WBBM WCAO WDSU WFBM WGR WGST WHK WJAS WKRC

WKRC

R — Pop. Concert, Walter Logan
CKGW KFSD KGO KGW KHQ KOA
KSTP KTAR KTBS WAPI WBEN
WCAE WCSH WDAF WEAF WEBC
WEEI WENR WFBR WFI WFLA
WGY WHO WIOD WJAR WKY WMC
WOC WOW WRC WRVA WSAI WSB
WSM WTAG WTAM WWJ WWNC

R — National Vespors
KFSD KFYR KGHL KGIR KGO
KGW KHQ KOA KOIL KPRC KTAR
KTBS KFYB KVOO KWCR KWK
KYW WAPI WBAL WBAP WBZ
WBZA WDAY WEBC WFLA WGAR
WHAM WIBA WIOD WIS WJAX

WHAM WIBA WIOD WIS WJAX WJDX WJZ WMC WOAI WPTF WREN WRVA WSB WSMB WWNC

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

R — Big Ben's Dream Dramas M — BIG Ben's Jream Dramas KDYL KFI KGO KOA KSD KSTP WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WFI WGY WJAR WOW WRC WSAI WTAG WTAM WTMJ WWJ

E-5:45 p.m., C-4:45, M-3:45, P-2:45 R — "Bring 'Em Back Alive"
KDYL KFI KFYR KGO KGW KHQ KOA KOMO KSD KSTP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WGY WHO WIBA WJAR WMAQ WOC WOW WRC WSAI WTAG WTAM WWJ

E-6:00 p.m., C-5:00, M-4:00, P-3:00 B — Paul Whiteman's Concert CKGW KOIL KWCR KWK WBAL WBZ WBZA WCKY WENR WGAR WHAM WJR WJZ WRC WREN

C — Poet's Gold-David Ross CFRB CKOK KFH KLZ KRLD KSCJ KVOR WABC WACO WADC WBCM WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBL WFBM WFEA WGR WGST WHAS WHEC WHP WIBW WISN

WJAS WKBH WLAC WLBZ WMT WNAX WOKO WORC WQAM WREC WSBT WSFA WSJS WTAQ WTAR WTOC WWVA

R - Catholic Hour KEX KFSD KFYR KGA KGHL
KGIR KJR KOA KPO KPRC KSTP
KVOO WAPI WBAP WBEN WCAE
WCSH WDAF WEAF WEBC WEEI
WENR WFBR WFLA WGY WHO WFBR WFLA WGY WHO WIOD WJAR WJAX WJDX WLIT WMC WOAI WOC WRC WRVA WSAI WSM WIBA WKY WOW WSMB WTAG WTAM WWJ WWNC

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

C — Little Jack Little

CFRB CKOK KFH KLZ KRLD KSCJ

KSL KVOR WACO WADC WCAU

WCCO WDAE WDBJ WDBO WDOD

WDRC WDSU WFBL WFBM WFEA

WGR WGST WHAS WHEC WHP

WIBW WISN WJAS WKBH WKRC

WLAC WLBW WLBZ WMT WNAX

WOKO WORC WPG WQAM WREC

WSBT WSFA WSJS WTAQ

WTOC WWVA

C — Irene Reasley, Round Towners

WTOC WWVA

C — Irene Beasley, Round Towners

CFRB CKOK KFAB KFBK KFH
KFJF KFRC KHJ KLRA KMBC
KMOX KOL KRLD KSCJ KVOR
WABC WBCM WBIG WBRC WBT
WCAH WCAO WCAU WCCO WDAE
WDBJ WDBO WDOD WDRC WDSU
WEAN WFBL WFBM WFEA WGR
WGST WHAS WHEC WHK WHP
WIBW WISN WJAS WKBH WKBN
WLBW WMBD WNAC WNOX WODX
WOKO WORC WOWO WQAM WREC
WSFA WSPD WTAQ WTAR WTOC WWVA

– Our American Schools R — OUR AMERICAN SCHOOLS
KDYL KEX KFSD KGA KJR KPO
KPRC KSD KSTP KTBS KYA WBEN
WCAE WCSH WDAF WEAF WEBC
WEEI WENR WFBR WFLA WHO
WIBA WIOD WIS WJAR WJAX
WKY WOAI WOC WOW WRVA WSAI
WSB WSM WSMB WTAG WTAM
WWJ WWNC
WWALL REGISEO DE KLEI

C-World's Business, Dr. Klein KFAB KFH KFPY KGB KLZ KMOX KFAB KFH KFPY KGB KLZ KMOX
KOH KRLD KSCJ KTRH KVI
KVOR WABC WACO WADC WBBM
WBCM WBIG WBRC WBT WCAH
WCAO WCCO WDBJ WDDD WDRC
WEAN WFAN WFBL WFBM WFEA
WGL WGR WHAS WHEC WIP
WISN WJAS WLAC WLBW WLBZ
WMT WNAC WNAX WNOX WOKO
WORC WPG WQAM WREC WSBT
WTAQ WTAR WWVA

R — Marimba Band KDYL KFI KFSD KFYR KGO KGW KHQ KOA KPRC KSD KTBS WCAE WCKY WDAF WDAY WEAF WEBC WCEI WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WKY WLIT WMAQ WOAI WOC WSMB WTAG WWJ WWNC

E-7:15 p.m., C-8:15, M-5:15, P-4:15
C—Barbara Maurel, Contralto
CKOK KFH KLZ KMBC KMOX
KOMA KRLD KSCJ KSL KVOR
WABC WACO WADC WBCM WBIG
WBRC WBT WCAO WCAU WCCO
WDAE WBJ WDBO WDOD WDRC
WDSU WFEA WGR WHEC WHK
WHP WIBW WISN WJAS WKBH
WLBZ WMT WNAX WNOX
WODX WOKO WORC WQAM WREC
WSBT WSJS WTAR WTOC WWVA

### SUNDAY—Continued

B - Borrah Minnevitch-Harmonica B — Borrah Minnevitch — Harmonica KDYL KPI KFSD KFYR KGO KGW KHQ KOA KPRC KSTP KTBS KWCR WBAL WBZ WBZA WCKY WDAY WBC WFAA WFLA WGAR WIBA WIOD WIS WJR WJZ WLS WOAI WREN WRVA WSB WSMB WWNC B — Bay Knight See Mondon

R - Ray Knight See Monday C - New World Symphony

E-7:30 p.m., C-6:30, M-5:30, P-4:30 B — Great Moments in History KDKA KDYL KFI KFSD KFYR KGO KGW KHQ KOA KOMO PKRC
KSTP KTAR KVOO KWK WBAL
WBZ WBZA WDAY WEBC WFAA
WFLA WGAR WHAM WIBA WIOD
WJAX WJDX WJR WJZ WKY WLS
WLW WMC WOAI WREN WRVA
WSB WSM WSMB WTMJ WWNC R — Orchestral Gems

KSD WBEN WCAE WDAF WEAF WFBR WGY WJAR WLS WOW WSAI WTAG WTIC WWJ

E-7:45 p.m., C-6:45, M-5:45 P-4:45 C — Angelo Patri, See Wednesday

- Chase and Sanborn Hour CFCF CKGW KFI KFSD KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSL KSTP KTAR KTHS KVOO MADI WEEN WCAE WCKY WCSH
WDAF WDAY WEAF WEBC WFAA
WFBR WFLA WGY WHO WIOD
WIS WJAR WJAX WJDX WKY
WLIT WLS WMC WOAI WOC WPTF
WRC WRVA WSAI WSB WSM
WSMB WTAG WTAM WTIC WTMJ
WWI WWMC WWJ WWNC

Ernest Hutcheson-Pianist U — Ernest Hutcheson—Pianist
CKOK KLZ KMBC KMOX KOMA
KRLD KSCJ KSL KTSA KVOR
WABC WACO WACO WADE WBM
WBRC WCAO WCCO WDAE WDBJ
WDBO WDOD WDRC WDSU WFBL
WFBM WFEA WGR WHEC WHP WIBW WISN WJAS WKBE WHAC WLBW WLBZ WMT WNOX WODX WOKO WORC WQAM WREC WSJS WTAR WWVA

B — Russian Gaieties KDKA KOIL KWCR KWK WBAL WGAR WJR WJZ WLS WREN

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — To The Ladies — Morton Downey CKOK KLZ KMBC KOMA KRLD KSCJ KSL KTSA KVOR WAAB WABC WADC WBCM WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBL WEBA WEFA WCQ WHEC WHE WFBM WFEA WCR WHEC WHK
WHP WIBW WISN WJAS WKBH
WLAC WLBW WLBZ WMT WNAX
WNOX WODX WOKO WORC WQAM WREC WSJS

B — Red Adams—Sketch KDKA KOIL KWCR KWK WBAL WGAR WHAM WJR WJZ WLS WREN

E-9:00 p.m., C-8:00, M-7:00, P-6:00 R — Our Government, David Lawrence KPRC KSD KTBS KVOO WEAF WENR WFAA WFBI WFBR WFIA WGY WHO WIOD WIS WJAR
WJDX WKY WMC WOC WOW
WPTF WRC WRYA WSAI WSB
WSM WSMB WTAG WWNC

B — Enna Jettick Melodies
CFCF CKGW KDKA KFI KFSD
KFYR KGHL KGIR KGO KGW KHQ
KOA KOIL KOMO KSTP KTAR
KWCR KWK KYW WBAL WBZ
WBZA WCKY WDAY WEBC WGAR
WHAM WIBA WJAX WJR WJZ
WREN WRVA WTMJ
C — Bath Club—Fred Allen
CFRB CKOK KLRA KLZ KMBC
KMOX KSCJ KTRH KTSA KVOR
WABC WADC WBCM WCAH WCAO
WCCO WDAE WDBJ WBBO WDOD
WDRC WDSU WFAN WFEL WFBM
WFEA WGR WGST WHAS WHEC
WHK WHP WIBW WIP WISN WJAS
WKBH WKRC WLAC WLAC WLAC
WREC WSBT WSJS WTAR WTOC

E-9:15 p.m., C-8:15, M-7:15, P-6:15
R — Album of Familiar Music
KFI KFSD KFYR KGO KGW KHQ
KOA KOMO KPRC KSD KSL KSTP
KTAR KTHS WAPI WBEN WCAE
WCSH WDAY WEAF WEBC WENR
WFAA WFBR WFI WFLA WGY
WHO WIBA WIOD WJAR WJDX
WKY WMC WOAI WOC WOW
WRC WSAI WSB WSM WSMB
WTAG WTAM WTMJ WWJ
B — Smith Brothers

B — Smith Brothers KDKA KOIL KWCR KWK KYW WBAL WBZ WBZA WHAM WJR WJZ WREN

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

C-Pennson Parade CKOK KFFF KLRA KMBC KMOX KTSA WABC WADC WBRC WBT WCAO WCAU WCCO WDRC WEAN WFBL WGN WGR WGST WHEC WHK WJAS WKRC WLAC WLBZ WNAC WOKO WSPD

B - Harriet Lee and Leaders
CKGW KDKA KFYR KOIL KSTP
KWCR KWK KYW WBAL WGAR
WHAM WJR WJZ WLW WREN

E-9:45 p.m., C-8:45, M-7:45, P-6:45 B — Sheaffer Lifetime Revue B — Sneafer Lifetime Revue
CFCF CKGW KDKA KDYL KFI
KFYR KGHL KGIR KGO KGW
KHQ KOA KOIL KOMO KPRC
KSTP KTBS KTHS KWCR KWK
WBAL WBZ WBZA WDAY WEBC
WENR WGAR WHAM WIBA WJDX
WJR WJZ WKY WMC WOAI WREN
WSB WSM WSMB WTMJ
R — Ohman and Arden, Piano Duo

WSB WOM WAND WIND

R— Ohman and Arden, Piano Duo

KSD WBEN WCAE WCSH WDAF

WEAF WFBR WFI WGY WHO

WJAR WMAQ WOC WOW WRC

WSAI WTAG WTAM WTIC WWJ

E-10:00 p.m., C-9:00 M-8:00, P-7:00 C — Canada Dry-Jack Benny

CFRB CKAC CKOK KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WHAS WHK WJAS WKBW WKRC WNAC WOKO WOWO WPG WSPD

E-10:15 p.m., C-9:15, M-8:15, P-7:15 R — L'Heure Exquise # — L'Heure Exquiso
CKGW KFYR KPRC KSD KSTP
KTAR KTBS WBEN WCAE WCKY
WDAF WEAF WEBC WEEI WFBR
WFI WFLA WGY WHO WIBA WIOD
WJAR WKY WMC WOC WOW WRC
WRVA WSAI WSM WSMB WTAG
WTAM WTIC WWJ WWNC B—Old Singing Master
KDKA KFI KGO KGW KHQ KOA
KOIL KOMO KSL KWK WBAL WBZ
WBZA WGAR WHAM WJR WJZ
WLW WMAQ WREN

A.

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Welfare and Relief Program
CFRB CKAC CKOK KFH KLZ
KMBC KOMA KSCJ KTSA KVOR
WAAB WABC WADC WBBM WBCM
WBRC WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDOD WDRC
WDSU WFBL WFBM WFEA WGR
WHEC WHP WIBW WISN WIAS
WKBH WLBW WLBZ WMBD WMT
WNAX WNOX WOKO WORC WPG
WQAM WREC WSFA WSJS WTAR

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

R—Sunday at Seth Parker's
CFCF KECA KFSD KFYR KGHL
KGIR KGO KGW KHQ KOA KOMO
KPRC KSD KSL KSTP KTAR KTBS
KYW WAPI WBEN WCAE WCSH
WDAF WDAY WEAF WEBC WEEL
WFAA WFBR WFI WFLA WGY
WHO WIBA WIOD WIS WJAR WJAX
WJDX WKY WMC WOAI WOC WOW
WPTF WRC WRVA WSAI WSB
WSM WTAM WTMJ WWJ

E-11:00 p.m., C-10:00, M-9:00, P-8:00 B — Sam Herman, Xylophonist KOIL KWCR KWK WBAL WGAR WHAM WJR WJZ WMAQ WREN

WHAM WJR WJZ WMAQ WREN
E-11:15 p.m., C-10:15, M-9:15, P-8:15
R — Donald Novis—Tenor
KDYL KFYR KGHL KGO KGW
KHQ KSTP KTBS WCAE WCKY
WDAF WEAF WEBC WENR WFBR
WFI WFLA WGY WHO WIBA WIS
WJAX WMC WOC WRC WSB WSMB
WTAG WTAM WWNC
C — The Gauchos—Tito Guizar
WAAB WABC WBRC WBT WDAE
WDBJ WDBO WDOD WDRC WDSU
WLAC WLBZ WNOX WPG WQAM
WREC WSJS WTAR WTOC

E-11:30 p.m., C-10:30, M-9:30, P-8:30
R — Melodic Serenade
KFSD KFYR KGO KHQ KSTP
KTAR KTBS WCAE WCKY WEAF
WENR WFBR WFLA WGY WIBA
WIOD WIS WJAR WMC WRC WSAI
WSB WSM WTAM WWJ WWNC
C — Eddic Duchin's Orchestra
CERB CKOK KIRA KTDH WARC

C — Eddie Duchin's Oronestra CFRB CKOK KLRA KTRH WABC WADC WBCM WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBL WGR WGST WHK WHP WISN WLAC WLBZ WOKO WPG WQAM WREC WSJS WTAR

B - Frankie Masters and Orchestra KOIL KWCR KWK WBAL WCK WENR WHAM WJR WJZ WREN WCKY

C — Pennzoil Parade KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KVI KWG

E-12:00 m., G-11:00, m-10:00, B — Wm. Stoess and Orchestra
KGHL KGO KGW KOA KOIL KOMO
KSTP KTBS KWCR WDAY WEN
WFLA WGAR WHAM WIOD WJR
WJZ WKY WLW WMC WREN E-12:00 m., C-11:00, M-10:00, P-9:00 WJZ WKY WSB WWNC

R — Joe Furst and Orchestra WCAE WCKY WDAF WEAF WFBR WHO WLIT WOC WTAM

# CLASSIFIED INDEX TO CHAIN PROGRAMS

# Time in Eastern Standard

### BANDS

Carborundum Band, 9:30 p.m., Saturday, C. Little German Band, 6:00 p.m., Saturday, B. Marimba Band, 7:00 p.m., Sunday, R.

### CONCERTS

Howard Barlow Symphony, 11:00 p.m., daily, ex. Sun. C. Cities Service, 8:00 p.m., Friday, R. The Gauchos, 11:15 p.m., Sunday, C. Kremlin Art Quintet, 7:15 p.m., Friday, R. L'Heure Exquise, 10:15 p.m., Sunday, R. Le'Trio Charmante, 4:45 p.m., Sunday, R. Walter Logan, 5:00 p.m., Sunday, R. Melodic Serenade, 11:30 p.m., Sunday, R. National Opera, 11:15 p.m., Mon. and Tues., B. New York Philharmonic, 3:00 p.m., Sunday, R. Our American Music, 3:00 p.m., Sunday, R. Our American Music, 3:00 p.m., Sunday, B. Popular Classics, 7:45 p.m., Monday, C. Erno Rapee, 9:00 p.m., Saturday, R. Road to Romany, 8:30 p.m., Saturday, B. Russian Gaieties, 8:00 p.m., Sunday, B. Waldorf-Astoria, 6:00 p.m., Sunday, B. Waldorf-Astoria, 6:00 p.m., daily, ex. Sunday, R. Howard Barlow Symphony, 11:00 p.m., daily, ex. Sat. and

### DANCE BANDS

Ben Bernie. 9:00 p.m., and 12:30 a.m., Tues.; 11:30 p.m., Thurs., R. Thurs., R.
Den Bestor. 11:00 p.m., Thurs. and Sat., R.
Cab Calloway, 12 mid., Wed. and Fri., B.
Don DeForest, 6:00 p.m., Friday, B.
Jack Denny, 12 mid., Mon., Sat., B; 11:15 p.m., Tues.,
8:45 p.m., Wed., R; 8:45 p.m., Thurs., C.
Lew Diamond, 12:30 a.m., Monday, B.
Clyde Doerr, 2:00 p.m., Sunday, R.
Eddie Duchin, 11:30 p.m., Sun.; 12 mid. Mon. and Thurs.,
C. Eddie Duchin, 11:30 p.m., sun.; 12 mid. Mon. and Thurs., C. Ted Fiorito, 12 mid., Sunday, R. Joe Furst, 12 mid., Sunday, R. Isham Jones, 11:30 p.m., Tues., Wed. and Thurs., C. Roger Wolfe Kahn, 11:00 p.m., Mon.; 12 mid., Sat., R. Wayne King, 3:00 p.m., Sun.; 8:30 p.m., Tues., R. Guy Lombardo, 11:30 p.m., Mon. and Fri.; 9:00 p.m., Wed., C. Vincent Lopez, 12:30 a.m., Saturday, R. Lucky Strike, 10:00 p.m., Tues., Thurs. and Sat., R. Abe Lyman, 8:00 p.m., Tues., Thurs. and Sat., C. Clyde McCoy, 11:30 p.m., Monday, R. Jack Miller, 6:30 p.m., Tues.; 6:45 p.m., Sat., C. George Olsen, 12 mid., Tues.; 7:15 p.m., Sat., R. Don Redman, 12 mid., Tues. and Wed., C. William Stoess, 12 mid., Sunday, B. Rudy Vallee, 8:00 p.m., Thursday, R. Anson Weeks, 11:00 p.m., Fri., R; 8:15 p.m., Sat., B. Ted Weems, 10:00 p.m., Sun.; 8:15 p.m., Thurs., C. Paul Whiteman, 6:00 p.m., Sun., B; 9:30 p.m., Mon., 11:30 p.m., Sat., R.

### DIALOG

p.m., Sat., R.

Red Adams, 8:30 p.m., Sunday, B. Fred Allen, 9:00 p.m., Sunday, C. Amos 'n' Andy, 7:00 and 11:00 p.m., daily, ex. Sat., and Sun. B.
Betty Boop, 7:30 p.m., Tuesday, B.
Burns and Allen, 9:00 p.m., Wednesday, C.
Clara, Lu 'n' Em, 10:15 a.m., daily, ex. Sat. and Sun., B.
Easy Aces, 10:15 p.m., Mon., Wed. and Fri., C.
Eddie and Ralph, 9:30 p.m., Friday, B.
Funnyboners, 6:45 p.m., Mon. and Wed.; 6:00 p.m., Sat., C.
Johnny Hart, 7:45 p.m., daily, ex. Sat. and Sun., B.
Ray Knight, 7:30 p.m., Saturday, B.
Jack Pearl, 10:00 p.m., Thursday, R.
Ray Perkins, 7:30 p.m., Tues. and Thurs., R.
The Pridgets, 9:30 p.m., Wednesday, R.
S. R. O. Comedy, 9:30 p.m., Saturday, B.
Stoopnagle & Budd, 10:45 p.m., Mon., Wed. and Fri., C.
Tastyeast Jesters, 7:15 p.m., Monday, B. Sun., B.

Howard Thurston, 8:45 p.m. and 12:15 a.m., Thurs. and Fri., B. Wheatenaville, 7:15 p.m., daily, ex. Fri and Sat., R. Ward Wilson, 7:15 p.m., Wed., Thurs and Fri., B.

DRAMA

Big Ben, 5:30 p.m., Sunday, R.
Death Valley Days, 9:00 p.m., Thursday, B.
Eno Crime Club, 9:30 p.m., Wednesday, C.
Evening in Paris. 9:30 p.m., Monday, C.
First Nighter, 9:00 p.m., Friday, B.
Friendship Town, 9:30 p.m., Tuesday, B.
Fu Manchu, 8:45 p.m., Monday, C.
Goldbergs, 7:45 p.m., daily, ex. Sunday, R.
Sherlock Holmes, 9:00 p.m., and 12:15 a.m., Wednesday, B.
Omar Khayyam, 9:30 p.m., Thursday, C.
Phillips Lord, 10:00 p.m., daily, ex. Sat. and Sun., B.
Magic Voice, 8:15 p.m., Tues. and Sat., C.
March of Time, 8:30 p.m., Friday, C.
Moments in History, 7:30 p.m., Sunday, B.
Myrt and Marge, 7:00 and 10:45 p.m., daily ex. Sat. and
Sun., C.
Rin Tin Tin, 8:30 p.m., Thursday, B. Sim, D., Sim, D., Sim, Thursday, B. Buok Rogers, 7:15 p.m., daily, ex. Sat. and Sun., C. Roses and Drums, 5:00 p.m., Sunday, C. The Shadow, 8:00 p.m., Wednesday, R. Sheer Romance, 6:30 p.m., Wednesday, B. Soconyland Sketches, 8:00 p.m., Monday, R.

### PIANO AND ORGAN

Archer Gibson, 8:00 p.m., Saturday, R.
Harding Sisters, 6:30 p.m., Mon. and Wed., R.; 10:45 p.m.,
Sat., B.
Ernest Hutcheson, 8:00 p.m., Sunday, C.
Keenan and Phillips, 6:45 p.m., Tuesday, C.
Ohman and Arden, 9:45 p.m., Sun, R.; 2:15 p.m., Sun. C.
Lee Sims, 6:45 p.m., Saturday, B.
Lew White, 11:15 p.m., Saturday, B.

### POPULAR PROGRAMS

POPULAR PROGRAMS

A. & P. Gypsies, 9:00 p.m., Monday, R. Armour Program, 9:30 p.m., Friday, B. Bath Club, 9:00 p.m., Sunday, C. Jack Benny, 10:00 p.m., Sunday, C. Jack Benny, 10:00 p.m., Sunciay, C. Jack Benny, 10:00 p.m., Sunday, R. Carnation Contented, 10:00 p.m., Monday, R. Carnation Contented, 10:00 p.m., Monday, R. Carnation Revue, 12:30 p.m., Sunday, R. Cliquot Club, 9:00 p.m., Friday, R. Columbia Revue, 12:30 p.m., daily, ex. Sat. and Sun., C. Enna Jettick Melodies, 9:00 p.m., Sunday, B. Jay C. Flippen, 10:00 p.m., Tuesday, C. G. E. Circle, 6:45 and 7:00 p.m., Juesday, C. G. E. Circle, 6:45 and 7:00 p.m., Junday, B. Andre Kostelanetz, 10:00 p.m., Thursday, C. Manhattan Merry-Go-Round, 3:30 p.m., Sunday, B. Maxwell House Sho Boat, 9:00 p.m., Thursday, R. Nestle's Program, 8:00 p.m., Friday, B. Pennzoil Parade, 9:30 and 11:30 p.m., Sunday, C. Pond's Program, 9:30 p.m., Friday, R. Sheafier Revue, 9:45 p.m., Sunday, B. Sinclair Wiener Minstrels, 9:00 p.m., Monday, B. Smith Brothers, 9:15 p.m., Sunday, B. To The Ladies, 9:30 p.m., Friday, C. Wildroot Institute, 4:15 p.m., Sunday, R. Feat Wynn, 9:30 p.m., Tuesday, R. Yeast Foamers, 2:30 p.m., Sunday, B.

### **QUARTETS**

Corn Cob Pipe Club, 10:00 p.m., Wednesday, R. Mills Bros., 9:15 p.m., Mon. and Thurs., C. Revelers, 8:30 p.m., Monday, R.

### RELIGIOUS

Dr. S. Parkes Cadman, 3:30 p.m., Sunday, R. Cathedral Hour, 1:00 p.m., Sunday, C.

Catholic Hour, 6:00 p.m., Sunday, R.
Church of the Air, 1:30 p.m., Sunday, C.
Rev. Chas. E. Coughlin, 4:00 p.m., Sunday.
Mid-Week Hymn Sing, 7:00 p.m., Tuesday, R.
National Vespers, 5:00 p.m., Sunday, B.
National Youth Conference, 4:30 p.m., Sunday, B.
Old Songs of Church, 6:30 p.m., Thúrsday, B.
Seth Parker, 10:45 p.m., Sunday, R.
Salt Lake Tabernacle Choir, 12 noon, Sunday, C.

### SINGERS

Mildred Bailey, 10:45 p.m., Mon., Wed. and Fri., B. Irene Beasley, 6:30 p.m., Sun.; 6:00 p.m., Mon. and Fri., C. Louise Bernhardt, 7:30 p.m., Thursday, B. Connie Boswell, 6:30 p.m., Wed.; 7:45 p.m., Sat., C. Boswell Sisters, 10:00 p.m., Mon., 9:00 p.m., Thurs., C. Eddie Cantor, 8:00 p.m., Sunday, R. Charle Carlie, 10:20 p.m., Sunday, R. Eddie Cantor, 8:00 p.m., Sunday, R. Charles Carlle, 10:30 p.m., Mon., Wed. and Fri., C. Vaughn DeLeath, 6:30 p.m., Mon., 6:00 p.m., Wed.; 5:45 p.m., Thurs.; 10:45 p.m., Sat., C. Do Re Mi Girls, 9:15 p.m., Saturday, C. Morton Downey, 9:30 p.m., Friday, C. Jessica Dragonette, 8:00 p.m., Friday, C. Ruth Etting, 10:00 p.m., Wed.; 9:00 p.m., Sat., C. Jane Froman, 4:00 p.m., Sunday, R. Jack Fulton, 7:30 p.m., Wed. and Fri.; 7:15 p.m., Sat., B. Tito Guizar, 11:15 p.m., Sunday, C. Harlem Fantasy, 6:30 p.m., Saturday, R. Tito Guizar, 11:15 p.m., Sunday, C. Harlem Fantasy, 6:30 p.m., Saturday, R. Art Jarrett, 11:00 p.m., Thurs. and Sat., R. Al Jolson, 10:00 p.m., Friday, R. Jones and Hare, 7:30 and 11:15 p.m., Mon., Wed., Fri., R. Alice Joy, 10:30 p.m., Monday, R. Ralph Kirbery, 6:30 p.m., Thursday, R. Harriet Lee, 9:30 p.m., Thursday, R. Harriet Lee, 9:30 p.m., Sunday, B. Little Jack Little, 6:15 p.m., Sunday, C. Barbara Maurel, 7:15 p.m., Sunday, C. Tommy McLaughlin, 9:15 p.m., Tuesday, C. Frank Munn, 9:15 p.m., Sunday; 9:30 p.m., Monday, R. Musical Memorics, 9:00 p.m., Tuesday, B. Donald Novis, 11:15 p.m., Sun, 12 mid., Mon., Thurs., R. Old Singing Master, 10:15 p.m., Sunday, B.

Pickens Sisters, 11:00 p.m., Mon., Tues. and Wed.; 9:00 p.m., Sat., B.
Georgie Price, 7:45 p.m., Tues. and Thurs., C.
Radio Rubes, 10:30 p.m., Mon., Tues. and Wed., B.
Virginia Rea, 9:36 p.m., Monday, R.
Red and Ramona, 8:30 p.m., Mon; 10:30 p.m., Thurs. B.
Regimentalista, 8:00 p.m., Thursday, B.
Lanny Ross, 9:00 p.m., Thurs:, 10:45 p.m., Fri., B.
Russian Symphonic Choir, 12:30 p.m., Sunday, R.
Sanderson-Crumit, 8:00 p.m., Tuesday, R.
Singin' Sam, 8:15 p.m., Mon., Wed. and Fri., C.
Jack Smith, 8:00 p.m., Mon. and Wed., C.
Kate Smith, 8:30 p.m., Mon., Tues. and Wed., C.
Street Singer, 9:00 p.m., Tues; 10:00 p.m., Fri., C.
Temple of Song, 4:00 p.m., Sunday, B.
Three Jesters, 10:30 p.m., Saturday, B.
Three Z Sisters, 7:30 p.m., Mon., Wed. and Fri., C.
Gus Van, 9:00 p.m., Saturday, B. p.m., Sat., B Gus Van, 9:00 p.m., Saturday, B

Adventures in Health, 8:30 p.m., Tues. and Fri., B. American Schools, 6:30 p.m., Sunday, R. Frank Buck, 5:45 p.m., Sunday, R. Economic World Today, 8:30 p.m., Saturday, R. Floyd Gibbons, 10:30 p.m., Friday, R. William Hard, 6:45 p.m., Tresday, R. William Hard, 6:45 p.m., Tresday, R. Wed, C. Light, 10:30 p.m., Tues. and Thurs.; 8:45 p.m. Wed, C. Liternational Radio, 4:30 p.m., Sunday, P. Sunday Wed., C. International Radio, 4:30 p.m., Sunday, R. H. V. Kaltenborn, 6:00 p.m., Tues, and Thurs., C. Dr., Julius Klein, 7:00 p.m., Sunday, C. Frederick Landis, 2:45 p.m., Sunday, C. David Lawrence, 9:00 p.m., Sunday, R. National Farm and Home, 12:30 p.m., daily, ex. Sat. and Sun, B.
Angelo Patri, 7:45 and 11:15 p.m., Wed. and Sun., C.
Poet's Gold, 6:00 p.m., Sunday, C. Poets Gold, 0:00 p.m., culturary C.
Public Affairs Institute, 10:15 p.m., Saturday, C.
Nellie Revell, 11:00 p.m., Wednesday, R.
Signud Spaeth, 10:15 p.m., Tues.; 8:15 p.m., Thurs., B.
Lowell Thomas, 6:45 p.m., daily, ex. Sat. and Sun., B.
You and Your Government, 8:00 p.m., Tuesday, B. Frederic William Wile, 7:00 p.m., Saturday, C.

# KEY TO SYMBOLS

### As Shown in the Index by Freqencies and Dial Numbers

Frequency is given in kilocycles; wavelength in meters. Night power is shown in watts in third column. Daytime power is shown in parenthesis in fourth column in kilowatts, thus (.25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column. R-C indicates Remote Control. Where space permits, names of hotels or other buildings used in announcements are shown in parenthesis. These are not mail addresses.

### Second Column Symbols

- Verifies reception for return postage.
- b Verifies only occasionally.
- Does not verify.
- Verification 25c; reply card 10c.
- Sends Ekko stamp for 10c.
  - Sends Ekko stamp for 5c.
- Fourth Column Symbols
- These stations are synchronized. National "Blue" Network. В
- Columbia network. C
- D Daytime only.
- Dn Daytime with occasional evening hours.
- Trans-Canada network.
- E Canadian National Railways network.
- G All Canadian networks.
- Н Yankee network.
- Orange and gold network.
- ĸ Mexican networks.
- Canadian Pacific Ry. network (Dominion).
- M
- Canadian Radio Corp. network. National "Red" and "Blue" networks.
  - Has construction permit only.

- Sends Ekko stamp for postage. Sends own stations stamp for 10c. Sends own station stamp for 5c. Sends own station stamp for postage.
- k Has no stamps.
- Failed to reply.

- Great Lakes network.
- National "Red" network. Sunday only.
- Don Lee System.
- Dixie network.
- Maritime Broadcasting network.
- W Curtis-Indiana network.
- Has permit to increase power.
- Has permit to change location.
- Has permit to change frequency.
- a-b-c. Small letters show stations using same transmitter.
- 1-2-3. Figures denote stations sharing time.
- .... No information.

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### FOR KEY TO SYMBOLS SEE PAGE 45

FOR KEY TO SYMBOLS SEE PAGE 45								
<b>540</b> 1	kilocyc	les 55	5.6 meters	ĵ4				
<b>CKOK</b>	ae 500	00 CG	Windsor, Ont.	Essex Broadcasters, Ltd.				
550 1	kilocyc	les 54	5.1 meters	55				
KFDY KFUO KFYR KOAC KSD WDEV WGR WKRC	ae 50 ah 100 ak 100 ak 50 ae 50 ae 100 ak 100	00 00 2R 00 D 00 C	Brookings, S. D. St. Louis, Mo. Bismarck, No. Dake Corvallis, Ore. St. Louis, Mo. Waterbury, Vt. Buffalo, N. Y. Cincinnati, Ohio	South Dakota State College Evangelical Lutheran Church ota Meyer Broadcasting Co. Oregon State Agricultural College Pulitzer Publishing Co. Harry G. Whitehill Buffalo Broadcasting Corp. WKRC, Inc., Hotel Alms				
<b>560</b> 1	kilocyc	les 53	5.4 meters	55 12				
KFDM KLZ KTAB WFI WIBO WLIT WNOX WPCC WQAM	ae 100 ae 100	00 00 1R 00 (1.5)a 00 1R 00 C(2) 00 Sa	Beaumont, Texas Denver, Colo. San Francisco, Cali Philadelphia, Pa. Chicago, Ill. Philadelphia, Pa. Knoxville, Tenn. Chicago, Ill. Miami, Fla.	Sabine Broadcasting Co., Inc. Reynolds Radio Co., Inc. Associated Broadcasters, Inc. WFI Broadcasting Co. Nelson Bros. Bond & Mtg. Co. Lit Bros. Broadcasting System, Inc. So. Carolina Broadcasting Co., Inc. North Shore Congregational Church Miami Broadcasting Co.				
<b>570</b> 1	kilocyc	les 520	6.0 meters	56				
KGKO KMTR KVI TGW WEAO WKBN WMCA WNAX WNYC WSYR WWNC	aeh 50 ae 50 z 1 ae 75 ak 50 ak 50 ae 100 ak 50	00 3 50 R2a	Wichita Falls, Texa Hollywood, Calif. Tacoma, Wash. Guatamala Columbus, Ohio Youngstown, Ohio New York, N. Y. Yankton, S. D. New York, N. Y. Syracuse, N. Y. Asheville, N. C.	KMTR Radio Corp. Puget Sound Broadcasting Co. Ohio State University				
580 1	kilocyc	les 51	6.9 meters	57-1				
CFCY CHMA CKCL CKUA CMCJ CMDD KMJ KSAC WDBO WBW WOBU WSAZ WTAG	ae 50 ak 22 z 11 ak 50 ak 50 ak 50 ak 50 ae 100 ak 22 ak 50 ae ae 100 ak 22 ak 22	00 E 50 4S 00 00 4F 50 588 50 CT 00 2(1) 50 CU	Charlottetown, P. Edmonton, Alta. Toronto, Ont. Edmonton, Alta. Havana, Cuba Havana, Cuba Fresno, Calif. Manhattan, Kans. Orlando, Fla. Topeka, Kans. Charleston, W. Va. Huntington, W. Va Worcester, Mass.	Christian & Missionary Alliance The Dominion Battery Co. University of Alberta Rafael Rodriquez G. deSequeira McClatchy Radio Stations (Fresno Bee) State Agricultural College Orlando Broadcasting Co., Inc. Capper Publications WOBU, Inc., Ruffner Hotel				
590 1	kilocyc	les 508	8.2 meters	5851				
CJGC KHQ WCAJ WEEI WKZO WOW	ae 50 ak 10	00 595GZ 00 N(2) 00 I 00 R 00 D	London, Ont. Spokane, Wash. Lincoln, Neb. Boston, Mass. Kalamazoo, Mich. Omaha, Neb.	Free Press Printing Co., Ltd. Louis Wasmer, Inc. Nebraska Wesleyan University Edison Electric Illuminating Co. WKZO, Inc., Burdick Hotel Woodmen of the World				

			•	
600 1	kilocycle	es 499	.7 meters	59 37 KCY
CNRO KFSD WCAC WCAO WICC	ak 500 ah 500 ak 250 ae 250 ae 250 ak 500	F N(1) 2 C 2H(.5)C C C(1)	Ottawa, Ont. San Diego, Calif. Storrs, Conn. Baltimore, Md. Bridgeport, Conn. Waterloo, Iowa	Canadian National Railways Airfan Radio Corp. Connecticut Agricultural College Monumental Radio Co. Bridgeport Bdctg. Station, Inc. Waterloo Broadcasting Co. WREC, Inc. UNITED TO BE STATE OF S
WREC .	z 500		Memphis, Tenn.	
blu k ∞KFRC′	cilocycle		.5 meters	lif. Don Lee Broadcasting System
WDAF WIP WJAY XETR	ae 1000 ae 1000 ak 500 ae 500 z 2500	C R C D	San Francisco, Cal Kansas City, Mo. Philadelphia, Pa. Cleveland, Ohio Mexico City, Mexic	Kansas City Star Co. Pennsylvania Bdctg. Co. (WFAN) Cleveland Radio Broadcasting Corp.
620 1	kilocycle	es 483	.6 meters	1017
KGW KTAR WFLA WLBZ WSUN WTMJ	ae 1000 ae 1000 ak 500 ae 1000 ae 1000	N NJ(1) Na(2.5) C Na(2.5) N(2.5)	Portland, Ore. Phoenix, Ariz. Clearwater, Fla. Bangor, Maine St. Petersburg, Fla Milwaukee, Wis.	Oregonian Publishing Co. KTAR Broadcasting Co. Florida West Coast Bdctg. Co., Inc. Maine Broadcasting Co., Inc. Florida West Coast Bdctg. Co., Inc. Journal Company
630 1	cilocycle	es 475	.9 meters	1.a
CFCT CJGX CKOC CKTB CMCU CMQ CNRA HIX KFRU KGFX WGBF WMAL WOS	ae 500 ae 1000 ae 1000 z 150 z 250 ae 700 ah 1000 z 200 ae 500 ae 2500 ae 2500 ae 2500 ae 500	G FL 635aG 635aL  F  1 D W (.5)	Victoria, B. C. Yorkton, Sask. Hamilton, Ont. St. Catharines, On Havana, Cuba Havana, Cuba Moncton, N. B. Santo Domingo, D Columbia, Mo. Pierre, S. D. Evansville, Ind. Washington, D. C. Jefferson City, Mo.	Jorge Garcia Serra Jose Fernandez Canadian National Railways R. The Dominican Government KFRU, Inc. Dana McNeil Evansville On the Air, Inc. M. A. Leese Radio Corp., Inc.
XETF	ak 500	K	Veracruz, Ver., Me	xico Manuel Angel Fernandez
	kilocycle		3.5 meters	CHRC Led Viscosia Viscosia
CHRC CKCI CKCR KFI WAIU WOI	ak 100 ck 100 ak 100 ah 50000 ae 500 ae 5000	645aG 645a 645G N1 1 D	Quebec, Que. Quebec, Que. Waterloo, Ont. Los Angeles, Calif. Columbus, Ohio Ames, Iowa	CHRC, Ltd., Victoria Hotel Le Soleil, Ltd.  Mitchell & Liddle Earle C. Anthony, Inc. American Insurance Union State College of Agriculture
650 1	kilocycle	es 461	.3 meters	6H2
KPCB WSM	ae 100 aej 50000		Seattle, Wash. Nashville, Tenn.	Queen City Broadcasting Co. National Life & Accident Ins. Co.
660 1	kilocycle	es 454	.3 meters	65 =
CHWK CJRM CJRW RUS WAAW WEAF	ak 100 z 500 z 1000 z 500 agh 500 ak 50000	665 665 664 D R	Chilliwack, B. C. Moose Jaw, Sask. Fleming, Sask. Salvador Omaha, Neb. New York City	Chilliwack Broadcasting Co., Ltd. Jas. Richardson & Sons, Ltd. Jas. Richardson & Sons, Ltd. Republic of El Salvador Omaha Grain Exchange National Broadcasting Co., Inc.
670 1	kilocycle	es 447	.5 meters	663
-WMAQ	ae 5000	N	Chicago, Ill.	WMAQ, Inc. (NBC Lessees)
680 1	kilocycle	es 440	.9 meters	673
CMAF KFEQ KPO WPTF XFG	ak 1000 ae 2500 ak 5000 ae 1000 z 2000	D N N Dn 683.3	Havana, Cuba St. Joseph, Mo. San Francisco, Cal Raleigh, N. C. Mexico, Mexico	Durham Life Insurance Co.
			[47]	Sria. de Guerra y Marina Billioteca hacional de Monta dea cion Cle Roding Estacion Radio diffusora Hi

600	1-41-4	227010	6 131	.5 meters	b 65 }
CFAC	ak	500		Calgary, Alta.	Calgary Herald, Ltd.
FRR	ae ak	10000 500	1G CM 1LE	Toronto, Ont. Calgary, Alta.	Rogers-Majestic Corp., Ltd. Albertan Publishing Co., Ltd.
CJCJ WAA	z	1000		Arlington, Va. Glace Bay, N. S.	U. S. Navy
WAS XET	z ck	2000 500	685(4)	Monterrey, Mexico	· Canadian Marconi Co. Cadena Radio Difusora Mexicana S. A.
vox	z	100		Monterrey, Mexico Halifax, N. S.	Sambro Lightship
<i>7</i> 00	kilo	cycle	s 428	.3 meters	70-
www.WLW	ae	50000	В	Cincinnati, Ohio	The Crosley Radio Corporation
	kilo	•		.3 meters	70-5
WOR	ae ak	500 5000	Dn X	Beverly Hills, Calif. Newark, N. J.	R. S. MacMillan Bamberger's Broadcasting Service, Inc.
-XEN	agj	1000	711K	Mexico City	Bamberger's Broadcasting Service, Inc. Cerveceria Modelo S. A.
<b>720</b>	kilo	cycle	s 416	.4 meters	12
₩GN	ak	25000	С	Chicago, Ill.	WGN, Inc., Drake Hotel
<b>730</b>	kilo	cycle	s 410	.7 meters	my and have
CHLS	ak	100 5000	1b	Vancouver, B. C.	W. G. Hassell (Province Bldg.)
—CHYC —CKAC	z ak	5000 5000	Sa CaM	Montreal, Que. Montreal, Que.	Northern Electric Co., Ltd. La Presse Publishing Co., Ltd.
CKCD	z.	100	1ь	Vancouver, B. C.	Vancouver Daily Province
CKFC	ak ) z	50 100	1	Vancouver, B. C. Vancouver, B. C.	United Church of Canada Sprott-Shaw Radio Co. Western Broadcasting Co., Ltd.
CKWX	C ak	100	îL	Vancouver, B. C.	Western Broadcasting Co., Ltd.
CMK XEF-2	aeh KER z	3150 75000	735 (13)	Havana, Cuba Villa Acuna, Mexico	National Broadcasting Co. of Cuba Villa Acuna Broadcasting Co., Inc.
<b>740</b>	kilo			.2 meters	732
CJCA KMM	ae I bk	500 1000	745EL Dn	Edmonton, Alberta	Edmonton Journal, Ltd.
WSB WHEE	aeh	5000 250	N D	Clay Center, Neb. Atlanta, Ga. Portsmouth, N. H.	M. M. Johnson Co. (R/C Lincoln) Atlanta Journal, Biltmore Hotel Granite State Broadcasting Co.
<i>7</i> 50	kilo	cycle	s 399	.8 meters	75   '
KGU	aj ak	2500	NX	Honolulu, Hawaii	Advertiser Publishing Co.
VOWR WJR	ak ak	750 10000	 В	St. John's, N. F.	Wesley United Church WJR, The Goodwill Station, Inc.
XEQ	aeh	5000		Detroit, Mich. Juarez, Chih., Mexic	Radio Difusora National S. A.
<b>760</b>	kilo	cycle	s 394	.5 meters	10
KXA	ae	250	(.5) BA	Seattle, Wash.	American Radio Tel. Co.
→WBAL →WEW	, ae ae	10000 1000	BA D	Baltimore, Md. St. Louis, Mo.	(See 1060 kcys. also) St. Louis University
WEW	ck	30000	BA	New York City	National Broadcasting Co., Inc.
<i>77</i> 0	kilo	-		.4 meters	7 (0 to
KFAB WBBN	ae A ae	5000 25000	1C 1C	Lincoln, Neb. Chicago, Ill.	KFAB Broadcasting Co. WBBM Bdctg. Corp. (Wrigley Bldg.)
780	kilo	cycle	s 384	.4 meters	property des
CKY	z	5000		Winnipeg, Man.	Manitoba Telephone System
CMBS	e z	150		Winnipeg, Man. Havana, Cuba	Enrique Artalejo
CMC( KELW	) z aeh	1000 500	2	Burbank, Calif.	Andres Martinez Magnolia Park, Ltd.
KTM WEAN	ae	500	Ž(1) CH(.5)	Los Angeles, Calif.	Pickwick Broadcasting Corp., Ltd.
WEAN	l ak	250 500	CH(.5)	Los Angeles, Calif. Providence, R. I. Memphis, Tenn.	Pickwick Broadcasting Corp., Ltd. Shepard Broadcasting Service, Inc. Memphis Commercial Appeal, Inc.
WPOF	ak Raeh	500 500	N(1) b	Portsmouth, va.	WTAR Radio Corp. (Norfolk)
WTAI XEZ	R aeh	500 500	ьС	Norfolk, Va. Mexico, Mexico	WTAR Radio Corp. Joaquin Capilla
	kilo		s 379	.5 meters	Joaquin Capina
CMH		250		Tuinucu, Cuba	Frank H. Jones
CMJK	z	300		Camaguey, Cuba	Iano Gomez
₩KGO ₩WGY	ak ak	7500 50000	N R	San Francisco, Calif Schenectady, N. Y.	General Electric Co. (Opr. NBC) General Electric Co.
	an	55500	••		

		INDE	XBYI	FREQUENCIES A	AND DIAL NUMBERS	
<b>800</b> 1	kilo	cycle	es 374	1.8 meters	70.	
-WBAP -WFAA	ak ak	10000 50000	1N 1N	Fort Worth, Texas Dallas, Texas	Carter Publications, Inc. Dallas News-Dallas Journal	
810	kilo	cycle	es 370	).2 meters	81	
CHNS CNRH VOAS WCCO WPCH XFC	ae ak ae ak z	500 500 200 50000 500 250	815aZG 815aZ D C D	Halifax, N. S. Halifax, N. S. St. John's, N. F. Minneapolis, Minn New York City Aguascalientes, Me	Eastern Broadcasters, Inc.	ксүs. 890
<b>820</b> 1	kilo	cycle	es 365	5.6 meters	82-	MTRS.
CMGC WHAS	z aj	30 25000	ç	Matanzas, Cuba Louisville, Ky.	Oscar S. Mechoso The Louisville Times Co., Inc.	336.9
830 1	kilo	cycle	s 361	.2 meters	8 3	DIAL
CMGA KOA WEEU WHDH WRUF	z ak ak ae ae	100 12500 1000 1000 5000	834 NJ D DY DnC	Colon, Cuba Denver, Colo. Reading, Pa. Boston, Mass. Gainesville, Fla.	L. Valdes Figueroa General Electric Co. (NBC Opr.) Berks Broadcasting Co. Matheson Radio Co., Inc. State of Florida (Univ. of Fla.)	     
840 1	kilo	cycle	s 356	.9 meters	পত্ত	ì
CHNC CKGW CKLC CMC CPRY	z ae ak z ae	500 5000 1000 500 5000	a NEa G La	Toronto, Ont. Toronto, Ont. Red Deer, Alta. Havana, Cuba Toronto, Ont.	Canadian National Carbon Co., Ltd. Gooderham & Worts, Ltd. Alberta Pacific Grain Co., Ltd. Cuban Telephone Co. Canadian Pacific Co., Royal York Hotel	L    - 
850 1	cilo	cycle	s 352	.7 meters	84	İ
KIEV KWKH WWL	z ae ak	100 10000 5000	D [ · 1DnX	Glendale, Calif. Shreveport, La. New Orleans, La.	Cannon Systems, Inc. Hello World Broadcasting Corp. WWL Development Co. (Loyola Univ.)	 
860 1	cilo	cycle	s 348	.6 meters	861	<u> </u>
WABC WBOQ WHB XFX	ae ae ae z	50000 50000 500 500	aC a D 867	New York City New York City Kansas City, Mo. Mexico City, Mexico	Atlantic Broadcasting Corp. Atlantic Broadcasting Corp. (tests) WHB Broadcasting Co. Secretaria de Educacion Publica	CUT OUT
870 l	cilo	cycle	s 344	.6 meters	υ?τ   J	[ <del>2</del>
WENR WLS XFF	ak ae z	50000 50000 500	Na Na 875	Chicago, III. Chicago, III. Chihuahua, Mexico	Great Lakes Bdctg. Co. NBC Opr. Agricultural Broadcasting Co. Gobierno del Estado de Chihuahua	ON DOTTED
880 1	cilo	cycle	s 340	.7 meters	88+1	Ü
CHML CJCB CKCV CKPC KFKA KLX KPOF WCOC WGBI WQAN WSUI	ae ak ak ak ae ae ae ah ak	50 100 100 100 500 500 500 500 250 250 250	4G G  2(1)  2 (1) Q1 1	Hamilton, Ont. Sydney, N. S. Quebec, Que. Preston, Ont. Greeley, Colo. Oakland, Calif. Denver, Colo. Meridian, Miss. Scranton, Pa. Scranton, Pa. lowa City, lowa	Maple Leaf Radio Co., Ltd. Nathansan's Radio Headquarters Vandry, Inc. Cyrus Dolph Mid-Western Radio Corp. Tribune Publishing Co. Pillar of Fire Mississippi Broadcasting Co., Inc. Scranton Broadcasters, Inc. Scranton Times State University of Iowa	LINES
890 k	iloc	cycle	s 336	.9 meters	88 1-1	
CFBO CKCO CKPR CMCF CMX/M KARK KFNF KSEI KUSD	z ak ak ae ak ak ae	500 100 100 250 500 250 500 250 500 250 500	3 3G 1 1  (.5)	St. John, N. B. Ottawa, Ont. Fort William, Ont. Havana, Cuba Havana, Cuba Little Rock, Ark. Shenandoah, Iowa Pocatello, Idaho Vermillion, S. Dak.	C. A. Munro, Ltd. Dr. G. M. Geldert Dougall Motor Car Co., Ltd. Raoul Karman, Casa DelaPorte Casa "Lavin" Francisco A. Lavin, Adm. Arkansas Radio & Equipment Co. Henry Field Company Radio Service Corporation University of South Dakota	

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	***	DD21 I	, i .i .i	E COLICIES I	THE HOMBERS
VOGT WGST WILL WJAR WMMN	ae ak ae	400 893 250 C( 250 2(. 250 (.5 250 (.5	.5)	Wabana, N. F. Atlanta, Ga. Urbana, III. Providence, R. I. Fairmont, W. Va.	The Gaiety Theatre Southern Broadcasting Co. University of Illinois The Outlet Co. A. M. Rowe, Inc.
900 1	cilocy	cles	333.	1 meters	954
KGBU KHJ WBEN WJAX WKY WLBL	ak ae 16 ae 16 aeh 16 ae 16	500 000 CT 000 R 000 N 000 N		Ketchikan, Alaska Los Angeles, Calif. Buffalo, N. Y. Jacksonville, Fla. Oklahoma City, Okl Stevens Point, Wis.	Alaska Radio & Service Co. Don Lee Broadcasting System WBEN, Inc., Buffalo Evening News
910 1	cilocy	cles	329.	6 meters [	6 1. 34
CFQC CFLC* TICR VOGY	ae i z z	500 100 915 50 911		Saskatoon, Sask. Prescott, Ont. San Jose, Costa Rica St. John's, N. F.	The Electric Shop, Ltd. Radio Association of Prescott
***XEW		000		Mexico City, Mexico	Cadena Radio-difusora Mexicana S. A.
	cilocy			9 meters	April Post was Consider
CMCD CMDE HHK KFEL KFXF KOMO KPRC WAAF WBSO WWJ	z 10 ak 8 ae 8 aj 10 ae 10 ak 8 ae 5	250 925 250 925 300 1 500 1 500 N 500 N 500 D 600 D	2.5)	Havana, Cuba Havana, Cuba Port au Prince, Haiti Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Babson Park, Mass. Detroit, Mich.	Angel Bertematy y Garcia Evilio Villar I Republic of Haiti Gene O'Fallon (Albany Hotel) Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. (Houston Post) Drovers Journal Publishing Co. Broadcasting Service Org., Inc. The Detroit News
930 k	ilocy	cles	322.4	4 meters	6, 3. 1, 1
CFCH CFRC CKX CMJF KFWI KGBZ KMA KROW WBRC WBRC WDBJ	ak ak 5 z 2 aj 5 ak 5 ae 5 ak 5 ak 5 ak 5	00 3LN 50 3(.2 600 E  00 1 00 2(1) 00 2(1) 00 1(1) 00 C(1 50 C(.5		North Bay, Ont. Kingston, Ont. Brandon, Manitoba Camaguey, Cuba San Francisco, Calif. York, Neb. Shenandoah, Iowa Oakland, Calif. Birmingham, Ala. Roanoke, Va. Glenside, Penna.	Northern Supplies, Ltd. Queen's University Manitoba Telephone System John L. Stowers Radio Entertainments, Ltd. Dr. Geo. R. Miller Earl E. May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Bdctg. Co., Inc. Times-World Corp. WIBG, Inc. (Keswick Bldg.)
940 k	ilocy	cles	319.0	) meters 🛚	943
KOIN WAAT WCSH WDAY WFIW WHA XEFO®	zk 10	00 CT 00 D 00 R(2 00 N 00 C 00 D	5) I	Portland, Ore. Jersey City, N. J. Portland, Maine Fargo, No. Dakota Hopkinsville, Ky. Madison, Wis. Mexico City, Mexico	KOIN, Inc. (New Heathman Hotel) Bremer Broadcasting Corp. Congress Square Hotel Co. WDAY, Inc. (Black Bldg.) WFIW, Inc. University of Wisconsin National Revolucionario Party
950 k	ilocy	cles	315.6	meters [	954
CMHD KFWB KGHL KMBC VONA WRC	z 2 ak 10 ak 10 ak 10 z 1	50 00 00 NJ(	(2.5) I	Caibarien, Cuba os Angeles, Calif. Sillings, Mont. Kamsas City, Mo. St. John's, N. F. Washington, D. C.	Manual Alvarez Warner Bros. Broadcasting Corp. Northwestern Auto Supply Co. Midland Bdctg. Co. (Pickwick Hotel) Lane, Gillard & Avery National Broadcasting Co., Inc.
960 k	ilocy	eles	312.3	3 meters 🗌	764
CHCK CHWC CKCK CKNC CMBC CMJL XED YVIBC —XEAW®	ak 5 ak 5 z 1 aeh 1 z 100 z	00 3FL 00 3FL 00 M 50 965 50 965 50 965	F	Charlottetown, P.E. I. Regina, Sask. Regina, Sask. Foronto, Ont. Havana, Cuba lavana, Cuba lavana, Cuba lavana, Wenezuela Wenezuela	J. A. Gesner & W. E. Burke R. H. Williams & Sons, Ltd. Leader Post, Ltd. (Leader Bldg.) Canadian National Carbon Co., Ltd. Efigenio Oliver Domingo Fernandez Enrique Artimes International Broadcasting Co.

INDER DI INDQUENCIES	III D DIIID I (CIVIDDIA)
970 kilocycles 309.1 meters	97
KJR ae 5000 N Seattle, Wash. WCFL ak 1500 RX Chicago, III.	Northwest Broadcasting System, Inc. Chicago Federation of Labor
980 kilocycles 305.9 meters	98
CFCN ak 10000 985FL Calgary, Alberta	The Voice of the Prairies, Ltd.
CMGF z 100 987 Matanzas, Cuba KDKA ak 50000 B Pittsburgh, Pa.	Bernabe R. de la Torre Westinghouse Elec. & Mfg. Co.
990 kilocycles 302.8 meters	99
WBZ ak 25000 BA Boston, Mass. WBZA ak 1000 BA Springfield, Mass. XEK z 101 Mexico City, Mexico	Westinghouse Elec. & Mfg. Co. Westinghouse Elec. & Mfg. Co. Arturo Martinez
1000 kilocycles 299.8 meters	97.
KFVD ak 250 Dn Los Angeles, Calif	f. Los Angeles Broadcasting Co. KCI Central Broadcasting Co.
WOC ak 5000 RAX Davenport, Iowa	Central Broadcasting Co.
AND WORK at 1000 D York, Pa.	York Broadcasting Co.
XEC z 50 Toluca, Mexico XEE z 105 Oaxaca, Oax., Mex	vice Alfoneo Zorillo R
XEFE z 100 N. Laredo, Tams., XEFI z 100 Chihuahua, Mexic	Mex. Rafael T. Carranza co Feliciano Lopez Islas
XEFI z 100 Chihuahua, Mexic XEFS z 40 Queretaro, Mexico	o Salvador Sandhez DIA
XEJ ak 100 K Juarez, Mexico	Juan G. Buttner & Leo Allande
XEL ak 25 Saltillo, Mexico XETC z 160 Jalapa, Ver., Mexi	Antonio Garza Castro y J. T. Perez ico Juventino Sanchez
XEIG Z 100 1orreon, Coah., N	Mex. Feliciano Lopez Islas
XEU ak 100 1007K Veracruz, Mexico XEV z 100 Puebla, Pue., Mex	Baltasat Pazos Sosa c. Ciro Molina
XEY z 105 Merida, Yuc.	Partido Socialista S. E.
1010 kilocycles 296.8 meters	100
CKIC ak 50 Wolfville, N. S.	Acadia University
CMBZ ak 150 Havana, Cuba CMCX z 150 Havana, Cuba KGGF ak 500 2(1) Coffeyville, Kans.	Manuel & Guillermo Salas Diario "El Mundo"
KGGF ak 500 2(1) Coffeyville, Kans.	Powell & Platz
KQW ae 500 T San Jose, Calif.  WHN ae 250 1 New York City	Pacific Agricultural Foundation, Ltd. Marcus Loew Booking Agency
WIS ae 500 N(1) Columbia, S. C.	South Carolina Bdctg. Co., Inc.
WNAD/\ ae 500 2 Norman, Okla. WPAP ae 250 1a New York City	University of Oklahoma  Jersey Boulevard Corp.
■WQAO ae 250 la New York City	Jersey Boulevard Corp.
WRNY z 250 1 New York City	Aviation Radio Station, Inc.
1020 kilocycles 293.9 meters	University of Oklahoma Jersey Boulevard Corp. Jersey Boulevard Corp. Aviation Radio Station, Inc.
WKXW ae 10000 N Chicago, III. WRAX ae 250 D Philadelphia, Pa. XEFD z 300 Tiajuana, Mex.	Westinghouse Elec. & Mfg. Co. (KFKX) WRAX Broadcasting Co. Carlos de la Sierra
1030 kilocycles 291.1 meters	/02
CFCF ae 500 NG Montreal, Que.	Canadian Marconi Co.
CMHI ck 30 a Santa Clara, Cub	a Laviz & Paz
CMKC z 150 1034a Santiago de Cuba CNRV ak 500 Vancouver, B. C.	Pinol Batlle y Co. Canadian National Railways
XEB ak 1000 Mexico City, Mexico	ico El Buen Tono, S. A.
1040 kilocycles 288.3 meters	1031
CMGH z 15 Matanzas, Cuba KRLD ae 10000 1C Dallas, Tex.	O. y J. Alvarez KRLD Radio Corp. (Adolphus Hotel)
KRLD ae 10000 1C Dallas, Tex.  KTHS ae 10000 1N Hot Springs, Ark.	. Chamber of Commerce
WKAR ae 1000 D East Lansing, Mid	ch. Michigan State College
1050 kilocycles 285.5 meters	104
CMJG z 50 Camaguey, Cuba KFBI ae 5000 Dn Abilene, Kans.	Jose Antonio Lefran Farmers & Bankers Life Ins. Co.
KNX ae 25000 X Hollywood, Calif.	Western Broadcast Co.
XEFC z 10 Merida, Yuc. XES adk 500 1055K Tampico, Mexico	Hugo Molina Font Wendell Cox
1110 uon oo 10001 Immpleo, Mexico	CLICOLI COA

					•			
1060	kilo	cycle	es	282	.8 meters	105		
KWJJ -WBAL	z	500	Dn		Portland, Ore.	KWJJ	Broadcast Co., I idated Gas, Elec	nc.
WJAG	ak	10000 1000	1B Dn		Baltimore, Md. Norfolk, Neb.	Norfol	lidated Gas, Elec k Daily News	. L. & Pwr. Co.
₩JAG ₩TIC	ak	50000	1R		Hartford, Conn.		ers' Bdctg. Service	e Corp.
<b>1070</b> 1	kilo	-	es		.2 meters	106		
CMBG CMCB	z af	225 150		••	Havana, Cuba Havana, Cuba		Stowers politan-Radio de	Cuba
KJBS WCAZ	ae	100	D		San Francisco, Cali	f. Julius	Brunton & Sons	Co.
WCAZ WDZ · WTAM	ae ak	50 100	D D		Carthage, Ill. Tuscola, Ill.	James	or Bdctg. Service L. Bush al Broadcasting	, inc.
₩TAM XEG	ak :	50000 250	R	-	Cleveland, Ohio Mexico City, Mexico	Nation Miguel	al Broadcasting ( Yarza	Co., Inc.
1080	- kilo		es		.6 meters	106+	T	T
→WBT		25000	CU		Charlotte, N. C.		WBT. Inc.	
WCBD WMBI	ae ck	5000 5000	1Dn 1Dn		Zion, III.	Wilbur	n WBT, Inc. Glenn Voliva Bible Institute	
					Chicago, Ill.	Moody	bible institute	
1090					.1 meters	100	10. 7	
KMOX	ak :	50000	С		St. Louis, Mo.	_	of St. Louis, Inc.	
<b>1100</b> 1	kilo	cycle	es	272	.6 meters	801		
KGDM	ak	250	D	5	Stockton, Calif. New York City	E. F. P	effer	
→WLWL →WPG	ae ae	5000 5000	1 1C	]	New York City Atlantic City, N. J.	Mission Munic	nary Society of Si ipality of Atlanti	t. Paul c City
1110	kilo				1 meters	189		<del>_</del>
	z	15			Ciego de Avila, Cub	a Rev-Bo	orges	·
CMJO KSOO VONF WRVA	ae	1000 500	Dn(2	2.5)	Sioux Falls, So. Dak St. John's, N. F. Richmond, Va.	. Sioux I	Falls Broadcast A	ssn., Inc.
WRVA	ae	5000	1115 N	ì	Richmond, Va.	Larus &	& Bros. Co., Inc.	
XENT	_	50000	1115	1	Neuvo Laredo, Mex.	Norma	n T. Baker	
1120 1	kilo	eyele	es	267	.7 meters [	116		
-CFCA	ak ak	500 100	G EL	1	Foronto, Ont.	Toront	o Daily Star Imloops Sentinel	
CFJC -CHGS	ce	100	vx	3	Kamloops, B. C. Summerside, P. E. Lethbridge, Alta.	ı. R.T.F	Iolman, Ltd.	40,-
CJOC CMHJ	ak ae	100 40	1125			Harold Victori	R. Carson no Lopez (Hotel	Bristol)
KFIO	ae	100	D		Spokane, Wash.	Spokar	e Broadcasting (	Corp.
₩KFSG₩ —KRKD	ak aeh	500 500	3	1	Los Angeles, Calif. Los Angeles, Calif.	Echo P Dalton	ark Evangelistic 's, Inc. (Arcade E	Assn. Bldg.)
KRSC	ak	100	D		Seattle, Wash.	Radio 8	Sales Corp. (Wasi	ı. Ath. Club)
WDEL	ak aj	500 250	2C (.5) 1C	1	Houston, Tex. Wilmington, Del.	WDEL,	Broadcasting Co. Inc.	
WHAD	ae	250 250	ic	1	Milwaukee, Wis.	Marque	ette University an Radio News C	'orn
WISN WTAW(≬	ak ae	500	1C 2	(	Wilmington, Del. Milwaukee, Wis. Milwaukee, Wis. College Station, Tex	as Agricul	an Radio News C tural & Mech. C	ollege
1130 1	kiloo	eycle	es		3 meters	111 ====	<u> </u>	-
→KSL	ae 5	50000	С	5	Salt Lake City, Utal	Radio S	Service Corp. of U	Jtah
WJJD WOV	ze 2 ae	20000 1000	Dn D	1	Chicago, Ill. New York City	WJJD, Interna	Inc. (Palmer Ho ational Broadcast	use) ting Corp.
XEH	ak	1000	1132	Î	Monterrey, Mexico	Tarnav	a & Cia	J F.
1140 1	kiloo	eycle	es	263.	0 meters	11,3		
CMBJ CMBW	z	150	••••	. I	Iavana, Cuba Iavana, Cuba	Emilio Alvarez		i2
KVOO WAPI	z ae	150 5000	iN	- 1	l'ulsa, Okla.	Southw	vestern Sales Cor	p. "
<b>─</b> WAPI <b>─</b> XETA	aj z	5000 500	1N	I	Birmingham, Ala. Mexico City, Mexico	WAPI I Manue	Broadcasting Cor I Espinosa Tagle	р.
1150 1	-		 es		7 meters	113		
CMJH	ak	50			_	1 4	arauri Mendoza	
WHAM XEA	ae ak	5000 500	BX K115	, į	Ciego de Avila, Cuba Rochester, N. Y. Guadalajara, Mexico	Stromb	erg-Carlson Tel. onografica de Gua	Mfg. Co.
10-AT	ak z	25	1155	7	rail, B. C.	Trail A	mateur Radio As	
					EE01			

	]	NDE	X BY	FREQUENCIES AN	ID DIAL NUMBERS	
1160	kilo	cycle	es 2	58.5 meters	114	
-wowo -wwva	ae ae	10000 5000	IC IC	Fort Wayne, Ind. Wheeling, W. Va.	Main Auto Supply Co. West Virginia Broadcastin	g Corp.
1170	kilo	cycle	es 2	56.3 meters	113	
-WCAU	z ae	50 50000	11 <b>75</b> C	Camaguey, Cuba Philadelphia, Pa.	Manuel Fernandez Universal Broadcasting Co	rp.
1180	kilo	cycl		54.1 meters	116	
CMW KEX KOB WDGY WINS WMAZ	ae ak ae ak ae ak	1400 5000 10000 1000 500 500 5 60	1185 2N 2 Dn	Havana, Cuba Portland, Ore. Albuquerque, N. M. Minneapolis, Minn. New York City Macon, Ga.	Troncoso y Gil National Broadcasting Co. N. M. Coll. of Agr. & Mech George W. Young American Radio News Cor Southeastern Broadcasting	anical Arts p.
	kilo		es 2	252.0 meters	11'6	
-WOAI	aeh	50000	N	San Antonio, Texas	Southern Equipment Co.	
	kilo	cycl	es 2	249.9 meters	118	
CHCH CKOV CMGB KBTM KERN KFJB KFWF KFXD KGDY KGEK KGEY KGFJ KGFJ KGVO KMLB KVOS KWG WABI	z az akkka ae aekkke ae aekkke ae aekkke ae aekkke ae aek	100 100 30 100 100 100 100 100 100 100 1	1205 D CT (.25) 5 (.25)	Montreal, Que. Kelowna, B. C. Matanzas, Cuba Paragould, Ark. Bakersfield, Calif. Marshalltown, Iowa St. Louis, Mo. Nampa, Idaho Fergus Falls, Minn. Huron, S. D. Yuma, Colo. Ft. Morgan, Colo. Los Angeles, Calif. Little Rock, Ark. Missoula, Mont. Monroe, La. Bellingham, Wash. Stockton, Calif. Bangor, Maine	Montreal Radio Corp. Okanagan Broadcasters, L Jose Anorga Beard's Temple of Music Bee Bakersfield Broadcasti Marshall Electric Co., Inc. St. Louis Truth Center, Ir Frank E. Hurt (R/C Boise) Jaren Drug Co. Voice of South Dakota, In Beehler Electrical Equipm City of Fort Morgan Ben. S. McGlashan O. A. Cook Mosby's, Inc. Liner's Broadcasting Stati KVOS, Inc. McClatchy Newspapers First Universalist Society	ing Co. inc. KCYS. 1210 c. MTRS. 247.8 DIAL
WABI WABZ WBBZ WCAT WCAT WCAZ WCOD WFAM WFBE WHBY WIBY WIBY WIBY WJBU WKJC WJBW WKJC WNBO WNBO WNBO WNBW WORC WPHR WABE 10-AB 10-BP 10-BU 10-BU	akkkkkk aaakkkkk aaaakk aaaaaaaaaaaaaa	100 100 100 100 100 100 100 100 100 100	i	Bangor, Maine New Orleans, La. Ponca City, Okla. Huntsville, Ala. Rapid City, S. D. Burlington, Vt. Janesville, Wis. Harrisburg, Pa. South Bend, Ind. Cincinnati, Ohio Canton, Ohio Green Bay, Wis. Utica, N. Y. St. Louis, Mo. LaSalle, Ill. Decatur, Ill. New Orleans, La. Lancaster, Pa. Louisville, Ky. Washington, Pa. Carbondale, Pa. Worcester, Mass. Petersburg, Va. Columbus, Ga. Hammond, Ind. Moose Jaw, Sask. Stratford, Ont. Prince Albert, Sask. Wingham, Ont. Brantford, Ont. Canora, Sask.	First Universalist Society Samuel D. Reeks C. L. Carrell (R/C various Radio Station WBHS, Inc. State School of Mines Burlington Daily News WCLO Radio Corp. (R/C I Keystone Broadcasting Co South Bend Tribune (WSI The Post Publishing Co., 6 Edward P. Graham St. Norbert College (Bellin WIBX, Inc. Missouri Broadcasting Co Kaskaskia Broadcasting Co Kaskaskia Broadcasting Co Commodore Broadcasting Co Commodore Broadcasting Co Spriggs Symplex WNBW, Inc. A. F. Kleindienst WLBG, Inc. WRBL Radio Station, Inc. Hammond-Calumet Bdctg Moose Jaw Radio Assn. M. I. Higgins Elec. & Radi Prince Albert Radio Club W. T. Cruickshank Tom Brown & Harold Bro Canora Radio Assn.	Beloit)  Prop.  Bop.  Bldg.)  Prop.  Bldg.)  Prop.  Bldg.)  Prop.  Bldg.)  Bld
CFCO	ak	250	8G	Chatham, Ont.	John Beardall (Wm. Pitt I	7-4-1\

1	NDE	X BY F	REQUENCIES AND	DIAL NUMBERS
CJOR ak	500	Е	Vancouver, B. C.	George C. Chandler
CKMC ak	100	8	Cobalt, Ont.	George C. Chandler R. L. McAdam E. M. Woody (Casa Grande Hotel) KDLR, Inc. KFJI Broadcasters, Inc.
KASA ≔ ak	100		Elk City, Okla. Devils Lake, N. Dak. Klamath Falls, Ore.	E. M. Woody (Casa Grande Hotel)
KDLR ak	100	·····	Devils Lake, N. Dak.	KDLR, Inc.
KFJI ak KFOR ak	100 100	(.25)	Lincoln, Neb.	Howard A. Shuman
KFPW ak	100		Fort Smith, Ark.	Southwestern Hotel Co.
T/EV/C	100	6	Cape Girardeau, Mo.	Oscar C. Hirsch J. C. & E. W. Lee
★KFXM ak	100	9	Cape Girardeau, Mo. San Bernardino, Calif.	J. C. & E. W. Lee
KGCR ah	100	• • • • • •	Watertown, S. Dak.	Greater Kampeska Radio Corp.
KFXM ak KGCR ah KGNO ak KGY ak KIEM z	100 100	• • • • • • • • • • • • • • • • • • • •	Dodge City, Kans. Olympia, Wash. Eureka, Calif.	Dodge City Broadcasting Co. KGY, Inc. (Capitol Park Bldg.) Harold H. Hanseth
KIEM z	100	ĎP	Eureka, Calif.	Harold H. Hanseth
KPPC ak	50	9	Pasadena, Calif.	Pasadena Presbyterian Church
KWEA z	100		Shreveport, La. Zanesville, Ohio	Hello World Broadcasting Corp.
WALR ae WBAX ae	100 100	i · · · · ·	Wilkes Barra Da	WALR Broadcasting Corp.
WBBL ak	100	7S	Wilkes-Barre, Pa. Richmond, Va. Springfield, Ill. Chicago, Ill.	John H. Stenger, Jr. (Morris Bldg.) Grace Covenant Pres. Church WCBS, Inc.
WCBS ak	100	2 4	Springfield, Ill.	WCBS, Inc.
WCRW ae	100	4	Chicago, Ill.	Clinton R. White
WEBQ, ae WEDC z	100 100	6	Harrisburg, Ill.	Harrisburg Broadcasting Co.
WEDC z WFAS x ak	100	3	White Plains N. Y.	Emil Denemark, Inc. Westchester Broadcasting Corp.
WGBB ae	100	3	Freeport, N. Y.	Harry H. Carman
WGCM ae WGNY z	100	5	Gulfport, Miss.	Great Southern Land Co.
	50	P	Chester Twp., N. Y.	Peter Goelet
WHBF ae ₩WHBU aj	100 100		Chicago, III. Chicago, III. White Plains, N. Y. Freeport, N. Y. Gulfport, Miss. Chester Twp., N. Y. Rock Island, III. Anderson Ind	Beardsley Specialty Co. (Harms Hotel) Anderson Broadcasting Corp.
₩WHBU aj ₩WHET ak	100	Ď	Anderson, Ind. Troy, Ala.	Troy Broadcasting Co.
TOTT	100		Poynette, Wis.	Wm C Formert
₩JBI ak	100	3	Red Bank, N. J.	Monmouth Broadcasting Co., Inc.
oon WJBU ae √oo WJBY≎ aeh	100	1	Lewisburg, Pa. Gadsden, Ala.	Will. C. Portest Monmouth Broadcasting Co., Inc. Bucknell University Ingrams Broadcasting Co. A. V. Tidmore
WJEJ/ z	100 100	PD	Hagerstown, Md.	A. V. Tidmore
WJW ae	100	5	Akron, Ohio	John F. Weimer
WKFI ak	100	5	Greenville, Miss. Richmond, Va.	J. Pat Scully
₩MBG aj WOCL ak	100 50	7C •	Richmond, va.	Havens & Martin, Inc. A. E. Newton
WOMT ae	100		Manitowoc, Wis.	Francis Mangin Kadow
≪WPAW αlr	100	a	Jamestown, N. Y. Manitowoc, Wis. Providence, R. I.	Cherry & Webb Broadcasting Co. Cherry & Webb Broadcasting Co.
WPRO ak	100	a	Providence, K. I.	Cherry & Webb Broadcasting Co.
WQDXO z	100 100	4	Thomasville, Ga. Chicago, Ill.	Stevens Luke World Bettery Co. Inc.
WODXO z WSBC z WSEN ak WSIX ae WSOCO ae	100	*	Columbus, Ohio Springfield, Tenn. Gastonia, N. C.	World Battery Co., Inc. Columbus Bdctg. Corp. (Seneca Hotel) 638 Tire & Vulc. Co. (R/C WLW) WSOC, Inc. WTAX, Inc.
WSIX ae	100		Springfield, Tenn.	638 Tire & Vulc. Co. (R/C WLW)
WSOC <sup>65</sup> ae WTAX ae	100 100	2	Gastonia, N. C.	WSOC, Inc.
WTAX ac XEX z	500	2	Springfield, Ill. Mexico City, Mexico	Excelsior, Cia Editorial S. A.
_ ',				
4000 1 11		- 4		
1220 kilo	cycl	es 24:	5.8 meters	119
CMHK z	15	1225	Cruces, Cuba	V. Villaneuva
KFKU ae	500	1 2 2(2)	Lawrence, Kans. Seattle, Wash.	University of Kansas
KTW z	1000	2	Seattle, Wash.	First Presbyterian Church
-KWSC ae WCAD ak	1000 500	2(2) D	Pullman, Wash. Canton, N. Y.	State College of Washington
WCAD ak WCAE ae	1000	R P	Pittsburgh Pa	St. Lawrence University WCAE, Inc. and Sun-Telegraph
WDAE ak	1000	R C	Pittsburgh, Pa. Tampa, Fla.	Tampa Daily Times (Tampa Terrace)
-WREN× ak	1000	1B	Lawrence, Kans.	Jenny Wren Co.
				• ,
1230 kilo	cvc1	es 24	3.8 meters 🗀	120
		- D-TC		
CMBY z	350	• • • • • •	Havana, Cuba	Callejas-Estefani
₩CMCA z	150 250	• • • • • •	Havana, Cuba Anchorage, Alaska	Manuel Cruz Anchorage Radio Club, Inc.
KFOD aj KGGM ak	250 250	(.5)	Albuquerque, N. M.	New Mexico Broadcasting Co.
	1000	(.5) N	Albuquerque, N. M. San Francisco, Calif. Indianapolis, Ind.	Pacific Broadcasting Co.
WFBM ach	1000 1000	ÎC CH	Indianapolis, Ind.	Indianapolis Power & Light Co.
wwWNAC ae WSBT ak	500	1C	Boston, Mass. South Bend, Ind.	Shepard Broadcasting Service, Inc. South Bend Tribune (WFAM)
XETQ z	100		Mexico, Mexico	Carlos G. Caballero
12/0 1/10	03701	00 24	1 8 motors	1001
1240 kilo	-		1.8 meters	130
CMAB z KGCU ak	20 250	1249	Pinar del Rio, Cuba	Jose Silvera
KGCU ak ~KLPM × ak	250 250	3 3	Mandan, N. Dak. Minot, N. Dak.	Mandan Radio Assn. John B. Cooley
un	200	•		

KTAT KTFI WAEO WKAQ WXYZ	ak ak ak ae ak	1000 500 1000 1009 1000	1 iC	Fort Worth, Texas Twin Falls, Idaho Waco, Texas San Juan, P. R. Detroit, Mich.	KTAT Broadcast Co., In Radio Broadcasting Cor Central Texas Broadcast Radio Corp. of Porto Ric Kunsky-Trendle Broadca	20	-
1250	kilo	cyc1	es 23	9.9 meters	121	T -	
KFMX KFOX WAAM WCAL WDSU WGCP WLB WODA WRHM XEFA	aj ae ae ak ak ak ak	1000 1000 1000 1000 1000 250 1000 1000 250	2 CT 1(2.5) 2 C 1 2	Northfield, Minn. Long Beach, Calif. Newark, N. J. Northfield, Minn. New Orleans, La. Newark, N. J. Minneapolis, Minn. Paterson, N. J. Minneapolis, Minn. Mexico City, Mexico	Carleton College Nichols & Warinner, Ind WAAM, Inc. St. Olaf College Jos. H. Uhalt May Radio Broadcasting University of Minnesota Richard E. O'Dea Minnesota Broadcasting Manuel F. Murguia	; Co.	
1260	kilo	cyc1	es 23	8.0 meters	122		
CMJI KOIL KRGV KVOA KWWG WNBW	ae	1000 500 500 500 500 250 500	5 B 1 P 1 C(1) D CU	Ciego de Avila, Cuba Council Bluffs, Iowa Harlingen, Texas Tucson, Arizona Brownsville, Texas Erie, Pa. Springfield, Vt. Savannah, Ga.	Gilberto Gessa Lopez Mona Motor Oil Co. KRGV, Inc. (Rio Grande Robert M. Riculfi Frank P. Jackson Broadcasters of Pennsyl WNBX Broadcasting Co. Savannah Broadcasting	vania, Inc.	
1 <b>270</b>	kilo	cyc1	es 23	6.1 meters 🗌	/흝'님 <u></u>		
CMBD CMCN CMJN KGCA KOL KVOR WULC WASH WESG WFBR WJDX	z z z ak ae ak ae ak ae ak	150 250 50 100 1000 1000 1000 500 1000 500	D2 CT CD a D R N a	Havana, Cuba Havana, Cuba Camaguey, Cuba Decorah, Iowa Seattle, Wash. Colorado Springs, Col. Decorah, Iowa Grand Rapids, Mich. Elmira, N. Y. Baltimore, Md. Jackson, Miss. Grand Rapids, Mich.	Luis Perez Garcia Antonio Ginard E. de Ugarriza Chas. W. Greenley Seattle Broadcasting Co Reynolds Radio Co., Inc Luther College Kunsky-Trendle Broadc Cornell University Baltimore Radio Show, Lamar Life Insurance C Kunsky-Trendle Broadc	asting Corp. Inc. o.	KYCS.
1280	kilo	cyc1	es 23	4.2 meters	1234		1300
WCAM WCAP WDOD WIBA WOAX WRR	aeh aeh ae ae ae aeh aeh	1000 500 500 1000 500 500 500	(2.5) 1C C(2.5) N(1) 1	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Trenton, N. J. Dallas, Texas	Buttrey Broadcast, Inc. City of Camden (City H. Radio Industries Broadc WDOD Bdctg. Corp. (Ho Badger Broadcasting Co Trenton Broadcasting C City of Dallas (Hilton H.	ail Tower) ast Co. tel Patten) ., Inc.	MTRS. 230.6 DIAL
1290	kilo	cyc1	es 23	2.4 meters 🗌	125		ļ
CMHIL KDYL KFCL KLCN KTSA WEBC WJAS WNBZ	z ak ak z ak ae ak z	20 1000 500 50 1000 1000 1000 50	N 1 D 1C(2.5) N(2.5) C(2.5) D	Clenfuegos, Cuba Salt Lake City, Utah Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y.	Oscar Zayas Intermountain Broadca: News Publishing Co. (Buc C. L. Lintzenich Lone Star Broadcast Co. Head of the Lakes Broad Pittsburgh Radio Supply Smith & Ms ce	(Plaza Hotel) (casting Co.	CUT OUT ON
1300	kilo	cycl	es 230	0.6 meters	1		מַל
CMKJ KALB KFAC KFH   KFJR; WBBR WFAB WHAZ WWHAZ WWOO WOO XEM	z ak aj ae aej ae z ae aeh ae	20 500 1000 1000 - 500 1000 500 1000 500 1000 250	3C C 3 1 1 1 1 N	Guantanamo, Cuba Portland, Ore. Los Angeles, Calif. Wichita, Kans. Portland, Ore. Brooklyn, N. Y. New York City New York City Troy, N. Y. Miami, Fla. Kansas City, Mo. Tampico, Tams, Mex.	Luis Morlote KALE, Inc. Los Angeles Broadcastin Wichita Eagle—Hotel Le Ashley C. Dixon—KFJR, Peoples Pulpit Assn. Debs Memorial Radio Fu Defenders of Truth ocoic Rensselaer Polytechnic I Isle of Dreams Broadcast Unity School of Christia Maria T. de Gutirrez	nstitute	DOTTED LINES

	INDEX BY F	REQUENCIES AN	D DIAL NUMBERS
1310 kilo			1264
CMJP z KCRJ ak KFBK ak	7.5 100 D	Moron, Cuba Jerome, Arizona	Cesar Canals Chas. C. Robinson Jas. McClatchy Co.
KCRJ ak KFBK ak	100 D 100 C	Sacramento, Calif.	Les McClatchy Co
≪KFGQ∗ ak	100 7	Rooma Ioma	Boone Biblical College
KEPI ck	100	Dublin, Texas Greenville, Texas Grand Junction, Colo.	C. C. Baxter
KFPM ae	15	Greenville, Texas	New Furniture Co.
KFXJ ak	100 100 (.25)_		Western Slope Broadcasting Co.
KFXR ak KFYÖ z	100 (.25) 100 (.25)Z	Okianoma City, Okia.	
*™KGBX - ae	100 (.25)Z 100	Lubbock, Texas	T. E. Kirksey KGBX, Inc. First State Bank of Vida Donald C. Treloar Control Nebroles Belgts, Com-
KGBX ae KGCX ak KGEZ aj	100 (.25)	Springfield, Mo. Wolf Point, Mont. Kalispell, Mont.	First State Bank of Vida
KGEZ aj	100	Kalispell, Mont.	Donald C. Treloar
KGFW ah	100	Kearney, Neb. Yakima, Wash. Medford, Ore.	
KIT ak	100	Yakima, Wash.	Valley Broadcasters, Inc.
KMED ak KRMD ak	100 100	Shravaport I a	Valley Broadcasters, Inc. Mrs. W. J. Virgin KRMD, Inc. (Jefferson Hotel)
KTSM z	100 100 a	Shreveport, La. El Paso, Texas	Tri-State Broadcasting Co., Inc.
KXRØ ak	100	Aberdeen, Wash.	KXRO, Inc. (Hotel Morck)
WBEO z WBOW ak	100	Marquette, Mich.	Lake Superior Broadcasting Co. Banks of Wabash, Inc. Louis G. Baltimore
WBOW ak	100	Terre Haute, Ind.	Banks of Wabash, Inc.
-WBRE z	100	Wilkes-Barre, Pa.	Louis G. Baltimore
WCLS ae	100 b	Joliet, Ill.	WCLS, Inc.
WDAH z WEBR ae	100 a 100 Q(.25)	Buffalo N V	Tri-State Broadcasting Co., Inc. Howell Broadcasting Station
-WEXL ak	50 100 3	El Paso, Texas Buffalo, N. Y. Royal Oak, Mich.	Royal Oak Broadcasting Co.
-WFBG ae	100 3	Altoona, Pa.	Royal Oak Broadcasting Co. The William F. Gable Co.
WFDF ae	100	Flint, Mich.	Frank D. Fallain (Union Ind. Bldg.)
WGAL ae	100 5	Lancaster, Pa. Newport News, Va. Philadelphia, Pa.	WGAL, Inc. (Lancaster Newsp. Bldg.
WGH ae	100	Newport News, Va.	Hampton Roads Broadcasting Corp.
₩HAT ak WIAS ak	100 4 100 7 100 3	Ottumbra Jorg	Independence Broadcasting Co.
WJAC ac	100 3	Ottumwa, Iowa Iohnstown Pa	Iowa Bdctg. Co. (Hotel Ottumwa) WJAC, Inc.
WJAC ae WKAV ae WKBB ae	100	Johnstown, Pa. Laconia, N. H. Joliet, Ill.	Laconia Radio Club
WKBB ae	100 bYZ	Joliet, Ill.	Laconia Radio Club Richard W. Hoffman
WKBC z	100	Birmingham, Ala.	R. B. Broyles Furniture Co.
WKBS z	100	Galesburg, Ill.	Permil N. Nelson
WLBC ak WMBO ak	50 6 100	Muncie, Ind. Auburn, N. Y.	VAPO Inc. (Marginia Temple)
WMBO ak WNBH ae	100 H(.25)	New Bedford, Mass.	D. A. Burton—A. J. Marriott WMBO, Inc. (Masonic Temple) New Bedford Bdctg. Co. (N. B. Hotel) American Broadcasting Co.
WOL ae	100	Washington, D. C.	American Broadcasting Co.
WRAW ak	100 5X	Reading, Pa.	Reading Broadcasting Co. Stuart Bdctg. Co. (Farragut Hotel) Grove City College Winston-Salem Journal Co. Foulkrod Radio Eng. Co., Inc. Stup Bublishing Co. (Sup. Bldg.)
WROL ak	100	Reading, Pa. Knoxville, Tenn.	Stuart Bdctg. Co. (Farragut Hotel)
WSAJ ae WSAJ ae WTEL ae WTEL ae WTJS ak WTRC ak	100 100 C	Grove City, Pa. Winston-Salem, N. C.	Grove City College
●WSJS to ae ■WTEL ae	100 4	Philadelphia, Pa.	Foulkrod Radio Fra Co. Inc.
WTJS ak	100 4	Jackson, Tenn.	Sun Publishing Co. (Sun Bldg.)
→WTRC ak	50 6	Elkhart, Ind.	Sun Publishing Co. (Sun Bldg.) Elkhart Daily Truth
WISL Z	100	Jackson, Tenn. Elkhart, Ind. Laurel, Miss.	G. A. Houseman
XEFB ak	100 1315	Monterrey, N. L., Mex.	Quintanilla y Stevenson
XEI ak	150	Morelia, Mexico	Carlos Gutierrez M.
1320 kilo	cycles 227	7.1 meters	74.
CMCR z	150 1325	Havana, Cuba	Aurelio Hernandez
<b>∽</b> KGHF ak	250 (.5)	Havana, Cuba Pueblo, Colo.	C. P. Ritchie & J. E. Finch
KGMB ak	250 C 250 (.5)	Honolulu, Hawaii Idaho Falls, Idaho	Honolulu Broadcasting Co.
KID ae	250 (.5) 1000 C	Idaho Falls, Idaho	KID Broadcasting Co., Inc.
WADC ae		Akron, Ohio	Allan T. Simmons
₩SMB ( ae	500 N	New Orleans, La.	WSMB, Inc.
1220 1 11	1 00/	4	
1330 kilo	cycles 225	5.4 meters 🗀	128
→KGB ae	1000 CT	San Diego, Calif. Tacoma, Wash.	Don Lee Broadcasting System
KMO ak	250	Tacoma, Wash.	KMO, Inc. (Hotel Winthrop)
KSCJ ah WDRC ae	1000 1C(2.5) 500 CH	Sioux City, Iowa Hartford, Conn.	Perkins Bros. Co. WDRC, Inc.
→WDRC ae →WSAI ae	500 CH 500 R(1)	Cincinnati Ohio	The Crosley Radio Corp.
WTAQ ae	500 R(1) 1000 1C	Cincinnati, Ohio Eau Claire, Wis.	The Gillette Rubber Co.
	100		
1340 kilo	ovoles 22	3.7 meters	129
	•		
KFPY ae WCOA agj	1000 CT 500	Spokane, Wash.	Symons Bdctg. Co. (Symons Bldg.)
WCOA agj	1000 C	Pensacola, Fla. Toledo, Ohio	Pensacola Bdctg. Co. (San Carlos Hot.) Toledo Bdctg. Co. (Com. Perry Hotel)
			(John I orly Liotel)

	,	INDEZ	Z DI FF	CEQUENCIES AN	D DIAL NUMBERS	
1350	kilo	cycle	es 222	.1 meters	129	
KIDO	ak	1000 1000	<u>.</u>	Boise, Idaho	C. G. Phillips & Frank Hill Thomas Patrick, Inc. (Hotel Chase) Pillar of Fire	
-KWK -WAWZ	ae ae	1000 250	B 1	St. Louis, Mo. Zarenhath, N. I.	Thomas Patrick, Inc. (Hotel Chase) Pillar of Fire	
-WBNX	ae	250	la	Zarephath, N. J. New York City	New York Met. Broadcasting Corp.	
-WCDA WEHC	ae ae	250 500	la DY	New York City	Italian Educ. Bdctg. Co., Inc.	
-WMSG	ae	250	la la	Emory, Va. New York City	Emory & Henry College New York Met. Broadcasting Corp.	
1360	kilo	cycle	es 220	.4 meters	130	
		150	1365 1365	Havana .Cuba	Ramon Bardales	
CMBF CMCW CMCYX	ak ak	150 1000	1365 1365	Havana, Cuba Havana, Cuba	Jose Lorenzo M. D. Autran	
<b>∼</b> KGER	ah	1000		Long Beach, Calif.	Consolidated Bdctg. Co. (R/C Los An.)	
₩CSC	ak	500	NJ	Butte Mont.	KGIR, Inc.	
₩CSC ₩FBL	ae ak	500 1000	C(2.2)	Charleston, S. C. Syracuse, N. Y. Chicago, Ill. Gary, Ind.	So. Carolina Broadcasting Co., Inc. Onondaga Radio Broadcasting Corp.	
WGES	ae	500	C(2.2) 1(1) 1Z	Chicago, Ill.	Oak Leaves Broadcasting Station, Inc.	
<b>-</b> ₩JKS WQBC	agj ak	1000 500	12	Vicksburg, Miss.	Johnson-Kennedy Radio Corp. Delta Bdctg. Co. (Post-Herald Station)	
Q20	<b></b>	000		, 141.00 mg, 111-001		
1370	kila	cvc1e	218	3.7 meters	1301	
				Cardenas, Cuba	Genaro Sebater	
←CMGE <sup>®</sup> KCRC	ak	30 100	1375 2(.25)	Part A Otala	Enid Dedicalesses Co. (Outset Hotel)	
KFBL	aj zk	50 100	3	Emia, Okia. Everett, Wash. Grand Forks, N. Dak. Fort Worth, Texas Galveston, Texas Tucson. Arizona	Leese Bros. University of North Dakota	
KFJM KFJZ KFLX	ae	100		Fort Worth, Texas	Fort Worth Broadcasters, Inc.	
KFLX	z	100	; ; ; ; ; ;	Galveston, Texas	George Roy Clough Tucson Motor Service Co.	
KGAR KGDA	ae ak	100 100	(/	Tucson, Arizona Mitchell, S. Dak.	Mitchell Broadcasting Corp.	
KGFG	bk	100	2	Oklahoma City Okla.	Oklahoma Broadcasting Co., Inc.	
KGFL	zk ak	100 100	4	Santa Fe, N. Mex.	KGFL, Inc. (St. Angelus Hotel)	
KGKL KICA	77	100	<u>.</u>	Santa Fe, N. Mex. San Angelo, Texas Clovis, N. Mex.	KGKL, Inc. (St. Angelus Hotel) W. E. Whitmore	
KMAC KONO	ak	100	5 5	San Antonio Tevas		
KOOS KRE	ae	100 100		Marshfield, Ore.	H. H. Hanseth, Inc. (Hall Bldg.)	
KRE KUJ	ak	100	Ď	San Antonio, Texas Marshfield, Ore. Berkeley, Calif. Walla Walla, Wash.	First Cong. Church of Berkeley	
KVL	ak z	100 100	3	Seattle, Wash.	Walmac Co., Inc. (Blue Bornet Stud.) Mission Broadcasting Co. H. H. Hanseth, Inc. (Hall Bldg.) First Cong. Church of Berkeley KUJ, Inc. (Marcus Whitman Hotel) KVL, Inc.	
-KWKC WBTM	z ole	100	÷····	Seattle, Wash. Kansas City, Mo.	wilson Duncan Broadcasting Co.	
WCBM	ak ae	100 100	7 Z(.25) (.25) Y(.1)	Danville, Va. Baltimore, Md.	Piedmont Broadcasting Corp. Baltimore Broadcasting Corp.	
WDAS	aeh	100 50	(.25)	Baltimore, Md. Philadelphia, Pa. Glens Falls, N. Y.	WDAS Bdctg. Sta., Inc. (Elks Hotel) O. T. Griffin & G. F. Bissell F. C. Zieg F. P. Moler	
WGLC WGL_/	z aeh	100	C (.1)	Fort Wayne, Ind.	F. C. Zieg	
·WHBD	hk	100			F. P. Moler	
WHBQC	ak ak	100 100	( 25)	Memphis, Tenn.	Unner Michigan Broadcasting Co.	17.0370
WIRM	aeh	100	(.25) 1	Jackson, Mich.	WIBM, Inc. (Otsega Hotel)	KCYS.
WJBK WJEQ WJTL WLEY	ae z	50 100	1Q 6P	Memphis, Tenn. Calumet, Mich. Jackson, Mich. Detroit, Mich. Williamsport, Pa.	WIBM, Inc. (Otsega Hotel) James F. Hopkins, Inc. (Curtiss Bldg.) Sun-Gazette Broadcasting Co.	1380
→WJTL	ae	100		Atlanta, Ga.	Oglethorpe University Lexington Air Station	MTRS.
-WLEY	aeh	100 100	(.25) 7	Lexington, Mass.	Lexington Air Station	
WLVA WMBR	ck ak	100	,	Lynchburg, Va. Tampa, Fla.	Lynchburg Broadcasting Corp. F. J. Reynolds	217.3
WPFB	ak	100	<b>D</b>	Hattiesburg, Miss. St. Albans, Vt.	Hattiesburg Broadcasting Co.	DIAL
WQDM WRAK	evae ak	100 100	D 6	St. Albans, Vt.	A. J. St. Antoine & E. J. Regan C. R. Cummins (Penn Central Bldg.)	
~WRAM	ae 🤉	100		Williamsport, Pa. Wilmington, N. C.	Wilmington Radio Assn., Inc.	r
₩RDO :	ae 🚓	100		Augusta, Maine	WRDO, Inc. (Augusta House) Racine Bdctg. Corp. (Hotel Racine)	1
WRJN WSVS	ae ak	100 50		Augusta, Maine Racine, Wis. Buffalo, N. Y. Coyoacan, Mexico	Seneca Vocational School	12
XEFZ	ae	100		Coyoacan, Mexico	Seneca Vocational School Manuel Zetina	lū_
						ΙĞΘ
1380	kilo	cycle	es 217	'.3 meters	131	CUT OUT
CMJC	z	150	1382	Camaguey, Cuba	Feliciano Isaac	ΙÜĞ
·••KOH	ak	500	С	Reno. Nevada	McClatchy Newspapers	
KQV KSO	ak z	500 100	2 BYZ(.25)	Clarinda, Jowa	KQV Bdctg. Co. (Investment Bldg.) Iowa Broadcasting Co.	IZ
WKBH	aj	1000	1C	Pittsburgh, Pa. Clarinda, Iowa LaCrosse, Wis. Dayton, Ohio	WKBH, Inc. (Radio Bldg.) Stanley M. Krohn, Jr.	હ
WSMK XETB	ak z	200 125	2	Dayton, Ohio Torreon, Coah., Mex.	Stanley M. Krohn, Jr. Jose A. Berumen	
VEID	2	120	• • • • • •	LOLLEGIA, COMILA, IVICE.	Jose A. Delamen	•

	INDE	X DI F	REQUENCIES AN	DIAL NUMBERS
1390 ki	ilocycle	es 21	5.7 meters 🗌	132
	e 1000 ie 500	IC C	Little Rock, Ark.	Arkansas Broadcasting Co.
KUOA b	sk 1000	1	Phoenix, Arizona Fayetteville, Ark.	Nielson Radio & Sporting Goods Co. Southwestern Hotel Co. (Ft. Smith)
WHK a	e 1000	Ċ	Cleveland, Ohio	Radio Air Service Corp. (Higbee Store)
1400 1-4	100001	oo 21	4.2 meters	
1400 ki				138
CMCH a CMCM z	k 50	1405 1405	Havana, Cuba Havana, Cuba	Wifredo & Hum. Fontanals Sanchez Aurelio Balino
CMDB z	40	1405	Havana, Cuba Havana, Cuba	Iulio Powers
KLO a KOCW z	250	(.5)	Salt Lake City, Utah Chickasha, Okla. Lafayette, Ind. Brooklyn, N. Y. Brooklyn, N. Y.	Interstate Bcg. Corp. (Hotel Bigelow College for Women
WBAA  \ a	k 500 e 500		Lafayette, Ind.	Purdue University Brooklyn Broadcasting Corp.
₩WCGU a	k 500	2 2 1	Brooklyn, N. Y.	United States Broadcasting Corp.
	k 500 k 500	1 2	Brooklyn N V	General Broadcasting, Inc. Paramount Broadcasting Co.
→WKBF a	k 500	1W	Indianapolis, Ind. Brooklyn, N. Y.	Indianapolis Broadcasting, Inc.
WLTH a	eh 500 200	2	Brooklyn, N. Y. Laredo, Mexico	Voice of Brooklyn, Inc. La Voz Latino
				,
1410 ki	ilocycle	es 21	2.6 meters 🗌	1 5 H
KFLV a	k 500	4		Rockford Broadcasters, Inc.
KGRS a		1 CH	Rockford, Ill. Amarillo, Texas Boston, Mass.	E. B. Gish Bay State Broadcasting Corp.
→WBCM a	e 500	C T	Bay City, Mich. Amarillo, Texas	Bay State Broadcasting Corp. James E. Davidson
₩WDAG%, a		4	Sheboygan, Wis.	National Radio & Bdctg. Corp. The Press Publishing Co.
WHIS at WODX ea		2 3CU	Sheboygan, Wis. Bluefield, W. Va. Mobile, Ala.	The Press Publishing Co. Daily Telegraph Mobile Broadcasting Corp.
₩RBX a	e 250	2	Roanoke, Va.	Richmond Development Corp.
WSFA a	k 500	3C	Montgomery, Ala.	Montgomery Broadcasting Co., Inc.
1420 ki	ilocycle	es 21	1.1 meters 🗌	135
KABC al		<b>4</b> ·····	San Antonio, Texas Portland, Ore.	Alamo Bctg. Co., Inc. (Texas Theatre) Student Body Benson Polytech. School
KCMC/// a	k 100	*	Texarkana, Ark.	Texarkana Gazette & Daily News
KFIZ al			Fond du Lac, Wis. Shawnee, Okla.	Reporter Printing Co. KGFF Bdctg. Co. (Aldridge Hotel) Golden Gate Broadcasting Co.
KGGC al	k 100	5	San Francisco, Calif.	Golden Gate Broadcasting Co.
KGIW al KGIX al KGKX z		1	Las Vegas, Nevada	Leonard E. Wilson J. M. Heaton
KGKX z	100	Ÿ	Trinidad, Colo. Las Vegas, Nevada Lewiston, Idaho Red Oak, Iowa	Sand Point Broadcasting Co. Red Oak Radio Corp.
KIDW al	k 100	î	Lamar, Colo.	Southwest Broadcasting Co.
KORE as	eh 100 k 100	•••••	Eugene, Ore.	Frank L. Hill & Curtis G. Phillips Dr. Albert H. Schermann
KWCR a	e 100	B(.25)	Yuma, Arizona Cedar Rapids, Iowa	Cedar Rapids broadcast Co.
KXL a WAGM a		4	Portland, Ore. Presque Isle, Maine	KXL Broadcasters (Hotel Multnomah) Aroostook Broadcasting Corp.
WAMC : ac	e 100		Anniston, Ala	Raymond C. Hammett (Alabama Hot.)
WAZL! z		P2 a	Hazleton, Pa.	Herman G. Halsted WEHS, Inc.
WELL z	50		Cicero, Ill. Battle Creek, Mich.	Enquirer-News Co.
WENCW al		D	Americus, Ga. Erie, Pa.	Americus Broadcast Co. Erie Bdctg. Corp. (Lawrence Hotel)
WHDL ac	eh 100	D	Tupper Lake, N. Y.	Tupper Lake Broadcasting Co., Inc. WHFC, Inc.
WHFC ac	e 100	a 2	Cicero, Ill. Wilmington, Del.	Delaware Broadcasting Co.
WJBO z WJMS al	100	D	New Orleans, La.	Valdemar Jensen
WKBI al	k 100	a	Ironwood, Mich. Cicero, Ill.	WJMS, Inc. (St. James Hotel) WKBI, Inc.
WLBF ac	e 100	ĊĦ	Kansas City, Kans. Springfield, Mass.	WKBI, Inc. WLBF Bdctg. Co. (Aladdin Hotel) Albert S. Moffet
***WMBC₩ a	e 100	(.25) (.25)	Detroit, Mich.  Joplin, Mo.	Michigan Broadcasting Co.
WMBH at		(.25)	Joplin, Mo.	W. M. Robertson
₩SPA ac	eh 100	(.25) (.25)	Paducah, Ky. Spartanburg, S. C. Cumberland, Md.	Paducah Bdctg. Co. (Ritz Hotel) The Voice of South Carolina
₩TBO ac		(.25)	Cumberland, Md.	Interstate Broadcasting System, Inc.
1430 ki	locycle	es 209	9.7 meters 🗀	The to
KECA al		N	Los Angeles, Calif. North Platte, Neb.	Earle C. Anthony, Inc.
KGNF all WBAK al		D 1(1)	North Platte, Neb. Harrisburg, Pa.	Great Plains Broadcasting Co. Pennsylvania State Police

		INDE	X BY	FREQUENCIES AN	D DIAL NUMBERS		
WCAH WFEA WHEC WHP WNBR WOKO	ae ae ak ae ae	500 500 500 500 500 500	CA CHA CA 1EA(1)  CA	Columbus, Ohio Manchester, N. H. Rochester, N. Y. Harrisburg, Pa. Memphis, Tenn. Albany, N. Y.	Commercial Radio Serv New Hampshire Broadc WHBC, Inc. (Roch. Sav. WHP, Inc. (Harrisburg' Memphis Bdctg. Co. (W WOKO, Inc. (Hotel Ten	esting Co.	
1440	kilo	cyc1	es 20	08.2 meters	131		
CMBL CMBN KDFN KLS KXYZ WBIG WCBA WMBD WSAN WTAD	ak ak ak ae ak	20 30 500 250 250 250 500 250 500 250	1445 1445 D C(1) 3C(1) a 3	Havana, Cuba Havana, Cuba Casper, Wyo. Oakland, Calif. Houston, Texas Greensboro, N. C. Allentown, Pa. Peoria, Ill. Allentown, Pa. Quincy, Hl.	Julio C. Hidalgo Armando Romeu Marre Donald L. Hathaway Warner Bros. Harris County Broadcas No. Carolina Broadcasti B. Bryan Musselman Peoria Broadcasting Co. Allentown Call Publishi Illinois Broadcasting Co	nt Co. ng Co., Inc. ng Co., Inc.	-
1450	kilo	cyc1	es 20	06.8 meters	1.71		
WBMS WGAR WHOM WNJ WSAR WTFI	ll ae ak ak	1000 250 500 250 250 250 250 500	N 1 B 1 1	Shreveport, La. Hackensack, N. J. Cleveland, Ohio Jersey City, N. J. Newark, N. J. Fall River, Mass. Athens, Ga.	Tri-State Bdctg. System WBMS Broadcasting Co WGAR Broadcasting Co New Jersey Broadcastin The Radio Investment of Doughty & Welch Elect Liberty Broadcasting Co	rp. ., Inc. g Corp. Co., Inc. ric Co., Inc.	
1460	kilo	cyc1	es 20	)5.4 meters 🗌	1361		
<b>≪</b> KSTP <b>≪</b> WJSV	ae ck	10000 10000	Й С	St. Paul, Minn. Washington, D. C.	National Battery Broad Old Dominion Broadcas	casting Co. ting Co.	
1470	kilo	cvc1	es 20	04.0 meters	140	T	
KGA WLAC	ak ae	5000 5000	B	Spokane, Wash. Nashville, Tenn.	Northwest Broadcasting Life & Casualty Insurar	System ace Co.	
1480	kilo	cyc1	es 20	2.6 meters	1411		
CMBK CMBR KOMA WKBW	z z ak ae	15 40 5000 5000	1485 C C	Havana, Cuba Havana, Cuba Oklahoma City, Okla. Buffalo, N. Y.	Alberto Alvarez Tomas Basail National Radio Mfg. Co Buffalo Broadcasting Co		
1490	kilo	cycl	es 20	1.2 meters	142		
<b>₩</b> CKY	ae	5000	N	Covington, Ky.	L. B. Wilson, Inc. (Mab	ley & Carew)	
1500	kilo	cycl(	es 19	99.9 meters 🗀	14211		
KBD KGFK KGFK KGKB KGKY KNOW KPJM KPQ KREG KXO WFDV! WKBV WKBV WKBV WWBZ WHOB	ak z ak ae ae ak ak ak	100 100 50 100 100 100 100 50 100 100 10	(.25) (.25) (.25) (.25) 1	Santa Barbara, Calif. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Neb. Austin, Texas Prescott, Arizona Wenatchee, Wash. Santa Ana, Calif. El Centro, Calif. Rome, Ga. Kosciusko, Miss. Connersville, Ind. Ludington, Mich. Boston, Mass. Brooklyn, N. Y. Brooklyn, N. Y. Lapeer, Mich.	Santa Barbara Broadcas Eagle Broadcasting Co., Red River Broadcasting Grant City Park Corp. East Texas Broadcasting Hilliard Co., Inc. KUT Bdetg. Co. (Driskil Scott & Sturm Wescoast Broadcasting G. J. S. Edwards E. R. Irey and F. M. Box Rome Broadcasting Cor Attala Milling & Produc William O. Knox K. L. Ashbacker Boston Broadcasting Co Paul J. Gollhofer Arthur Faske First Methedist Protesta	Inc. Co., Inc. (Co.) I Hotel) Co. wies p. e Co. (WRSC)	KCYS. 1500 MTRS. 199.9 DIAL
WNBF WOPI WPEN WRDW WSYB WWRL WWSW	ae ee ee aeh ak ak	100 100 100 100 100 100 100	(.25) 1 X(.25)	Binghamton, N. Y. Bristol, Tenn. Philadelphia, Pa. Augusta, Ga. Rutland, Vt. Woodside, N. Y. Pittsburgh, Pa.	Howitt-Wood Radio Co. Radiophone Bdctg. Stat Wm. Penn Broadcasting Musicove, Inc. (Relays V Philip Weiss Music Co. Long Island Broadcastin Walker & Downing Radi	ion WOPI Co. VLW) ng Corp.	

# INDEX BY LOCATIONS WITH MAP KEY

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

ALABAMA	Watts Kcys.	Wat	rts	Kcys.
Anniston O-21 tr	100 WAMC 1420			1010
Birmingham O-21	5000 ***WAPI N 1140	Santa Ana M-3	00 KQW 00 KREG	<b>1500</b>
	500 -WBRC C 930	Santa Barbara M-2 10 Stockton J-2 2	00 KDB C 50 KGDM	1500 1100
Gadsden O-21	100 WKBC 1310 100:WJBY 1210		00 KWG C	1200
Huntsville N-21 c	100 WBHS 1200	COLORADO		
Mobile Q-20	500 WODX C 1410	Colorado Springs K-11 10	00≋KVOR C	1270
Montgomery P-21 Troy P-21 rc	500 WSFA C 1410 100 WHET 1210	Denver K-11 5	00 KFEL	920
110y 1 -21 1C	100 -534 11131 1210	. 5	00 KFXF	920 920
ALASKA		100	00 KLZ C 00 ∞KOA N	560 830
Anchorage	250 KFOD 1230		00 KPOF	880
Ketchikan	500 KGBU 900	Fort Morgan J-11	00 KGEW	1200
ADIZONIA		Grand Junction K-9 lc 10	00 KFXJ	1310
ARIZONA	******		00 KFKA 00 KIDW	880 1420
Jerome M-6 Phoenix N-6	100 KCRJ 1310 500 KOY C 1390	Pueblo L-11 2	50∞KGHF	1320
Phoenix 14-0	500 KTAR N 620		00 KGIW	1420
Prescott M-6	100 KPJM 1500	Yuma J-12	00 ≁KGEK	1200
Tucson O-7	100 KGAR 1370 500 KVOA 1260	CONNECTICUT		
Yuma O-5 tl	100 KUMA 1420		50≈ WICC C	600
ARKANSAS			00 WDRC C	1330 1060
Blytheville M-19	50 KLCN 1290	Storrs H-28	50 WCAC	600
Fayetteville M-16 Fort Smith N-16	1000 KUOA 1390 100 KFPW 1210	DELAWARE		
Hot Springs N-17	10000 EKTHS N 1040		50≈WDEL	1120
Little Rock N-17	250 KARK 890		00 WILM	1420
	100-KGHI 1200 1000 KLRA C 1390	DISTRICT OF COL	TINATOTA	
Paragould M-18	100 KBTM 1200	DISTRICT OF CO		
Texarkana O-17 bl	100 KCMC 1420	Washington J-26 1000	00~WJSV C 50~WMAL	1460
CALIFORNIA	√ I	5	00∽WRC N	630 950
Bakersfield L-2 br			00 WOL	1310
Berkeley I-2	100 KERN C 1200 100 KRE 1370	FLORIDA		
Berkeley J-2 Beverly Hills M-3 bl	500KMPC 710		00-WFLA N	620
Burbank M-3 El Centro N-4	500 KELW 780 100 KXO 1500	Gainesville Q-24 500	00 WRUF C	830 900
Eureka H-1 tc	100 KIEM 1210	Jacksonville Q-24 100 Miami T-25 100	00WJAX N 00WIOD N	1300
Fresno K-2	500 KMJ C 580	100	00-***WOAM C	560
Glendale M-3 Hollywood M-3	100 KIEV 850 500 KMTR 570	Orlando R-24		580
Honywood M-3	500 KMTR 570 25000 KMTR 1050	Pensacola Q-21 50 St. Petersburg S-24 100	00 WCOA 00 WSUN N	1340 620
Long Beach M-3	1000 am KFOX C 1250 I	Tampa R-24 100	00 WDAE C	1220
Las Amuslas M 2	1000 KGER 1360	10	00-WMBR	1370
Los Angeles M-3	1000=KECA N 1430 1000=KFAC 1300	GEORGIA		
	50000—KFI N 640	Americus P-22 c 10	00-WENC	1420
	500 KFSG 1120	Athens N-23 bc 50	00 WTFI	1450
	250 KFVD 1000 1000 KFWB 950	Atlanta O-22 2	50 ⊶WGST C	890 13 <b>7</b> 0
	100 KGFJ 1200	500	00∝≃WJTL 00∽∞WSB N	<b>740</b>
	1000 KHJ C 900	Augusta O-23	00 ™WRDW	1500
	500≕KRŘD 1120 500≕KTM 780	Columbus O-22 10 Macon O-23 50	00 WRBL 00 WMAZ	1200 1180
Oakland J-1	250 KLS 1440	Rome N-22 10	00 WFDV	1500
	500 KLX 880	Savannah O-24 50	00∞WTOC C	1260
Pasadena M-3	500 KROW 930 50 KPPC 1210	Thomasville Q-22	00 WQDX	1210
	50 KPPC 1210 100 KFBK C 1310	HAWAII		
Sacramento J-2 San Bernardino M-3	100~™KFXM 1210		O VCMP C	1220
San Diego N-3	500 KFSD N 600	Honolulu 25	50 KGMB C 00 KGU N	1320 750
San Francisco J-1	1000 KGB C 1330 1000 KFRC C 610	IDAHO		
	500 KFWI 930		no KIDO	1250
	100 KGGC 1420	Boise G-5 100 Idaho Falls G-7 25	00 KIDO 50 KID	1350 1320
		Nampa G-5	00 KFXD	1200
	5000™KPO N 680		50 KSEI 00 KGKX	890
	1900 KTAB 560 1090 KYA N 1230		00 KGKX 90==KTFI	1420 1240
	1000 ™KYA N 1230			

ILLINOIS	Watts Kcys.	KANSAS	Watts Kcys.
Carthage J-18	50 WCAZ 1070	Abilene K-15 bl	5000 KFBI 1050
Chicago I-20	10000-KFKX 1020	Coffeyville M-15 tr	500 KGGF 1010
	10000—KYW N 1020 500 WAAF 920	Dodge City L-13 Kansas City K-16 Lawrence K-16	100 KGNO 1210 100 WLBF 1420
	25000 WAAF 220	Lawrence K-16	500 KFKU 1220
	1500WCFL R 970		1000-WREN B 1220
	100 WCRW 1210	Manhattan K-15	500 KSAC 580 1000=WIBW C 580
	100 WEDC 1210 50000 WENR N 870	Topeka K-16 Wichita L-15	1000 WIBW C 580 1000 KFH C 1300
	500 WGES 1360	"""""	1000 1011 0 1000
	25000 WGN C 720	KENTUCKY	
	1000 WIBO 560 20000 WJJD 1130	Covington K-22	5000 WCKY N 1490
	50000 WLS N 870	Hopkinsville M-20	1000 WFIW C 940
	5000≈≈WMAO N 670 I	Louisville L-21	25000 WHAS C 820
•	5000 WMBI 1080 500 WPCC 560	Paducah M-19	100-WLAP 1200 100 WPAD 1420
	100 WFCC 300	raducan M-19	100 WIAD 1420
Cicero I-20	100 WEHS 1420	LOUISIANA	
	100 WHFC 1420 100 WKBI 1420	Monroe P-18	100 KMLB 1200
Decatur K-19	100 WKB1 1420	New Orleans R-19	100 WABZ 1200
Galesburg J-18	100 WKBS 1310	11011 01100110 11 15	1000 WDSU C 1250
Harrisburg L-19	100 WEBQ 1210 100 WCLS 1310		100 WJBO 1420 100 WJBW 1200 500 MWSMB N 1320
Joliet I-19	100 WCLS 1310 100 WKBB 1310	1	100 WJBW 1200 500 ∞WSMB N 1320
La Saile J-19	100 WJBC 1200	ļ	5000~WWL 850
Peoria J-19	500-WMBD C 1440	Shreveport P-17	100 KRMD 1310
Quincy K-18 Rockford I-19	500 WTAD 1440   500 KFLV 1410	1	1000 KTBS N 1450 100 KWEA 1210
Rock Island I-18	100 WHBF 1210	Į.	10000-KWKH 850
Springfield K-19	100 WCBS 1210 I	l	
Tressels IZ 20	100 WTAX 1210 100 44104WDZ 1070	MAINE	
Tuscola K-20 Urbana J-20	250 WILL 890	Augusta F-28	100 WRDO 1370
Zion I-20	5000 WCBD 1080	Bangor F-29	100 WABI 1200 500 4000 WLBZ C 620
		Portland F-28	1000-WCSH R 940
INDIANA	. ,	Presque Isle D-29 1c	100 WAGM 1420
Anderson J-21	100=∞WHBU 1210	MARYLAND	
Connersville K-21	100 WKBV 1500 500 WCMA 1400	Baltimore J-26	10000 word WBAL B 1060
Culver I-20 Elkhart I-21 bc	50 WCMA 1400 50 WTRC 1310	Baltimore J-20	250 WCAO C 600
Evansville L-20	500 WGBF 630	1	100 <sup>∞∞</sup> WCBM 1370
Fort Wayne J-21	100 WGL C 1370 10000 WOWO C 1160	Cumphonland I 25	500 WFBR R 1270 100 WTBO 1420
Gary I-20	10000-WJKS 1360	Cumberland J-25 Hagerstown J-25 rc	100-WIEJ 1210
Hammond I-20 bc	100 ∞ WWAE 1200		
Indianapolis J-21	1000-WFBM C 1230 500-WKBF 1400	MASSACHUSE	
Lafayette J-20	500 WBAA 1400	Babson Park G-28	500 WBSO 920 500 WAAB C 1410
Muncie J-21	50 WLBC 1310	Boston G-28	500 WAAB C 1410 25000 WBZ B 990
South Bend I-20	100 WFAM C 1200 500 WSBT C 1230	1	1000 WEEI R 590
Terre Haute K-20	100 WBOW 1310	1	1000 WHDH 830
		i	100=WLOE 1500 1000=WNAC C 1230
IOWA		Fall River H-28	250 WSAR 1450
Ames I-17	5000 ₩OI 640	Lexington G-28	100==WLEY 1370
Boone I-17	100≥KFGO 1310	New Bedford H-28 Springfield H-27	100 WNBH 1310 1000 WBZA B 990
Cedar Rapids I-18	100 KWCR B 1420	Springheid 11-27	100~~WMAS 1420
Clarinda J-16 Council Bluffs J-16	1005 KSO B 1380 1000 KOIL B 1260	Worcester G-28	100WORC C 1200
Davenport I-18	1000 KOIL B 1260 5000 WOC R 1000	l	250 WTAG R 580
Decorah H-18	100 KGCA 1270	MICHIGAN	
Des Maines I 17	100 KWLC 1270		50 WELL 1420
Des Moines I-17 Iowa City I-18	5000 WHO R 1000 500 WSUI 880	Battle Creek I-21 Bay City H-22	50 WELL 1420 500 WBCM C 1410
Marshalltown I-17	100 KFJB 1200	Calumet E-19	100 WHDF 1370
Ottumwa J-17	100 WIAS 1310	Detroit H-22	50 WJBK 1370
Red Oak J-16 Shenandoah J-16	100—KICK 1420 500—KFNF 890		10000-WJR B 750 100-WMBC 1420
SHERRINGORII J-10	500 KMA 930		1000 WWJ R 920
Sioux City I-15	1000 KSCJ C 1330		1000~~WXYZ 1240
Waterloo I-17	500:50 WMŤ C 600	East Lansing H-21	1000 WKAR , 1040
	,		

# INDEX BY LOCATIONS WITH MAP KEY

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

Filint H-12		Watts Kcys.	NEVADA 🗸	Watts Kcys.
Incremond F-18 rc   100 WIMS   1370		500 WASH 1270	Las Vegas L-5	100 KGIX 1420
Ludington H-20	Jackson I-21	100 WJMS 1420 100 WIBM 1370		
MINNESOTA   Someway   So	Lapeer H-22 Ludington H-20	100 WMPC 1500 100WKBZ 1500	Manchester G-28	500 WFEA C 1430
MINNESOTA   Fergus Falls F-15   100   KGDE   1200   Minneapolis G-17   1000   WLB   1250   1000   WCAL   1250   1000   WCAL   1250   1000   WCAL   1250   1000   WCB   1250   1000   WLB	Royal Oak H-22		NEW JERSEY	
Minneapolis G-17	MINNESOTA		Asbury Park I-27	500-WCAP C 1280
1000 WDGY   1180   1000 WBR   1250   1000 WR   1250   1250   1000 WR   1250		100 KGDE 1200	Camden I-26	500 WCAM 1280
Moorhead F-15	Willineapolis G-17	1000 WDGY 1180		300-WAAT 940
Moorhead F-15   Northfield G-17   1000=WCAL   1250   1		1000 w WRHM 1250		250 WHOM 1450
St. Paul G-17		1000 WKFMX 1250	Tiewark 1-27	250 WGCP 1250
MISSISSIPPI   Greenville O-18   100   WKFI   1210   Culffort O-19   100   WGCM   1210   Trenton I-26   500, WMX   1230   250, WMX   1230		1000 WCAL 1250		5000∞WOŘ 710
Greenville O-18 Gulfport Q-19 Hattlesburg Q-19 Jackson P-19 Kosciusko O-19 bc Laurel P-19 br Missouri Cp. Girardeau L-19 Columbia K-17 Grant City L-16 Jefferson City L-16 Jefferson City L-17 Soo WMBH Loplin M-16 Kansas City K-16 St. Louis L-18 St. Louis L-18 Springfield M-17 S		1000000EKS1P 14 1400	Paterson I-27 Red Bank I-27	1000@mWODA 1250 100damWJBI 1210
Guifport Q-19   100 WGCM   1210   12			Trenton I-26	500 WOAX 1280
Hattliesburg Q-19   1000 WFB   1370   1300   MISC   1230	Gulfport Q-19	100 WGCM 1210	_	250 smw A W 2 1550
Laurel P-19 br   Meridian P-20   S00 - WCOC   880   S00 - WCOC   880   S00 - WCOC   880   S00 - WCOC   880   S00 - WCOC   S80   S00 - WCOC   S	Hattiesburg Q-19	100 WPFB 1370		250 VCCM 1220
Meridian P-20   S00	Kosciusko O-19 bc	100 WHEF 1500		10000 KOB 1180
NEW YORK   Solid North Platter   Solid Work   Solid North Platter   Solid Work   Solid North Platter   Solid Work   Soli	Meridian P-20	500 ₩COC 880		
Albany G-27 bl   Auburn H-25   100 WMB   1310   100 WMB	Vicksburg P-18	500 WQBC 1360		
Columbia K-17				500~WOKO C 1430
Grant City J-16	Cp. Girardeau L-19 Columbia K-17		Auburn H-25	100 WMBO 1310
100 WMBH	Grant City J-16	100 KGIZ 1500	Brooklyn I-27	500-WBBC 1400
Name	Joplin M-16	100 WMBH 1420		500-WCGU 1400
St. Joseph K-16 St. Louis L-18 St. L	Kansas City K-16		,	500 ****WFOX 1400
St.   Joseph K-16		1000 WDAF R 610		100@WMBO 1500
St. Louis L-18    500   KFUO   550     100   KFWF   5000   KFWF   5000     500   KKB   R   550     1000   KWK   B   1350     1000   KWK   B   1350     1000   WIL   1200     100   WIL   1200     Springfield M-17   100   KGBX   1310     MONTANA     Billings F-9   1000   KGHL   N   950     Butte F-7   500   KGIR   N   1360     Ralispell D-7   100   KGEZ   1310     Missoula E-7   100   KGEX   1310     NEBRASKA   Clay Center J-14   1000   KGW   1200     Wolf Point E-11   100   KGCX   1310     NEBRASKA   Clay Center J-14   1000   KGFW   1310     Lincoln J-15   1000   KFAB   C   770     Norfolk I-15   1000   WJAG   1060     North Platte J-13   500   KASK   1000   WJAG   1000     Scottsbluff I-11   100   KGKY   1500     Scottsbluff I-12   1000   KGKY   1000	0. 7 . 47.46	1000 WOQ 1300	Buffalo H-24	1000-WBEN R 900
100 KFWF   1200   50000-KKOX C   1800   500 WKSD   1370   5000-KSD   1000-KWK B   1350   1000-WW W   1000 WIL   1200   1000 WIL   1200   1000 WIL   1200   1000-KGBX   1310   1	St. Joseph K-16 St. Louis L-18			
SolowKSD			· ·	5000 WKBW C 1480
Springfield M-17   1000 - W   N   1200   1200   131		500===KSD R 550	Canton F-26	50 WSVS 13/0 500 WCAD 1220
Springfield M-17   100   ML   1200   1310   1310   1310   1370   1310		1000-WEW 760	Chester Twp.	50 WGNY 1210
MONTANA   Sillings F-9	Springfield M-17	100 WIL 1200	Freeport 1-27	100 WGBB 1210
Billings F-9 1000 KGHL N 950 Butte F-7 500 KGIR N 1360 Great Falls E-8 1000 KFBB 1280 Kalispell D-7 100 KGEZ 1310 Missoula E-7 100 KGVO 1200 Wolf Point E-11 100 KGCX 1310  NEBRASKA  Clay Center J-14 1000 KMMJ 740 Kearney J-14 bc 100 KGFW 1310 Lincoln J-15 5000 KFAB C 770 100 KFOR 1210 Norfolk I-15 1000 WJAG 1060 Nortolk I-15 500 WJAG 1060 Nortolk I-15 500 WJAG 1060 Nortolk I-15 500 WJAW 660 North Platte J-13 500 KGNF 1300 Norfolk I-15 1000 WJAG 1060 North Platte J-13 500 KGNF 1300 Scottsbluff I-11 100 KGKY 1500 Rochester G-25 5000 WHAM B 1150		4.01	Jamestown H-24	50 WOCL 1210
Butte F-7   500 - KGIR   N   1360   50000 - WBOQ   860   250 - WCDA   1350   Kalispell D-7   100   KGEZ   1310   5000 - WEAR   R   660   6		1000 VCTH N 070	New York City I-27	50000WABG C 860 250WBNX 1350
Great Falls E-8	Butte F-7	500~KGIR N 1360		50000 WBOO 860
Missoula E-7	Great Falls E-8	1000-KFBB 1280	•	50000 WEAF R 660
NEBRASKA  Clay Center J-14 Clay Center J	Missoula E-7	100 KGVO 1200		500 WEVD 1300
Nebraska   30006 WJZ B 760	Wolf Point E-II	100-KGCX 1310		500 VVINS 1180
Lincoln J-15 5000 KFAB C 770 250 WMSG 1350 100 KFOR 1210 500 WMYC 570 500 WNYC 570 1000 WOY 1130 Norfolk I-15 1000 WJAG 1060 250 WPAP 1010 North Platte J-13 500 KGNF 1430 500 WPCH 810 Omaha J-15 500 WAAW 660 250 WQAO 1010 Scottsbluff I-11 100 KGKY 1500 Rochester G-25 5000 WHAM B 1150	NEBRASKA			30000 VJZ B 760
Lincoln J-15 5000 KFAB C 770 250 WMSG 1350 100 KFOR 1210 500 WMYC 570 500 WNYC 570 1000 WOY 1130 Norfolk I-15 1000 WJAG 1060 250 WPAP 1010 North Platte J-13 500 KGNF 1430 500 WPCH 810 Omaha J-15 500 WAAW 660 250 WQAO 1010 Scottsbluff I-11 100 KGKY 1500 Rochester G-25 5000 WHAM B 1150	Clay Center J-14 Kearney I-14 bo	1000 KMMJ 740 100 KGFW 1310		5000 WLWL 1100 500 WMCA 570
Solution	Lincoln J-15	5000 KFAB C 7701		250 WMSG 1350
Norfolk I-15 1000 WJAG 1060 256 WPAP 1010 North Platte J-13 500 KGNF 1430 500 WAW 660 250 WQAO 1010 250 WRNY 1010 Scottsbluff I-11 100—KGKY 1500 Rochester G-25 5000 WHAM B 1150		500≔WCAJ 590		1000 WOV 1130
Omaha J-15       500 WAAW       660 1000 WOW R 590 1010       250 WRNY 1010         Scottsbluff I-11       100 KGKY 1500 1500 Rochester G-25       5000 WRNY 1500 1500		1000 WJAG 1060		250 VPAP 1010
Scottsbluff I-11 100—KGKY 1500 Rochester G-25 5000—WHAM B 1150	Omaha J-15	500 WAAW 660		250 WQAO 1010
York J-15 500 KGBZ 930 500-WHEC C 1430		100-KGKY 1500	Rochester G-25	5000 WHAM B 1150
	York J-15	500 KGBZ 930		500===WHEC C 1430



w	/atts 🦵 Kcys.	1	Watts Kcys.
Saranac Lake F-26	50 WMBZ 1290	Portland E-3	500 KALE C 1300
Schenectady G-27 50	)000⋘WGY R <i>7</i> 90		5000∞KEX N 1180
Syracuse G-25	1000=WFBL C 1360	,	100 KBPS 1420
	250 WMAC 570 250 WSYR R 570		500 KFJR 1300 1000 KGW N 620
Troy G-27	250 WSYR R 570 500 WHAZ 1300	1	1000 KOIN C 940
Tupper Lake F-26 Utica G-26	100 WHDL 1420	3	500 KWJJ 1060
Utica G-26	100 ₩IBX 1200		100 KXL 1420
woodside 1-27	100-WWRL 1500	l .	
White Plains H-27 bl	100 WFAS 1210	PENNSYLVAN	TA
	i		250***WCBA 1440
NORTH CAROLI	NIA I	Allentown I-26	250 WSAN 1440
		Altoona I-25	100-WFBG 1310
	1000 WWNC N 570 5000-WBT C 1080	Carbondale H-26	10 WNBW 1200
Gastonia M-24	100-WSOC 1210	Erie H-24	100 WERE 1420
Greensboro M-24	500 WBIG C 1440		500-WLBW C 1260
	1000 WPTF N 680	Glenside I-26 rc Grove City I-24	25 -WIBG 930 100 WSAJ 1310
Wilmington N-26	100 WRAM 1370	Harrisburg I-25	500 WBAK 1430
Winston-Salem M-24	100 WSJS C 1310	Tiditisbuig 1-20,11,	100-WCOD 1200
			500 -WHP C 1430
NORTH DAKOTA	۱ ۱	Hazleton I-26 lc	100-WAZL 1420
		Johnstown J-24	100 WJAC 1310 100 WGAL 1310
	1000 KFYR N 550 100 KDLR 1210	Lancaster I-26	100 WGAL 1310 100 WKJC 1200
Devils Lake E-14 Fargo F-15	1000 WDAY N 940	Lewisburg I-26	100 WJBU 1210
Grand Forks E-15	100 KFJM 1370	Philadelphia I-26	50000-WCAU C 1170
Mandan F-13	250 KGCU 1240		100 WDAS 1370
Minot E-13	250==KLPM 1240		500 WFAN C 610
			500=WFI R 560 100=WHAT 1310
OHIO		i	500 WIP C 610
Akron I-23	1000 WADC C 1320		500-WLIT R 560
ARION 1-25	100 WJW 1210		100WPEN 1500
Canton I-23	10 WHBC 1200	i	250 WRAX 1020
Cincinnati K-22	100 WFBE 1200	Pittsburgh J-24	100
50	1000WKRC C 550 0000WLW B 700	Fittsburgh J-24	5000
30	500-WSAI R 1330		1000≕WČAE R 1220
Cleveland I-23	500-WGAR B 1450		1000 WJAS C 1290
1	1000-WHK C 1390	Danding I 26	100 WWSW 1500 1000-WEEU 830
-	500 WJAY 610 0000 WTAM R 1070 500 WAIU 640	Reading I-26	1000WEEU 830 100 WRAW 1310
Columbus J-22	500 WAIU 640	Scranton H-26	250-WGBI 880
Columbus J-22	500 xxx WCAH C 1430	1	250WQAN 880
	750 WEAO 570	Washington J-24	100⊶WNBO 1200 100 WBAX 1210
D	100 WSEN 1210	Wilkes-Barre I-26	100 WBAX 1210 100 WBRE 1310
Dayton J-22 Mount Orab K-22	200-WSMK 1380 100-WHBD 1370	Williamsport I-25	100 WRAK 1370
Toledo I-22	1000 WSPD C 1340	1	100 WJEQ 1370
Youngstown I-23	500 ∞WKBN C 570	York J-25 tr	1000 WORK 1000
Zanesville J-23	100 WALR 1210	ì	
		PHILIPPINES	
OKLAHOMA		Cebu	500 KZRC 937.5
Chickasha N-14	250 KOCW 1400	Manila	1000 KZKA 1110
Elk City N-13	100 KASA 1210		50000 KZRM 618.5
Enid M-14	100 KCRC 1370	ì	•
Norman N-15	500WNAD 1010	PORTO RICO	
Oklahoma N-15	100 KFXR 1310	San Juan W-34	1000₩WKAQ 1240
	100 KGFG 1370 5000 KOMA C 1480	Carr Juan 11-02	TOO SHITTING IM
	5000 KOMA C 1480 1000≔WKY N 900	DIVODD TOT 43	
	100-WBBZ 1200	RHODE ISLAN	-
Ponca City M-15 Shawnee N-15	100 KGFF 1420	Providence H-28	250-WEAN C 780
Tulsa M-15 5	5000∞KVOO N 1140		250 WJAR R 890
Ĺ	1		100 WPAW 1210 100 WPRO 1210
OREGON 🗸		1	100****WFRQ 1210
	1000 KOAC 550	00117711 0470	
	100 KORE 1429	SOUTH CARO	
Klamath Falls G-3 c	100 KFJI 1210	Charleston O-25	500 WCSC 1360
Marshfield F-1	100 KOOS 1370	Columbia N-24	500 WIS N 1010 100 WSPA 1420
Medford G-2	100 KMED 1310	Spartanburg N-23	100 W SFA 1420

SOUTH DAKO	TAWatts Kcys.	VIRGINIA	Watts Kcys.
Brookings H-15 Huron H-14 Mitchell H-14 Pierre G-13 Rapid City H-12 Sioux Falls H-15 Vermillion I-15 Watertown G-15	500 KFDY 550 100 KGDY 1200 100 KGDA 1370 200 KGFX 630 100 WCAT 1200 1000 KSOO 1110 500 KUSD 890 100 KGCR 1210	Arlington J-25 Danville L-25 Emory L-23 Lynchburg L-25 Newport News L-26 Norfolk L-26 Petersburg L-26 Portsmouth L-26 te	1000 NAA 690 100 WBTM 1370 500 WEHC 1350 100 WLVA 1370 100 WGH 1310 500 WTAR C 780 100 WPHR 1200 500 WPOR 780
Yankton I-15  TENNESSEE Bristol L-23 Chattanooga N-21 Jackson M-19 br	1000 WNAX C 570 1000 WOPI 1500 1000 WDOD C 1280 1000 WJJS 1310 1000 WVNOX C 560	Richmond K-26  Roanoke L-24  WASHINGTON	
Knoxville M-22 Memphis N-19 Nashville M-21	1000 WNOX C 560 100 WROL 1310 100 WHBQ 1370 500 WNBR 1430 500 WNEC C 600 5000 WLAC C 1470 5000 WSM N 650	Aberdeen D-2 Bellingham C-3 Everett C-3 Olympia D-3 t1 Pullman E-5 Seattle C-3	100 KXRO 1310 100 KVOS 1200 50 KFBL 1370 100 KGY 1210 1000 KWSC 1220 5000 KJR N 970 1000 KOL C 1270
Springfield M-20 TEXAS Amarillo N-12	100 KGRS 1410 1000 KGRS 1410 1000 WDAG 1410	Spokane D-5	1000 KOMO N 920 100 KPCB 650 100 KRSC 1120 1000 KTW 1220 100 KVL 1370 250 KXA 760 100 KFIO 1120 1000 KFPY C 1340
Austin Q-14 Beaumont R-17 Brownsville U-15 College Sta. Q-15 Corpus Christi S-14 Dallas P-15	100" KNOW 1500 500 KFDM 560 500 KWWG 1260 500 WTAW 1120 1000" KGFI 1500 10000 KRLD C 1040 50000 WFAA N 800	Tacoma D-3 Walla Walla E-5 Wenatchee D-4 Yakima D-4	5000 KGA B 1470 1000 KHO N 590 250 KMO 1330 500 KVI C 570 100 KUJ 1370 50 KPO 1500 100 KIT 1310
Dublin P-14 E1 Paso P-9 Fort Worth P-15	500 WRR C 1280 100 KFPL 1310 100 KTSM 1310	WEST VIRGIN	IIA 250 WHIS 1410
Galveston R-16	1000 KTAT 1240 10000 WBAP N 800 100 KFLX 1370 500 KFUL 1290	Charleston K-23 Fairmont J-24 Huntington K-23 Wheeling J-24	250 WOBU 580 250 WMMN 890 250 WSAZ 580 5000 WWVA C 1160
Greenville O-15 Harlingen T-14 Houston R-16	15 KFPM 1310 500 KRGV 1260 1000 KPRC N 920 500 KTRH C 1120 250 KXYZ 1440	WISCONSIN  Eau Claire G-18  Fond du Lac H-19  Green Bay G-19	1000 WTAQ C 1330 100 KFIZ 1420 100 WHBY 1200
Lubbock O-12 tr San Angelo Q-13 San Antonio R-14	100 KFYO 1310 100 KGKL 1370 100 KMAC 1420 100 KMAC 1370 100 KONO 1370 1000 KTSA C 1290	Janesville I-19 La Crosse H-18 Madison H-19 Manitowoc H-20 Milwaukee H-19	100 WKBH C 1380 1000 WKBH C 1380 1000 WIBA N 1280 100 WIBA N 1280 100 WHAD C 1120 250 WHAD C 1120
Tyler P-16 rc Waco Q-15 Wichita Falls O-14 UTAH	50000 vczWOAI N 1190 100 KGKB 1500 1000 WACO C 1240 250 KGKO 570	Poynette H-19 Racine I-20 Sheboygan H-20 Stevens Point G-19 Superior F-17	1000WTMJ N 620 100WIBU 1210 100
Salt Lake City I-7	2500—KDYL N 1290 500 KLO 1400 50000=KSL C 1130	WYOMING Casper H-10	500 KDFN 1440
VERMONT	100000000000000000000000000000000000000	CAI	NADA
Burlington F-27 Rutland G-27 St. Albans F-27 Springfield G-27 Waterbury F-27 c	100 —WCAX 1200 100 WSYB 1500 100 =WQDM 1370 250 —WNBX 1260 500 —WDEV 550	ALBERTA Calgary B-7	500 CFAC 690 10000 CFCN 985 500 CJCJ 690



	Watts	Kcys.	ł.	Watts	Kcys.
Edmonton A-8	250 CHMA	580	Quebec D-27	100 CHRC	645
	500 CJCA	745		100 CKCI	645
I a bhaidea C 0	500 CKUA 100 CJOC	580 1120		100 CKCV	880
Le hbridge C-8 Rea Deer A-8	100 CJOC 1000 CKLC	840	SASKATCHEW	7 A NJ	
100 000 110	1000 01420	010			1200
BRITISH COL	UMBIA		Canora B-13 t1 Fleming C-13	15 10-BU 1000 CJRW	1200 665
Chilliwack B-3	100 CHWK	665	Moose Jaw C-11	1000 CJRW 500 CJRM	665
Kamloops B-5	100 CJFC	1120 1200	1	2510-AB	1200
Kelowna C-6 tl	100 CKOV 25 10-AT	1200 1155	Prince Albert A-11 rc	25 10-BI 500 CHWC	1200 960
Trail C-6 c Vancouver B-3	100 CHLS	730	Regina C-12	500 CHWC 500 CKCK	960
Valicouver D-3	500 CJOR	1210	Saskatoon B-11	500 CFOC	910
	100 CKCD	730	Yorkton B-13	500 CJGX	630
	50 CKFC 100 CKMO	730	l vermor	TATION AND	
	100 CKWX	730 730	I NEWFOL	JNDLAND	
	500 CNRV	1030	St. Johns A-35	200 VOAS	810
Victoria C-3	500 CFCT	630	1	500 VOGY	910
MANITOBA		- 1	1	100 VONA 500 VONF	950 1115
	F00	930		750 VOWR	750
Brandon D-14 Winnipeg D-15	500-CKX 5000 CKY	780 780	Wabana A-35	400 VOGT	893
		/00			
NEW BRUNSW		1	I CENTRAL	AMERICA	
Fredericton D-29	100 CFNB 700 CNRA	1210	COSTA RICA		
Moncton D-30 St. John D-30	500 CNRA	630   890			
		0,0	San Jose FF-23	50 TICR	911
NOVA SCOTIA		i	GUATAMALA		
Glace Bay C-32	2000-VAS 500-CHNS	√ √685		fo TCW	570
Halifax E-31	500 CHNS	75M)815	Guatamala CC-18 tr	50 TGW	5/0
	500 CNRH 100 VCX	815 690	SALVADOR		
Sydney C-32	100 CJCB	880	Salvador CC-19 br	500 RUS	664
Wolfville D-31	50₩ <b>€</b> KIC	1010	Salvador CC-19 br	300 ROS	
Wolfville D-31	50 KIC				551
Wolfville D-31 ONTARIO	50‱€KIC	1010	ME	XICO	301
Wolfville D-31 ONTARIO Brantford H-23 tr	50 EKIC 15 10-BQ 250 CFCO	1010 1200 1210	ME: AGUASCALIEN	XICO NTES	
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23	50 EKIC 15 do-BQ 250 CFCO 100 CKMC	1010 1200 1210 1210	ME	XICO NTES	810
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl	50 KIC  15 10 BQ 250 CFCO 100 CKMC 100 CKPR	1010 1200 1210 1210 890	ME: AGUASCALIEN Aguascalientes W-11 b	XICO NTES c 250 XFC	
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23	50 EKIC  15 d 0 B Q  250 CFC O  100 CKMC  100 CKPR  50 CHML	1010 1200 1210 1210	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI	XICO NTES c 250 XFC	
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25	50 EKIC  15 d 0 B Q  250 CFC O  100 CKMC  100 CKPR  50 CHML	1010 1200 1210 1210 890 880 635 930	MEX AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc	XICO VTES c 250 XFC RNIA	810
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25	50 EKIC  15 d 0 B Q  250 CFC O  100 CKMC  100 CKPR  50 CHML	1200 1210 1210 890 880 635 930 595	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA	XICO NTES c 250 XFC RNIA 300 XEFD	810 1020
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25	15=10-BQ 250-CFCO 100 CKMC 100 CKPR 50-CHML 1000-CKOC 50 CFRC 5000 CJGC 100 CFCH	1200 1210 1210 890 880 635 930 595 930	MEX AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc	XICO NTES c 250 XFC RNIA 300 XEFD	810 1020 1000
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25	15=10-BQ 250-CFCO 100 CKMC 100 CKMC 100 CKPR 50-CHML 1000-CKOC 50 CFRC 5000 CJGC 100 CFCH 100 CKCO 500 CFCH	1200 1210 1210 890 880 635 930 595 930 595 930 600	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9	XICO NTES c 250 XFC RNIA 300 XEFD	810 1020
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25	15=10-BQ 250-CFCO 100 CKMC 100 CKPR 50-CHML 1000-CKOC 50 CFC 500 CJGC 100 CFCH 100 CKCO 500 CNRO 100-CFCH	1200 1210 1210 890 880 635 930 595 930 890 600 915	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA	XICO NTES c 250 XFC RNIA 300 XEFD	810 1020 1000 875
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23	15=10-BQ 250-CFCO 100 CKMC 100 CKPR 50-CHML 1000-CKOC 50 CFRC 100 CFCH 100 CKCO 100 CKCO 100 CKCO 100 CKCO	1200 1210 1210 1210 890 880 635 930 595 930 890 600 915 880	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 250 XFF 101emXEJ	810 1020 1000 875 1000
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl	15=10-BQ 250-CFCO 100 CKMC 100 CKPR 50-CHML 1000-CKOC 50 CFRC 5000 CJGC 100 CFCH 100 CKCO 500 CNRO 100-CFLC 100 CKPC 100 CKPC	1200 1210 1210 1210 890 880 635 930 595 930 600 915 880 635 1200	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12	XICO  NTES c 250 XFC  RNIA 300 XEFD  100 XEFI 250 XFF 101===XEJ 5000 XEQ  25 XEL	810 1020 1000 875 1000 750
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23	15=10-BQ 250-CFCO 100 CKMC 100 CKPR 50-CHML 1000-CKOC 50 CFRC 5000 CJGC 100 CKCH 100 CKCO 100 CKCH 100 CKCO 100 CKTB 15 10-AK 500-CFCA	1200 1210 1210 890 880 635 930 595 930 600 915 880 635 1200	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 250 XFF 101 SWXEJ 5000 XEQ  25 XEL 125 XETB	810 1020 1000 875 1000 750 1000 1380
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc	15=10-BQ 250-CFCO 100 CKMC 100 CKPR 50-CHML 1000-CKOC 500 CFCC 100 CFCH 100 CKCO 500 CNRO 100-CFLC 1000-CKPC 1000-CKPC	1010 1200 1210 890 880 635 930 595 930 890 600 915 880 635 1200 C 690	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 tl	XICO  VTES c 250 XFC  RNIA 300 XEFD  100 XEFI 250 XFF 101 *** XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG	810 1020 1000 875 1000 750 1000 1380 1000
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc	15=10-BQ 250-CFCO 100 CKPC 100 CKPC 100 CKPC 50 CFRC 5000 CJGC 100 CFCH 100 CKCO 100 CFCH 100 CKCO 100 CFCH 100 CKCO 100-CFCC 1000 CKTB 15 10-AK 500-CFCA	1200 1210 1210 1210 890 635 930 595 930 600 915 880 635 1200 001 1120 C 690 840	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 250 XFF 1010==XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG 75000==XER-XEF	810 1020 1000 875 1000 750 1000 1380 1000 735
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc	15 10 BQ 250 CFCO 100 CKMC 100 CKPR 50 CHML 1000 CKCC 500 CFCC 100 CKCO 100 CKCO 100 CKCO 100 CKCO 100 CKCO 100 CKCC 100 CKCC 100 CKCC 100 CKPC 100 CKCC 500 CKCL 500 CKCL	1200 1210 1210 1210 890 635 930 595 930 600 915 880 630 630 640 640 640 640 640 640 640 640 640 64	AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 tl	XICO  VTES c 250 XFC  RNIA 300 XEFD  100 XEFI 250 XFF 101 *** XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG	810 1020 1000 875 1000 750 1000 1380 1000
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc	15 10-BQ 250 CFCO 100 CKMC 100 CKPR 50 CFRC 5000 CJGC 100 CFCH 100 CKCO 500 CNRO 100 CKCD 100 CKTB 15 10-AK 500 CFCA 1000 CKTB 15 10-AK 500 CFCA 1000 CKTB 15 500 CHNC 500 CHNC	1200 1210 1210 1210 1210 880 635 930 890 600 600 600 635 1200 C 690 840 840 840 840	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 tl Villa Acuna R-12 c D. F.	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 250 XFF 1010==XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG 75000==XER-XEF	810 1020 1000 875 1000 750 1000 1380 1000 735
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24	15 10 BQ 250 CFCO 100 CKMC 100 CKPR 50 CFRC 500 CJGC 100 CKCO 500 CNRO 100 CKDR 110 CKCO 500 CNRO 110 CKCO 500 CHRC 100 CKTB 15 10 AK 500 CFRB 500 CHNC 500 CKCL	1200 1210 1210 1210 890 635 930 595 930 600 915 880 635 1200 1200 1200 1200 1200 1200 1200 120	AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 tl	XICO  NTES c 250 XFC  RNIA 300 XEFD  100 XEFI 250 XFF 1010==XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG 75000==XER-XEF 1000 XETG 1000 XETG 1000 XETG	810 1020 1000 875 1000 750 1000 1380 1000 735 \$4.5 1370 1030
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24	15=10-BQ 250-CFCO 100 CKMC 100 CKPR 50-CHML 1000-CKOC 500 CFRC 5000 CJGC 100 CFCH 100 CKCD 100 CKTB 15 10-AK 500-CFCA 10000-CFCA 10000-CFCB 5000 CHNC 5000 CKCL 5000-CKNC	1200 1210 1210 890 635 930 635 930 600 915 880 635 1200 1120 C 690 840 840 840 840 840 840	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 1250 XFF 101==================================	810 1020 1000 875 1000 750 1000 1380 1000 735 © 5
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24  Waterloo G-23 Windsor I-22 tc	15=10-BQ 250-CFCO 100 CKMC 100 CKMC 100 CKPR 50-CHML 1000-CKOC 500 CJGC 100 CFCH 100 CKCO 100 CFCH 100 CKTB 15 10-AK 500-CFCA 10000-CFCA 10000-CFCB 5000 CHNC 5000 CHNC 5000-CKCR 5000-CKCR 5000-CKCR 5000-CKCR 5000-CKCR 5000-CKCR	1200 1210 1210 1210 890 635 930 595 930 600 915 880 635 1200 1200 1200 1200 1200 1200 1200 120	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 250 XFF 1010=XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG 75000—XER-XEF 1000—XER-XEF 1000—XEB 250 XEFA 250 XEFA 250 XEFA	810 1020 1000 875 1000 750 1000 1380 1000 735 \$4.5 1370 1030 1250 1070
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24  Waterloo G-23 Windsor I-22 tc Wingham G-23	15 10-BQ 250 CFCO 100 CKMC 100 CKPR 50 CFRC 5000 CJGC 100 CKCO 500 CNRO 100 CKCD 100 CKCB 100 CKCB 100 CKCB 100 CKCB 100 CKCB 15 10-AK 500 CFCA 10000 CKTB 15 500 CHNC 5000 CKCL 5000 CKCL 5000 CKCL 5000 CKCL 5000 CKCL 5000 CKCL 5000 CKCK 500 CKCK 5000 CKCK	1200 1210 1210 1210 890 635 930 595 930 607 880 635 1200 C 690 840 840 960 840 960	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO  NTES c 250 XFC  RNIA 300 XEFD  100 XEFI 250 XFF 1010 XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG 75000 XETG 75000 XETG 1000 XETC 1000 X	810 1020 1000 875 1000 1380 1000 735 94 5 1370 1030 1030 1030 1050 10
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24  Waterloo G-23 Windsor I-22 tc Wingham G-23 PRINCE EDWA	15 10 - BQ 250 - CFCO 100	1010 1200 1210 1210 890 635 930 890 600 915 880 635 1200 C 690 840 960 840 960 840 960 1199	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 250 XFF 1010 XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG 75000 XER-XEF 1000 XER 100 XER 250 XEFA 250 XEFA 250 XEFA 250 XEFA 1000 XEB 101 XEK 1000 XEFC	810 1020 1000 875 1000 735 94 1370 1030 1250 1070 990 711 940
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24  Waterloo G-23 Windsor I-22 tc Wingham G-23	15=10-BQ 250-CFCO 100 CKMC 100 CKPR 50-CHML 1000-CKOC 500 CFCC 100 CKCO 100 CKCO 100 CKCO 100 CKCO 100 CKCO 100 CKTB 15 10-AK 500-CFCA 1000-CKCR 5000 CKCL 5000-CKGW 1500-CKCR 5000-CKCK 5	1200 1210 1210 890 635 930 595 930 600 915 880 635 1200 C 690 C 690 N 840 960 840 1199	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 250 XFF 101 XEFI 250 XEQ  25 XEL 125 XETB 100 XETG 75000 XER-XEF 100 XEFZ 1000 XEB 250 XEG 101 XEF 100 XEFZ 1000 XEFX 1000	1020 1000 875 1000 750 1000 1380 1000 735 44 5 1370 1030 1250 1070 990 711 940
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24  Waterloo G-23 Windsor I-22 tc Wingham G-23 PRINCE EDWA Charlottestown C-31	15 10-BQ 250 CFCO 100 CKMC 100 CKMC 100 CKPR 50 CFRC 5000 CJGC 100 CFCH 100 CKCO 100 CFCH 100 CKTB 15 10-AK 500 CFCA 10000 CKTB 15 10-CFCA 10000 CKTB 15 10-BP 15 10-BP 15 10-BP 15 10-BP 15 10-BP 15 10-BP	1200 1210 1210 1210 1210 890 635 930 890 600 915 880 635 1200 840 840 840 840 840 840 840 840 840 8	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 250 XFF 101 XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG 75000 XER-XEF 1000 XER-XEF 1000 XER-XEF 1000 XEFZ 1000 XEB 250 XEFA 250 XEFA 250 XEFA 250 XEFA 250 XEFA 100 XEFO 500 XETO 500 XETO	810 1020 1000 875 1000 1380 1000 1380 1000 1380 1000 1030 1070 1070 990 711 940 1140 1230
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24  Waterloo G-23 Windsor I-22 tc Wingham G-23 PRINCE EDWA Charlottestown C-31 Summerside C-31	15=10-BQ 250-CFCO 100 CKMC 100 CKPR 50-CHML 1000-CKOC 500 CFCC 100 CKCO 100 CKCO 100 CKCO 100 CKCO 100 CKCO 100 CKTB 15 10-AK 500-CFCA 1000-CKCR 5000 CKCL 5000-CKGW 1500-CKCR 5000-CKCK 5	1200 1210 1210 890 635 930 595 930 600 915 880 635 1200 C 690 C 690 N 840 960 840 1199	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 250 XFF 1010 XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG 75000 XER-XEF 1000 XER-XEF 1000 XEB 250 XEFA 250 XEFA 250 XEFA 1000 XEN 5000 XETA 1000 XETO 2500 XETA 1000 XETO 2500 XETA 1000 XETO 2500 XETA 1000 XETO 2500 XETA	1020 1000 875 1000 750 1000 1380 1000 735 44 5 1370 1030 1250 1070 990 711 940
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24  Waterloo G-23 Windsor I-22 tc Wingham G-23 PRINCE EDWA Charlottestown C-31	15 10-BQ 250 CFCO 100 CKMC 100 CKMC 100 CKPR 50 CHNL 1000 CKOC 500 CFRC 5000 CJGC 100 CKCO 500 CNRO 100 CKCD 100 CKTB 15 10-AK 500 CFCR 1500 CKCL 5000 CKCL	1010 1200 1210 1210 890 635 930 890 600 915 880 635 1200 C 690 840 960 1120 580 N 840 960 1120	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO  NTES c 250 XFC  RNIA 300 XEFD  100 XEFI 250 XFF 1010 XEJ 5000 XEQ  25 XEL 125 XETB 100 XETG 75000 XER-XEF 1000 XETG 1000 XEB 250 XEFA 250 XETR 5000 XETR 5000 XETR 5000 XETR 5000 XETR 5000 XEX	810 1020 1000 875 1000 735 90 1370 1030 1250 1070 990 711 940 1140 1230 610 910 1210
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24  Waterloo G-23 Windsor I-22 tc Wingham G-23 PRINCE EDWA Charlottestown C-31 Summerside C-31	15 10 BQ 250 CFCO 100 CKMC 100 CKPR 50 CFCC 500 CFCC 500 CFCC 100 CKCO 500 CRO 100 CKDR 100 CKDR 100 CKDR 100 CKDR 100 CKTB 15 10 AK 500 CFRB 500 CFRB 500 CKCL 500 CKCK 500 CKCL 500 CKCL 500 CKCL 500 CKCL 500 CKCL 500 CKCL 500 CKCK 500 CKCL 500 CKCL 500 CKCL 500 CKCL 500 CKCL 500 CKCL 500 CKCK 500 CKCL 500 CKCK 500 CKCL 500 CKCK 500 CKCL 500 CKCK 500 CKCK 500 CKCL 500 CKCK 500 CKCK 500 CKCK 500 CKCL 500 CKCK 500 CKCL 500 C	1200 1210 1210 890 635 930 990 600 915 880 635 1200 1120 C 690 840 840 960 1199 580 960 1120 N 1030	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 1250 XFF 1010 XEF 15000 XEQ  25 XEL 125 XETB 100 XETG 75000 XER-XEF 1000 XER-XEF 1000 XEF 1000 XET 1000	810 1020 1000 875 1000 750 1000 1380 1000 1230 1230 1140 1140 1140 1140 11230 1140 1140 11230 1140 1140 11230
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24  Waterloo G-23 Windsor I-22 tc Wingham G-23 PRINCE EDWA Charlottestown C-31 Summerside C-31 QUEBEC	15 10-BQ 250 CFCO 100 CKMC 100 CKMC 100 CKPR 50 CFRC 5000 CJGC 100 CFCH 100 CKCD 100 CKCD 100 CKTB 15 10-AK 500 CFCA 10000 CKTB 15 10-CFCA 10000 CFRB 5000 CHNC 5000 CKCL 5000 CKCL 5000 CKCL 5000 CKCL 5000 CKCL 5000 CKCL 5000 CFCA 10 CKCC 5000 CFCC 5000 CFCC 5000 CFCC 5000 CFCC 5000 CFCC 5000 CFCC 5000 CHCC 5000 CHCC 5000 CHCC 5000 CHCC 5000 CHCCC 5000 CHCCC 5000 CHCCCC 5000 CHCCCC 5000 CHCCCCC 5000 CHCCCCCC 5000 CHCCCCCCC 5000 CHCCCCCCCC 5000 CHCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	1200 1210 1210 1210 1210 890 635 930 890 600 915 880 635 1200 C 690 840 960 910 580 N 840 960 910 1120 C 580 N 840 960 910 1120 0 1120 0 1120	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 250 XFF 101 XEFI 250 XEF 100 XEQ  25 XEL 125 XETB 100 XETG 75000 XER-XEF 1000 XER-XEF 1000 XERA 250 XER 1010 XEK 1000 XEF 1000 XEF 1000 XEF 1000 XEF 1000 XET	810 1020 1000 875 1000 750 1000 1380 1000 1380 1000 1070 910 1070 990 1140 1140 1230 610 910 1210 780 638
Wolfville D-31 ONTARIO Brantford H-23 tr Chatham H-22 Cobalt E-23 Ft. William E-19 bl Hamilton H-24 Kingston G-25 London H-23 North Bay F-23 c Ottawa F-25 Prescott F-25 Preston H-23 St. Catherines H-24 tl Stratford H-23 tc Toronto G-24  Waterloo G-23 Windsor I-22 tc Wingham G-23 PRINCE EDWA Charlottestown C-31 Summerside C-31 QUEBEC	15 10 - BQ 250 - CFCO 100 CKMC 100 CKMC 100 CKPR 50 - CHML 1000 - CKOC 500 CJGC 100 CKCO 500 CNRO 100 - CKCI 100 CKTB 15 10 - AK 500 - CFCR 1000 - CKCI 5000 CKCL	1200 1210 1210 890 635 930 990 600 915 880 635 1200 1120 C 690 840 840 960 1199 580 960 1120 N 1030	MEZ AGUASCALIEN Aguascalientes W-11 b BAJA CALIFOI Tiajuana N-3 bc CHIHUAHUA Chihuahua R-9 Juarez P-9 COAHUILA Saltillo, Coah. U-12 Torreon U-11 t1 Villa Acuna R-12 c D. F. Coyoacan Y-13	XICO NTES c 250 XFC RNIA 300 XEFD  100 XEFI 1250 XFF 1010 XEF 15000 XEQ  25 XEL 125 XETB 100 XETG 75000 XER-XEF 1000 XER-XEF 1000 XEF 1000 XET 1000	810 1020 1000 875 1000 750 1000 1380 1000 1230 1230 1140 1140 1140 1140 11230 1140 1140 11230 1140 1140 11230

# INDEX BY LOCATIONS WITH MAP KEY

7477000					-
JALISCO	Watts	Kcys.	C	Watts	Kcys.
Guadalajara, Jal. X-10	500 XEA	1155	Guantanamo X-28 to Havana W-23	20 CMKJ 500 CMAF	1300 680
MICHOACAN			11414444	150 CMAY	965
Morelia, Mich. Y-12	150 XEI	1310	i	150 CMBC	965
viorena, mich. 1-12	130 ALI	1310		150 CMBD 150 CMBF	1270 1365
NEUVO LEON		- 1		225 CMBG	1070
Monterrey, N. L. U-13	100-XEFB	1315		150 CMBJ	1140
	1000 XEH	1132		15 CMBK	1485
0437404	500 XET	690		20 CMBL 30 CMBN	1445 1445
OAXACA		- 1		40 CMBR	1485
Daxaca, Oax. AA-14	105 XEE	1000		150 CMBS	780
PUEBLA			t .	150 CMBW	1140
	101 77777			350 CMBY 150 CMBZ	1230 1010
Puebla Z-13	101 XEV	1000		500 CMC	840
OUERETARO		1	·	150 CMCA	1230
Oueretaro X-12 br	40 XEFS	1000		150 CMCB	1070
Queretaro X-12 br	40 AEFS	1000		250 CMCD 250 CMCF	925 890
TAMAULIPAS				50 CMCH	1405
N. Laredo S-13	101 XEFE	1000		250 CMCJ	1180
	50000 XENT	1115		15 CMCM 250 CMCN	1405
	200 XEP	1400		250 CMCN 1000 CMCO	1270 780
Reynosa, Tams. T-14 Fampico, Tams. W-14	10000∞XED 500 XEM	965 730		150 CMCR	1325
ampico, Tams. W-14		1055		150 CMCU	630
VERA CRUZ	500 XES	2000		150 CMCW 150 CMCX	1865 PU
	100 37000	1000		1000 ₩CMCY	1010 ' 1325
Jalapa Y-14 Jera Cruz, Ver. Z-14	100 XETC 500 XETF	1000 630		40 CMDB	1405
era Cruz, ver. 2-14	100 XEU	1007		150 CMDD	588
YUCATAN				250 CMDE 3150 CMK	925 730
Merida, Yuc. X-19	10 XEFC	1050		250 CMO	630
vierida, 1uc. A-19	105 XEY	1000		1400CMW	1185
		2000	M-4	500~CMX 30 CMGB	890
WEST 1	INDIES	i	Matanzas W-24	30 CMGB 30 CMGC	1205 820
CUBA		ı		100 CMGF	987
				15 CMGH	1040
Caibarien W-25	250 CMHD 150 CMJC	950 1382	Moron Pinar del Rio W-22	7.5 CMJP 20 CMAB	1310 1249
Camaguey W-26	50 - CMJE	1175	Santa Clara W-25	30 CMHI	1030
	200 CMJF	930	Santiago X-28	150 CMKC	1034
	50 CMJG	1050	Tuinucu W-25 re	250 CMHC	<i>7</i> 90
	300 CMJK 50 CMJL	790 960	DOMINICAN R	EPUBLIC	
21 17/ 24	50 CMJN	1270	Santo Domingo X-31	1000 HIX	630
Cardenas W-24 Ciego de Avila W-26	30 CMGE 50 CMJH	1375 1150	HAITI		
Diego de Avna 11-20	5 CMJI	1260		1000 17777	000
	15 CMJO	1110	Port au Prince X-30	1000 HHK	920
Cienfuegos W-25	40 CMHJ	1125	SOUTH /	AMERICA	
Colon W-24	20 CMHL 100 CMGA	1290 834	SOUTH	MATERICA	
Cruces	15 CMHK	1225	Caracas Venezuela	DD-31-YV1BC	960
			Booklin Oslumburg		690

# TIME CONVERSION TABLE

Atlantic	Eastern	Central	Mountain	Pacific	Atlantic	Eastern	Central	Mountain	Pacific
1:00	12:00	11:00	10:00	9:00	7:00	6:00	5:00	4:09	3:00
2:00	1:00	12:00	11:00	10:00	8:00	7:00	6:00	5:00	4:00
3:00	2:00	1:00	12:00	11:00	9:00	8:00	7:00	6:00	5:00
4:00	3:00	2:00	1:00	12:00	10:00	9:00	8:00	7:00	6:00
5:00	4:00	3:00	2:00	1:00	11:00	10:00	9:00	8:00	7:00
6:00	5:00	4:00	3:00	2:00	12:00	11:00	10:00	9:00	8:00

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CFAC	690 Calgary, Alta., MST. 7:30-9 a.m.; 11:30 a.m1:30 p.	CKCI	645 Quebec, Que., EST. 1-1:30 p.m.	CMCH	1405 Havana, Cuba, EST.
CFB	m.: 4:30-6 n.m.	CKCK	960 Regina, Sask., M&T.	CMCJ	5-9 p.m. 1180 Havana, Cuba.
CFC	1120 Toronto, Ont., EST.	CKCL	9-10 a.m.; 11 a.mnoon; 1-3:30. 580 Toronto, Ont., EST.	CMCM CMCN	1270 Havana, Cuba.
CFCI	7:15-noon; 1-11 p.m.	CKCO	8:30 a.mmid. 890 Ottawa, Ont.	CMCQ	780 Havana, Cuba. 1326 Havana, Cuba.
CFCI	8 a.mmid.	CKCR	645 Waterloo, Ont., EST. 10 a.m1:15 p.m.; 4-10 p.m.	CMCU	630 Havana, Cuba.
	8-8-30 a m · noon-1 n.m · 5-8	ekcv	880 Quebec, Que., EST.		1-о а.ш., 11 а.шо р.ш.
CFCI	985 Calgary, Alta., MST. 7:30 a.m1:30 p.m.; 5-11 p.m.	CKFC	Noon-2 p.m.; 6:30-11 p.m. 730 Vancouver, B. C.	CMCX CMCY	1325 Havana, Cuba. EST.
CFC	7:30 a.m1:30 p.m.; 5-11 p.m.  1210 Chatham, Ont., EST.  7:15-7:30 p.m.; 8:15-8:30 p.m.  630 Victoria, B. C., PST.	CKGW	Silent.  840 Toronto, Ont., EST. 6:45 a.mmid.	CMDB	8:30-10:30 p.m.
CFC	630 Victoria, B. C., PST.		6:45 a.mmid.	CMDD	588 Havana, Cuba.
	8 a.m12:30 p.m.; 6-8 p.m.; 10- 11 p.m.	CKIC ~	7:30-8:30 a.m.; 12:15-1:15 p.m.;	CMDE CMGA	925 Havana, Cuba. 834 Colon, Cuba.
CFC	7 580 Charlottetown, P. E. I., AST.	CKLC	6-7 p.m. 840 Red Deer, Alta., MST.	CMGB	1205 Matanzas, Cuba.
CFJC	11:30 a.mnoon; 4:30-8 p.m.		8 a.m7:45 p.m.	CMGC	1375 Cardenas, Cuba.
UFJU	7:30-9:30 a.m.; noon-2 p.m.;	CKMC	1210 Cobalt, Ont., EST. 7-8 p.m. 730 Vancouver, B. C.	CMGF CMGH	
CFLC	5:30-7 p.m. 915 Prescott, Ont., EST.	CKMO CKNC	730 Vancouver, B. C. 960 Toronto, Ont., EST.	CMHC CMHD	790 Tuinucu, Cuba. 950 Caibarien, Cuba.
CFN	8-10 a.m.; noon-2 p.m.; 5-7:30	CKOC	8 a.m12:30 p.m.; 2:30-11:15. 635 Hamilton, Ont., EST.	CMHI	1030 Santa Clara, Cuba, EST.
	8:30-9:30 a.m.; 12:30-2 p.m.		8 a.m10:30 p.m.	CMHJ	11 a.m1 p.m.; 8-10 p.m. 1125 Cienfuegos, Cuba, EST. 11 a.m1 p.m.; 7-9 p.m.
CFQ( CFR)	310 Saskatoon, Sask.	CKOK	540 Windsor, Ont., EST. 7:30 a.mmid.	СМНК	1225 Cruces, Cuba.
CFR	8 a.mmid.	CKOV	1200 Kelowna, B. C., PST.	CMHL CMJC	1290 Cienfuegos, Cuba.
CHC	H 1200 Montreal Que.	avna	8-9 a.m.; 11:30 a.m2 p.m.; 4:30-7:30 p.m.	CMJE	1175 Camaguey, Cuba.
CHC	Noon-2 p.m.: 5-7:30 p.m., $AST$ .	CKPC	880 Preston, Ont., EST. 10 a.m2 p.m.	CMJF CMJQ	930 Camaguey, Cuba. 1050 Camaguey, Cuba.
CHG	\$ 1120 Summerside, P. E. I., 10 a.m2 p.m.; 4-8 p.m., AST.	CKPR	890 Ft. William, Ont., EST. 9 a.m2 p.m.; 5:30-11 p.m.	СМЈН	1050 Camaguey, Cuba. 1150 Ciego de Avila, Cuba. 10 a.m2 p.m.; 5-10 p.m., EST.
CHL	Vancouver, B. C., PST.	CKTB	635 St. Catharines, Ont.,	CMJI	1260 Ciego de Avila, Cuba.
CHM	8:50-9:30 p.m. A 580 Edmonton, Alta., MST.	CKUA	1:30-5 p.m.; 6:30-8 p.m., EST. 580 Edmonton, Alta., MST.	CMJK	10 a.m1:30 p.m.; 6-10, EST. 790 Camaguey, Cuba.
CHM	Silent.  880 Hamilton, Ont., EST.	CKWX	4-9 p.m. 730 Vancouver, B. C., PST.	~ CMJL CMJN	960 Camaguey, Cuba. 1270 Camaguey, Cuba.
CHN	3-11 p.m. EST		8-8:30 a.m.; 10:30 a.mnoon;	CMJO CMJP	1110 Ciego de Avila, Cuba.
CHN	7:15-7:30 p. m.;	CKX	4:30-8:30 p.m.; 9:30-mid. 930 Brandon, Man., CST.	CMK	730 Havana, Cuba, EST.
	8 a.m2 p.m.; 6 p.mmid.	CKY	8:30-9:30 a.m.; 8-10 p.m. 780 Winnipeg, Man., CST.	CMKC	10 a.mnoon; 6 p.mmid. 1034 Santiago, Cuba.
CHR	9 a.m2 p.m.: 5 p.mmid.	CMAB	8:30 a.m2 p.m.;3:30-11:45 p.m. 1249 Pinar del Rio, Cuba.	CMKJ	1300 Guantanamo, Cuba. 630 Havana, Cuba.
CHW	8 a.m2 p.m.; 6 p.mmid. 645 Quebec, Que., EST. 9 a.m2 p.m.; 5 p.mmid. 650 Regina, Sask., MST. 7-9 a.m.; 10-11 a.m.; noon-1 p.	CMAB CMAF	680 Havana, Cuba, EST. 5-11:30 p.m.	CM Q CM W	1185 Havana, Cuba, EST. 7:30 a.m11:30 p.m.
	ш.; 5:50-ши.	CMAY	965 Havana, Cuba.	CMX	890 Havana, Cuba, EST.
CHW	Noon-8 p.m.	CMBC	965 Havana, Cuba, <i>EST</i> . 4 a.mmid.	CNRA	11 a.m2 p.m.;7-11 p.m. 630 Moncton, N. B., AST.
CHY(	730 Montreal, Que.	CMBD	1276 Havana, Cuba.		12:30-2 p.m.; 6:15-7:15 p.m.;
	7:45-9:15 a.m.; noon-1 p.m.; 3:30-4:30 p.m.; 5-7:30 p.m.	CMBF CMBG	1365 Havana, Cuba. 1070 Havana, Cuba.	CNRH	9-10 p.m. 815 Halifax, N. S., AST.
CJCE	880 Sydney, N. S., AST.	CMBJ CMBK	1140 Havana, Cuba. 1485 Havana, Cuba.	CNRO	Silent. 600 Ottawa, Ont., EST.
CJCJ	10 a.m2 p.m.; 6-10 p.m. 690 Calgary, Alta., <i>MST</i> . 9-11:30 a.m.; 1:45-3 p.m.; 6-7:30	CMBL	1445 Havana, Cuba, EST.	CNRV	Noon-1 p.m.; 6-11 p.m. 1030 Vancouver, B. C., PST.
CJG	9-11:30 a.m.; 1:45-3 p.m.; 6-7:30 595 London, Ont., EST.	CMBN	7-9 p.m. 1445 Havana, Cuba, <i>EST</i> .	CPRY	2-3:30 p.m.; 5:30-8:30 p.m. 840 Toronto, Ont., EST.
	8:45 a.m1:15 p.m.; 5:30-10.	CMBR	2-3 p.m.; 9:15-11 p.m.	J. III	1-1:30 p.m.; 7:45-8:30 p.m.; 10-
ClG	8:30-9:15 a.m.; 10:30-10:45 a.	CMBS	1485 Havana, Cuba. 780 Havana, Cuba.	ннк	10:30 p.m. 920 Port-au-Prince, Haiti.
CJO	m.; 12:40-1:15 p.m.; 6:45-8.	CMBW CMBY	<ul><li>1140 Havana, Cuba.</li><li>1230 Havana, Cuba.</li></ul>	HIX	630 Santo Domingo, EST. Silent.
0300	8:45-10 a.m.; noon-1:15 p.m.;	CMBZ	1010 Havana, Cuba, EST.	KABC	1420 San Antonio, Tex., CST.
CJOI	3-4 p.m.; 6-8 p.m. 1210 Vancouver, B. C., PST.		9-10:30 a.m.; noon-2 p.m.; 4-5 p.m.; 6-7 p.m.; 8-11 p.m.	KALE	6:45 a.m1:30 p.m.; 3:30-11:30. 1300 Portland, Ore., PST.
	7:30 a.m1 p.m.; 4-10 p.m.	CMC	840 Havana, Cuba.		7-10:30 a.m.; 2:30-5; 6-7 p.m.
CJRI	8-10:30 a.m.; noon-2:30 p.m.;	CMCA CMCB	<ul><li>1230 Havana, Cuba.</li><li>1070 Havana, Cuba, EST.</li></ul>	KARK	890 Little Rock, Ark., CST. 7:30 a.m9 p.m.
CJRV	7:30-10-30 p.m.		11:30 a.m1 p.m.; 5-6 p.m.; 7:30-10 p.m.	KASA	1210 Elk City, Okla., CST. 7 a.m9 p.m.
	Noon-1 p.m.; 4:30-7:30 p.m.	CMCD	925 Havana, Cuba, EST.	KBPS	1420 Portland, Ore., PST.
CKA	7:30 a.mmid.	CMCF	Noon-3 p.m.; 8 p.mmid. 890 Havana, Cuba, EST.	KBTM	11 a.m12:30 p.m.; 3-5 p.m. 1200 Paragould, Ark., CST.
CKC	730 Vancouver, B. C.		5-8 p.m.		7:30 a.m1:30 p.m.; 3:15-6:15.

101	VIC HODELDI ON		2112101112		1100
KCMC	1420 Texarkana, Ark., CST.	KFMX	1250 Northfield, Minn., CST.	KGCR	1210 Watertown, S. D., CST.
KCRC	6:45 a.m2 p.m.; 4-9 p.m. 1370 Enid, Okla., CST.	KFNF	8-9 p.m. 890 Shenandoah, Iowa, CST.	KGCU	6:30 a.m3 p.m.; 5-9. 1240 Mandan, N. D., MST.
	10 a.m2 p.m.; 3:45-7:45 p.m.	Krmr	5-8 a.m.: 9-10 a.m.: 12:15-5		Noon-5 p.m.; 6:45-9 p.m. 1310 Wolf Point, Mont., MST.
KCRJ	1310 Jerome, Ariz., MST. 7:30-9:30 a.m.; noon-1 p.m.;	KFOR	p.m.; 6-8 p.m.; 9-10 p.m. 1210 Lincoln, Nebr., CST.	KGCX	6:30-9 a.m.: 11:30-3: 6-9 p.m.
	3:45-6 p.m.		7 a.m10 p.m. 1250 Long Beach, Calif., PST.	KGDA	6:30-9 a.m.; 11:30-3; 6-9 p.m. 1370 Mitchell, S. D., CST.
KDB	1500 Santa Barbara, Calif., 8 a.mmid., PST.	KFOX	1250 Long Beach, Calif., PST. 6 a.mmid.	KGDE	8 a.m4:30 p.m.; 5:30-9. 1200 Fergus Falls, Minn.
KDFN	1440 Casper, Wvo., MST.	KFPL	1310 Dublin, Texas, CST.		7 a.m9 p.m., CST.
KDKA	9 a.m9 p.m. 980 Pittsburgh, Pa., EST.	KFPM	6 a.m10:30 p.m. 1310 Greenville, Texas, CST.	KGDM	1100 Stockton, Calif., PST. 6 a.msunset.
	7 a.m12:30 a.m. next day.		7:45-9 a.m.; 1-2:45 p.m.; 6-9	KGDY	1200 Huron, S. D., CST.
KDLR	1210 Devils Lake, N. D., CST. 7 a.m3 p.m.; 5:30-9:30 p.m.	KFPW	p.m.; 1210 Fort Smith, Ark., CST.	KGEK	7 a.m2 p.m.; 4-9 p.m. 1200 Yuma, Colo., <i>MST</i> .
KDYL	1290 Salt Lake City, Utah.		6:30 a.m2 p.m.; 5-10:30 p.m. 1340 Spokane, Wash., PST.		11 a.m1:30 p.m. 1360 Long Beach, Calif., PST.
KECA	1290 Salt Lake City, Utah. 6:30 a.m1 a.m., MST. 1430 Los Angeles, Calif., PST.	KFPY	1340 Spokane, Wash., PST. 7 a.m12:30 a.m. next day.	KGER	1360 Long Beach, Calif., PST. 6 a.mmid.
	9 a.m11 p.m.	KFQD	1230 Anchorage, Alaska. 6 p.mmid. (Zone 6)	KGEW	1200 Ft. Morgan, Colo., MST.
KELW	780 Burbank, Calif., PST. 10 a.m1 p.m.; 5-8 p.m.	KFRC	610 San Francisco, Calif.	KGEZ	6:30-9:30 p.m. 1310 Kalispell, Mont., MST.
KERN	1200 Bakersheld, Calif., PST.		7 a.m1 a.m., <i>PST</i> .  630 Columbia, Mo., <i>CST</i> . 6:30-9 a.m.; 4-7:30 p.m.; 9-mid.		8 a.m9 p.m.
KEX	7:30 a.mmid. 1180 Portland, Ore., PST.	KFRU	6:30-9 a.m.: 4-7:30 p.m.: 9-mid.	KGFF	1420 Shawnee, Okla., CST. 7:30 a.m9 p.m.
	7 a.mnoon; 1 p.mmid.	KFSD	buu ban Diego, Calli., Par.	KGFG	1370 Oklahoma City, Okla.
KFAB	770 Lincoln, Neb., CST. 6 a.m10:30 p.m.	KFSG	7:30 a.mmid. 1120 Los Angeles, Calif., <i>PST</i> .		7:15-10 a.m.; 3-3:45 p.m.; 7:45- 10 p.m., <i>CST</i> . 1500 Corpus Christi, Texas.
KFAC	1300 Los Angeles, Calif., PST.		1:30-3 p.m.; 7:30-mid. 1290 Galveston, Texas, CST. 8-9:30 a.m.; 11 a.m1 p.m.;	KGFI	1500 Corpus Christi, Texas.
KFBB	7 a.mmid. 1280 Great Falls, Mont., <i>MST</i>	KFUL	8-9:30 a.m.: 11 a.m1 p.m.:	KGFJ	7 a.m3 p.m.; 6-10 p.m., <i>CST</i> . 1200 Los Angeles, Calif.
	8 a.m3 p.m.; 5-10 p.m.		2:30-4 p.m.; 5:30-7 p.m.;	KGFK	24 hours daily.
KFBI	1050 Abilene, Kans., CST. 5 a.m9 p.m.	KFUO	10:15 p.mmid. 550 St. Louis, Mo., CST.	KUFK	1500 Moorhead, Minn., CST. 8 a.m9 p.m.
KFBK	1310 Sacramento, Calif., PST.		650 St. Louis, Mo., CST. 6:30-7 a.m.; 12:15-12:40 p.m.; 9:30-10:30 p.m.	KGFL	8 a.m9 p.m. 1370 Santa Fe, N. M., MST. 9-10 a.m.; 11 a.m3 p.m.; 4-5:30
KFBL	7 a.m11 p.m. 1370 Everett, Wash., PST.	KFVD	1000 Los Angeles, Calif., PST.		p.m.; 7:30-9.
KFDM	8:30 a.mnoon; 3-6 p.m.; 3-6 a.m. 560 Beaumont, Tex., CST.	KFVS	6 a.m6:45 p.m.; 10 p.mmid. 1210 Cape Girardeau, Mo.	KGFW	p.m.; 7:30-9. 1310 Kearney, Neb., CST. 7:30 a.m1:30 p.m.; 5-10:30
	7 a.m2 p.m.; 4:30-10:30 p.m. 550 Brookings, S. D., CST.		9 a.mnoon; 4-8:30 p.m., CST. 950 Los Angeles, Calif., PST.		p.m. 630 Pierre, S. D.
KFDY	550 Brookings, S. D., CST.	KFWB	950 Los Angeles, Calif., <i>PST</i> . 7:30 a.mmid.	KFGX KGGC	1420 San Francisco, Calif.
KFEL	12:30-2 p.m. 920 Denver, Colo., MST. 7.8:30 a m : 10 a m - 12:30 p m :	KFWF	1200 St. Louis, Mo., CST.		9 a.m9 p.m., <i>PST</i> . 1010 Coffeyville, Kans., <i>CST</i> . 7:30 a.m2 p.m.; 5-10:30.
		KFWI	Silent. 930 San Francisco, Calif.	KGGF	7:30 a.m2 p.m.; 5-10:30.
KFEQ	3-4:30 p.m.; 6-7:30 p.m. 680 St. Joseph, Mo., CST.		7-8 a.m.: 9 a.m1 p.m.: 6-7:30	KGGM	1230 Albuquerque, N. M.
KFGQ	6 a.m7:45 p.m. 1310 Boone, Iowa, CST.	KFXD	p.m.; 8:30-1 a.m., PST. 1200 Nampa, Idaho, MST.	KGHF	8 a.m2 p.m.; 4-10 p.m., MST. 1320 Pueblo, Colo., MST.
	6-7:30 a.m.; 1:30-2:30 p.m. 1300 Wichita, Kans., CST. 7-8:30 a.m.; 9-11 a.m.; 11:30		7 a.m9 p.m. 920 Denver, Colo., MST. 8:30-10 a.m.; 12:30-3; 4:30-6;		1320 Pueblo, Colo., MST. 7 a.m1 p.m.; 4-10 p.m.
KFH	7-8:30 a.m.: 9-11 a.m.: 11:30	KFXF	8:30-10 a.m.; 12:30-3; 4:30-6;	KGHI	1200 Little Rock, Ark., CST 8:30 a.m1:30 p.m.; 5-9; mid
	a.m2 p.m.; 3-6; 7-9; 10-11	V-V (	7:50-mia.		3 a.m.
KFI	p.m. 640 Los Angeles, Calif., PST.	KFXJ	1310 Grand Jet., Colo., MST. 8 a.m2 p.m.; 6-9 p.m.	KGHL	950 Billings, Mont., MST. 7:30 a.m4 p.m.; 5:30-11.
VEIO	6:30 a.mmid.	KFXM	1210 San Bernardino, Calif.	KGIR	1360 Butte, Mont., MST.
KFIO	1120 Spokane, Wash., PST. 6 a.msunset.	KFXR	7 a.m7 p.m., <i>PST</i> .  1310 Oklahoma City, Okla.	KQIW	7 a.mmid. 1420 Trinidad, Colo., <i>MST</i> .
KFIZ	1420 Fond du Lac, Wis., CST.	KFYO	7:30 a.m2 p.m.; 4-10, CST. 1310 Lubbock, Texas.		6-8 a.m.; 10-2 p.m.; 5-8 p.m.
KFJB	10 a.m1 p.m.; 4-10 p.m. 1200 Marshalltown, Iowa.	KFYR	550 Bismarck, N. D., CST.	KGIX	1420 Las Vegas, Nev., PST. 6-9 a.m.; noon-3 p.m.; 6-9 p.m.
KFJI	6-9 s.m.: noon-3 n.m.: 6-9 n.m.	KQA	6:30 a.m12:30 p.m.; 2-11 p.m 1470 Spokane, Wash., PST.	KGIZ	1500 Grant City, Mo., CST.
	1210 Klamath Falls, Ore. 7:30 a.m9 p.m., PST. 1370 Grand Forks, N. D.		6 a.mmid. 1870 Tueson, Ariz., MST.		7-11 a.m.; noon-5 p.m.; 6-9 p.m.
KFJM	7 a.m9 n.m. CST.	KGAR	1370 Tucson, Ariz., MST. 7 a.m1:30 p.m.; 4-11.	KGKB	1500 Tyler, Texas, CST. 7 a.m2 p.m.; 4-10 p.m.
KFJR	1300 Portland, Ore., PST.	KGB	1330 San Diego, Calif., PST.	KGKL	1370 San Angelo, Texas, CST
	10:30 a.m2:30 p.m.; 5-6 p.m.; 7-mid.	VADII	7 a.mmid.	како	8 a.m9:30 p.m. 570 Wichita Falls, Texas.
KFJZ	1370 Fort Worth, Texas, CST.	KGBU	900 Ketchikan, Alaska. (Zone 8), 10 a.m3 p.m.; 5-7;	KGKX	1420 Lewiston, Idaho.
KFKA	7 a.m11 p.m.	VORV	10 p.m3 a.m.	KGKY	1500 Scottsbluff, Neb., MST. 6:30 a.m2 p.m.; 4:30-9.
K. KA	880 Greeley, Colo., MST. 6-7:30 a.m.; 9 a.m2:30 p.m.;	KGBX	1310 Springfield, Mo., CST. 6:30-9:30 a.m.; 11 a.m2 p.m.;	KGMB	1320 Honolulu, Hawaii.
KFKU	0-7:30 p.m.; 9-11 p.m.	Vest	4-10 p.m.		7-9 a.m.; 10:40 a.m11 p.m. (Zone 5)
	1220 Lawrence, Kans., CST. 2:30-3 p.m.; 6-6:30 p.m.	KGBZ	930 York, Neb., CST. 7:30-9:30 a.m.; 11 a.m12:30 p.	KGNF	1480 North Platte, Neb.
KFKX	1020 Chicago, Ill.		m.; 2-3:30 p.m.; 5-6:30 p.m.;		7 a.msunset, $MST$ .
KFLV	1410 Rockford, Ill., CST. 10 s.m12:30 p.m.; 3-6 p.m.;	KGCA	8:30-10 p.m. 1270 Decorab. Iowa. CST.	KGMO	1210 Dodge City, Kans. 7:30 a.m3:30 p.m.; 5-9, MST.
	8-10 p.m.		1270 Decorah, Iowa, CST. 8:30-9:45 a.m.; 10:45-11:30 a. m.; 12:30-2:30.	KGO	790 San Francisco, Calif.
KFLX	1370 Galveston, Texas.		m.; 12:30-2:30.		7 s.m12-30 s.m., PST.

1701	NO INDEX DI CA	LLL L	ETTERS AND WEDIT	,5D11 1	TIME ICALO
KGRS	1410 Amarillo, Texas, CST.	KNX	1050 Hollywood, Calif., PST.	KSEI	890 Pocatello, Idaho, MST.
	6-8 a.m.; 10 a.m12:30 p.m.;	KOA	6:30 a.m1 a.m. next day.	KSL	8 a.m11 p.m.  1130 Salt Lake City, Utah.  7 a.mmid., MST.  1290 Clarinda Laws
	3-4:30 p.m.; 6-7:30 p.m.; 9-		830 Denver, Colo., <i>MŠT</i> . 7 s.mmid.		7 a.mmid., MST.
KGU	750 Honolulu, Hawaii.	KOAC	550 Corvalis, Ore., PST.	KSO.	oranina, iowa.
	6:15-10:30 a.m.; noon-1; 4:45- 11:30 p.m. (Zone 5).	KOB	6:30 a.m4 p.m.; 6-8:30 p.m. 1180 Albuquerque, N. M.	KSOO	1110 Sioux Falls, S. D., CST. 6 a.m8 p.m.
KGVO	1200 Missoula, Mont., MST.	KOOM	7 a.m9 p.m., <i>MST</i> . 1400 Chickasha, Okla.	KSTP.	1460 St. Paul, Minn., CST.
KGW	6 a.mmid. 620 Portland, Ore., PST.	KOCW Koh	1380 Reno, Nev., PST.	KTAB	6:30 a.m12:30 a.m. next day. 560 San Francisco, Calif.
KGY	6:30 a.mmid.	KOIL	8 a.m9 p.m.		6:45 a.m1 a.m., PST.
KGI	1210 Olympia, Wash., PST. 6 p.mmid.		1260 Council Bluffs, la., CST. 6 a.m1 a.m. next day.	KTAR	620 Phoenix, Ariz., MST. 7 a.m11:15 p.m.
KHJ	6 p.mmid. 900 Los Angeles, Calif., PST.	KOIN	940 Portland, Ore., PST.	KTAT	1240 Ft. Worth, Texas.
KHQ	7 a.m1 a.m. next day. 590 Spokane, Wash., <i>PST</i> .	KOL	6 a.ml a.m. next day. 1270 Seattle, Wash., PST.		7-9 a.m.; noon-1:30 p.m.; 4-7 p.m.; 9-mid.
-	7 a.mmid.		6:45 a.mmid.	KTBS	1450 Shreveport, La., CST.
KICA Kick	1370 Clovis, N. M. 1420 Red Oak, Iowa.	KUMA	1480 Oklahoma City, Okla. 7 a.m11 p.m CST.	VTEI	6 a.mmid.
	Silent.	KOMO	7 a.m11 p.m., <i>CST</i> . <b>920</b> Seattle, Wash., <i>PST</i> . 6:55 a.m12:30 a.m. next day.	KTFI	1240 Twin Falls, Idaho, MST. 6:30 a.m11 p.m.
KID	1320 Idaho Falls, Idaho, MST 9 a.mmid.	KONO	6:55 a.m12:30 a.m. next day. 1370 San Antonio, Tex., CST.	KTHS	1040 Hot Springs, Ark., CST.
KIDO	1350 Boise, Idaho, MST.	KONO	8:30-10 a.m.; 11 a.mnoon; 1:30-4 p.m.; 6-7 p.m.; 8-10.		9-10 a.m.; 11 a.m12:30 p.m.; 4:30-5:30 p.m.; 6:45-7:30;
KIDW	7 a.m9:30 p.m. 1420 Lamar, Colo., MST.	Vone	1:30-4 p.m.; 6-7 p.m.; 8-10.		8:30-9:30; 10:30-11:30 p.m.
	6-8 a.m.; 2-6 p.m.; 8-10.	Koos	1370 Marshfield, Ore., <i>PST</i> . 9 a.m9 p.m.	KTM	780 Los Angeles, Calif., PST. 6-10 a.m.; 1-5 p.m.; 8 p.m
KIEM	1210 Eureka, Calif., <i>PST</i> .	KORE	1420 Eugene, Ore., <i>PST</i> .		4 a.m. next day.
KIEV KIT	<ul><li>850 Glendale, Calif., PST.</li><li>1310 Yakima, Wash., PST.</li></ul>	KOY	7:45 a.m8:30 p.m. 1390 Phoenix, Ariz., MST.	KTRH	1120 Houston, Texas, CST.
	7 a.m11 p.m.		7 a.m10 p.m.	KTSA	6:30-11 a.m.; noon-11:30 p.m. 1290 San Antonio, Tex., CST.
KJBS	1070 San Francisco, Calif. Mid. to local sunset, PST.	KPCB	650 Seattle, Wash., PST.		6-8 a.m.; 9:30-11:30 a.m.; 3-5
KJR	970 Seattle, Wash., PST.	KPJM	5:30 a.m8 p.m.; 10 p.m4 a.m. 1500 Prescott, Ariz., MST.	KTSM	p.m.; 7-10 p.m. 1310 El Pago Texas.
VI ON	7 a.mmid.		9 a.m9 p.m.	KTW	1310 El Paso, Texas. 1220 Seattle, Wash. 1370 Walla Walla, Wash.
KLCN KLO	1290 Blytheville, Ark. 1400 Salt Lake City, Utah.	KPO	680 San Francisco, Calif. 7:30 a.mmid., PST.	KUJ	1370 Walla Walla, Wash.
	8:30 a.m10:30 p.m., MST.	<b>KPOF</b>	880 Denver, Colo., MST. 7:30-9 a.m.; 2:30-4:30 p.m.;	KUMA	6 a.msunset, <i>PST</i> .  1420 Yuma, Ariz., <i>MST</i> .
KLPM	1240 Minot, N. D., CST. 7 a.m1 p.m.; 6-7:45 p.m.; 10-		7:30-9 a.m.; 2:30-4:30 p.m.; 7:30-9 p.m.		7-9 a.m.; noon-3 p.m.; 6-9 p.m.
	11:30 p.m.	KPPC	1210 Pasadena, Calif., PST.	KUOA	1390 Fayetteville, Ark., CST. 7-8 a.m.; 11 a.m1 p.m.; 5-6:30.
KLRA	1390 Little Rock, Ark., CST. 8-11 a.m.; 1-5 p.m.; 6:30-11 p.m.	KPQ	7-9 p.m. 1500 Wenatchee, Wash., <i>PST</i> .	KUSD	890 Vermillion, S. D., CST.
KLS	1440 Oakland, Calif., PST.	-	7 a.m10 p.m.	KVI	8-9 p.m. 570 Tacoma, Wash., PST.
KLX	8:30 a.m7:30 p.m. 880 Oakland, Calif., PST.	KPRC	920 Houston, Texas, CST. 6:30 a.mmid.		6:30 a.mmid.
KLA	7 a.m11 p.m.	KQV	1380 Pittsburgh, Pa., EST.	KVL	1370 Seattle, Wash. 1260 Tucson, Ariz.
KLZ	560 Denver, Colo., MST. 6:30 a.m11:30 p.m.		1380 Pittsburgh, Pa., EST. 8:30 a.m1 p.m.; 2-11 p.m.	KYUA	6-9 a.m.; noon-3 p.m.; 6-9 p.m.
KMA	930 Shenandoah, lowa, CST.	KQW	1010 San Jose, Calif., PST. 6:45 a.m3 p.m.; 4:30-10 p.m.	KVOO	1140 Tulsa, Okla., <i>CST</i> .
	6-7:30 a.m.; 9:30-11 a.m.;12:30-	KRE	1370 Berkeley, Calif., PST.	KVOR	7 a.m1:45 p.m.; 3-9 p.m. 1270 Colorado Springs, Colo.
	2 p.m.; 3:30-5 p.m.; 6:30-8:30; 10-mid.		6:30-9:30 a.m.; noon-3 p.m.; 6-9 p.m.		7 a.m10 p.m., MST.
KMAC	1370 San Antonio, Tex., CST.	KREG	1500 Santa Ana, Calif., PST.	KVOS	1200 Bellingham, Wash. 1420 Cedar Rapids, Ia., CST.
	7-8:30 a.m.; 10-11 a.m.; noon- 1:30 p.m.; 4-6 p.m.; 7-8 p.m.;	KRGV	9 a.m11 p.m. 1260 Harlingen, Texas, CST.		6:30 a.mmid.
Water	10 p.mmid.		7-9:30 a.m.; 12:30-3:30 p.m.;	KWEA KWG	1210 Shreveport, La. 1200 Stockton, Calif., PST
KMBC	950 Kansas City, Mo., CST. 6:15 a.mmid.	KRKD	6:30-9:30 p.m. 1120 Los Angeles, Calif., PST.		7 a.mmid.
KMED	1310 Medford, Ore., PST.	KUKD	6 a.m1:30 p.m.; 3-7:30 p.m.	KWJJ	1060 Portland, Ore.
KW!	8 a.m9:30 p.m.	KRLD	1040 Dallas, Texas, CST.	KWK	1350 St. Louis, Mo., CST. 6:55 a.m12:15 a.m. next day.
KMJ	<ul><li>580 Fresno, Calif., PST.</li><li>7 a.mmid.</li></ul>		6-7:15 a.m.; 7:45-9 a.m.; 10-11 a.m.; 12:30-4:30 p.m.; 5:30-	KWKC	1370 Kansas City, Mo.
KMLB	1200 Monroe, La., CST.	wn	6:45; 7:30-8:30; 9:30-10:30.	KWKH	850 Shreveport, La., CST. 8:30 p.mmid.
KMMJ	7 a.m10 p.m. 740 Clay Center, Neb., CST.	KRMD	1310 Shreveport, La., CST. 7 a.m1 p.m.; 5-8 p.m.	KWLC	1270 Decorah, Iowa, CST.
	5:45  a.msunset.	KROW	930 Oakland, Calif., PST.		6;45-8 a.m.; 10:30-9:30 p.m.;
KMO	1330 Tacoma, Wash., PST. 6:30 a.m11 p.m.	KRSC	8-9 a.m.; 1-6 p.m.; 7:30-8:30.	KWSC	11:30 a.m12:30 p.m. 1220 Pullman, Wash., PST.
KMOX	1090 St. Louis, Mo., CST.	VU20	1120 Seattle, Wash., PST. Sunrise to local sunset.		6:45-8 a.m.; 10:30-9:30 p.m.
	6:45 a.m12:45 a.m. next day.	KSAC	580 Manhattan, Kans., CST.		1260 Brownsville, Texas.
KMPC	710 Beverly Hills, Calif. 6:30 a.m5:15 p.m.; 8-1 a.m.		8-9 a.m.; 10-10:30 a.m.; 12:30- 1:30 p.m.; 4:30-5:30 p.m.	KXA	760 Seattle, Wash., PST. 7 a.msundown; 9 p.mmid.
	PST.	KSCJ	1330 Sioux City, Iowa, CST.	KXL	1420 Portland, Ore., PST.
KMTR	<ul><li>570 Hollywood, Calif., PST.</li><li>6:30 a.mmid.</li></ul>	KSD	6:30 a.m11 p.m.	KXO	7 a.mmid. 1500 El Centro, Calif.
KNOW	1500 Austin, Texas, CST.	Yan	550 St. Louis, Mo., CST. 7 a.m12:15 p.m.; 12:40-9:30;	KXRO	1310 Aberdeen, Wash., PST.
	7:30 a.m1 p.m.; 5-11 p.m.		10:30-11 p.m.		7:30 a.m11 p.m.

KXYZ	1449 Houston, Texas, CST.	WBAX	1210 Wilkes Barre, Pa., EST.	WCDA	1350 New York City, EST.
٠.	7-10 a.m.; 11 a.m1:15 p.m.; 3:30-10:30 p.m.	WBBC	7:30 a.mnoon. 1400 Brooklyn, N. Y., EST.	WCFL	9 a.m3 p.m. 970 Chicago, Ill., CST.
KYA	1230 San Francisco, Calif.		9-10 p.m. 1219 Richmond, Va., EST.		6 a.mmid.
KYW	7:30 a.mmid., <i>PST</i> . 1020 Chicago, Ill., <i>CST</i> .	WBBL	Silent.	MCGU	1400 Brooklyn, N. Y., EST. 8 a.m11:15 a.m.; 7:30-9 p.m.
	7 a.m1 a.m. next day.	WBBM	770 Chicago, Ill, CST	WCKY	1490 Covington, Ky., CST.
KZRM	618.5 Manila, P. I. 6:30-7:30 a.m.; 12:15-1:15; 3-		6:45 a.m10 p.m.; 11:30 p.m 2 a.m.	WCLO	Midmid. 1200 Janesville, Wis., CST.
	10:30 p.m.	WBBR	1300 Brooklyn, N. Y., EST.		7:30 a.m3:30 p.m.; 5-9 p.m.
NAA Rus	690 Arlington, Va. 664 Salvador.	WBBZ	10 a.mnoon: 6-8 p.m. 1200 Ponca City, Okla., CST.	WCLS	1310 Joliet, Ill., CST. 11 a.mnoon; 3-8 p.m10-mid.
TGW	570 Guatamala.		6 a.m10 p.m.	WCMA	1400 Culver, Ind., CST.
TICR VAS	911 San Jose, C. R. 685 Glace Bay, N. S., <i>AST</i> .	WBCM	1410 Bay City, Mich., CST.		6-6:30 a.m.; 1:15-4:15 p.m.;
	685 Glace Bay, N. S., AST. 1-1:15 p.m.; mid12:15 a.m.	WBEN	8 a.mmid. 900 Buffalo, N. Y , <i>EST</i> .	WCOA	10:30-mid. 1340 Pensacola, Fla., CST.
VOAS	1-1:15 p.m.; mid12:15 a.m. 810 St. Johns, N. F.	WBEO	6:45 a.mmid.	wcoc	9 a.m10:30 p.m. 880 Meridian, Miss., CST.
	11 a.m12:30 p.m.; 4-5:30 p.m. (Zone 19).	WBHS	1310 Marquette, Mich. 1200 Huntsville, Ala., CST.	*****	7:30 a.m2 p.m.; 5-11 p.m.
VOGT	893 Wabana, N. F.	WBIG	8 a.m2 p.m.; 5-9:30 p.m.	WCOD	1200 Harrisburg, Pa., EST.
VOGY	Silent. 916 St. Johns, N. F.		1440 Greensboro, N. C., <i>EST</i> 8 a.m3 p.m.; 5-11 p.m.	WCRW	8-11 a.m.; 3-6 p.m.; 8-11 p.m. 1210 Chicago, Ill., CST.
VONA	916 St. Johns, N. F. 950 St. Johns, N. F.	WBMS	1450 Hackensack, N. J., EST.		1210 Chicago, Ill., CST. 7-8:30 a.m.; 11:30 a.m1:30
	12:30-2 p.m.; 6:30-8 p.m. (Zone 19)	WBNX	6-9 p.m. 1350 New York City, EST.	wcsc	p.m.; 6-7 p.m; 9-10 p.m. 1360 Charleston, S. C., EST.
VONF	1115 St. Johns, N. F.	-	4-6 p.m.	WASH	8 a.m3 p.m.: 6-11 p.m.
vowr	1-2 p.m.; 6:30-8 p.m. (Zone 19) 750 St. Johns, N. F.	WBO Q WBOW		WCSH	940 Portland, Maine, EST. 7:45 a.m1 p.m.; 2-10:45.
vox	690 Halifax, N. S.		7 a.m2 p.m.; 4-11 p.m. 930 Birmingham, Ala., CST.	WDAE	1220 Tampa, Fla., EST.
VPN WAAB	610 Nassau, B. I.	WBRC	7 a.m11 p.m.	WDAF	8 a.mmid. 610 Kansas City, Mo., CST.
WAAD	1410 Boston, Mass., EST. 7:45 a.mmid.	WBRE	7 a.m11 p.m. 1310 Wilkes Barre, Pa.		6:26 a.mmid.
WAAF	920 Chicago, Ill., CST.	WBSO	920 Babson Park, Mass., 7 a.m5 p.m EST	WDAG	1410 Amarillo, Texas, CST. 8-10 a.m.; 12:30-3 p.m.; 4:30-6
WAAM	6 a.mlocal sunset. 1250 Newark, N. J., EST.	WBT	7 a.m5 p.m., <i>EST</i> 1080 Charlotte, N. C., <i>EST</i>		p.m.; 7:30-9 p.m.; 10 p.m
	7-9 a.m.; 10 a.mnoon; 2-4:30	WBTM	7 a.mmid. 1370 Danville, Va., <i>EST</i>	WDAH	mid. 1310 El Paso, Texas.
WAAT	p.m.; 9- mid. 940 Jersey City, N. J., EST.	WBZ	7:30 a.m1 p.m.; 4-6:30 p.m.	WDAS	1370 Philadelphia Pa. EST.
	6 a.m -6 p.m.	MPT	990 Boston, Mass., <i>EST</i> 7 a.mmid.	WDAY	9 a.m10:30 p.m. 940 Fargo, N. D., CST.
WAAW	660 Omaha, Neb., <i>CST</i> . 6 a.m6 p.m.	WBZA	990 Springfield, Mass., EST	WDBJ	
WABC	860 New York City, EST.	WCAC	7 a.mmid. 600 Storrs, Conn., EST	# DB3	930 Roanoke, Va., EST. 8 a.mmid.
WABI	7:30 a.m2 a.m. next day.	WCAD	600 Storrs, Conn., EST 12:30-1 p.m.; 4:30-5; 7-8 p.m. 1220 Canton, N. Y., EST	WDBO	580 Orlando, Fla., EST.
	1200 Bangor, Maine, EST. 6-9 a.m.; noon-3 p.m.; 6-9 p.m.		12:30-1:20 p.m.; 4-5 p.m. 1220 Pittsburgh, Pa., EST	WDEL	7 a.mmid. 1120 Wilmington, Del., EST.
WABZ	1200 New Orleans, La. CST.	WCAE	1220 Pittsburgh, Pa., EST 6:45 a.mmid.	WDEV	9 a.m10 p.m.
WACO	Noon-4 p.m.; 8 p.mmid. 1240 Waco, Texas, CST.	WCAH	1430 Columbus, Ohio, EST.		550 Waterbury, Vt., EST. 9:30-11 a.m.; noon-2 p.m.
	0-7 a.m.; y-noon; 1:30-4 p.m.;	WCAJ	7:45 a.mmid.	WDGY	1180 Minneapolis, Minn.
WADC	7-9 p.m. 1320 Akron, Ohio, <i>EST</i>		7:45 a.mmid. 590 Lincoln, Neb., <i>CST</i> . 10-10:45 a.m.; 3:30-4 p.m.	WDOD	6:30 a.m8:15 p.m., CST. 1280 Chattanooga, Tenn.
	8:30 a.mmid.	WCAL	1250 Northfield, Minn., CST. 9:45-10:15 a.m.		1280 Chattanooga, Tenn. 7:30 a.m11 p.m., CST.
WAGM	1420 Presque Isle, Me., EST 7 a.m1 p.m.; 3-9 p.m.	WCAM	1280 Camden, N. J., EST.	MDKC	1330 Hartford, Conn., EST. 8 a.mmid.
WAIU	640 Columbus, Ohio, EST	WCAO	11 a.mnoon; 2-5 p.m.	WDSU	1250 New Orleans, La., CST.
WALR	7 a.msunset.		600 Baltimore, Md., EST. 7 a.mmid.	WDZ	7 a.m11:45 p.m. 1070 Tuscola, Ill., CST.
	1210 Zanesville, Ohio, <i>EST</i> 9 a.m10 p.m.	WCAP	1280 Ashury Park N. I. EST		7 a.m4:30 p.m.
WAMC	1420 Anniston, Ala., CST.	WCAT	9-11 a.m.; 5-8 p.m. 1200 Rapid City, S. D., CST.	WEAF	660 New York City, EST.
WAPI	7-10:30 a.m.; noon-9 p.m. 1140 Birmingham, Ala., CST	WCAU	1:30-2:30 p.m. 1170 Philadelphia, Pa., EST.	WEAN	6:45 a.m1 a.m. next day. 780 Providence, R. I., EST.
	6:30 a.msunset; 9 p.mmid.		8 a.m1 a.m. next day.	WELL	7:30 a.m1 a.m. next day.
WASH	1279 Gd. Rapids, Mich., CST. 7 a.mmid.	WCAX	8 a.m1 a.m. next day.  1200 Burlington, Vt., EST.	WEAO	570 Columbus, Ohio, <i>EST</i> . 9-11 a.m.; 1-3 p.m.; 8-mid.
WAWZ	1350 Zarephath, N. J., EST.	WCAZ	Noon-1 p.m.; 6-9 p.m. 1070 Carthage, Ill., CST.	WEBC	1290 Superior, Wis., CST.
WAZL	6-9 a.m.; 3-4 p.m.; 6-9 p.m.	WCBÃ	9:30 a.m3:30 p.m.	WEBA	7 a.m11 p.m. 1210 Harrisburg, Ill., CST.
WBAA	1420 Hazelton, Pa., EST. 1400 Lafayette, Ind., CST	•	1440 Allentown, Pa., EST. 7:30 a.m1 a.m.	" FDQ	6-9 a.m.; noon-4 p.m.; 8:30 mid.
	Silent.	WCBD	1080 Zion, Ill., CST. 6-7 a.m.; 7:30-10:30 a.m.; 1:30-3	WEBR	1310 Buffalo, N. Y., EST.
WBAK	1430 Harrisburg, Pa., <i>EST</i> 10:30-11:15; a.m.; 1:30-2:30		6-7 a.m.; 7:30-10:30 a.m.; 1:30-3 p.m.; 4:30-5:30 p.m.	WEDC	7 a.m2 a.m. next day. 1210 Chicago, Ill.
	p.m.; 4-4:30 p.m.,8-9:45 p.m.	WCBM	1370 Baltimore, Md., EST. 7 a.m1:30 p.m.; 5-11 p.m.	WEEL	Boston, Mass., EST.
WBAL	1060 Baltimore, Md., EST 7 a.mmid.	WCBS	7 a.m1:30 p.m.; 5-11 p.m.	WEEU	6:45 a.mmid.
WBAP			1210 Springfield, Ill., CST. 11:30 a.m3 p.m.; 6:45-9 p.m.	** EEU	830 Reading, Pa., EST. 8 a.m8 p.m.
	800 Ft. Worth, Texas, CST. 8:30-10:30 a.m.; 12:30-3 p.m.;	MCCO	810 Minneapolis, Minn.	WEHC	1350 Emory, Va., EST.
	4:30-5:30 p.m.; 9-mid.		6:45 a.mmid., <i>CST</i> .		6-8 a.m.; 11 a.m2 p.m.; 4-7.

WGH WIBG 930 Glenside, Pa., EST. WEHS 1420 Cicero, Ill., CST. 1310 Newport News, Va. 7 a.m.-2 p.m.; 5-11 p.m., EST. 1370 Fort Wayne, Ind., CST. Daybreak to sunset. 1370 Jackson, Mich., CST. 4-6 p.m. 1420 F WELL Battle Creek, Mich. WGL WIBM 6:15 a.m.-9:30 p.m.
1370 Glens Falls, N. Y., EST.
720 Chicago, Ill., CST. 7:30 a.m.-8:15 p.m.; 11 p.m.-WENC 1420 Americus, Ga., EST. 7 a.m.-2 p.m.; 4 p.m.-sunset. 870 Chicago, Ill., CST. 10:15-11:45 a.m.; 3:30-7 p.m.; WGLC mid. 560 Chicago, Ill., CST. 6:30 a.m.-mid. WENR WIBO WGN 7:30 a.m.-1:30 a.m. next day. 1210 Chester, N. Y., EST. 550 Buffalo, N. Y., EST. 8:30 p.m.-1 a.m. next day. 1420 Erie, Pa., EST. 8 a.m.-1:30 p.m.; 3:45-10:45. 1270 Elmira, N. Y. WIBU WGNY 1210 Poynette, Wis., CST. WERE WGR 9 a.m.-9 p.m. 7:30 a.m.-mid. WIBW 580 Topeka, Kans., CST. WGST 890 Atlanta, Ga., CST. 6 a.m.-mid. WESG 7 a.m.-11 p.m.
790 Schenectady N.Y., EST.
6:45 a.m.-1 a.m. next day.
940 Madison, Wis., CST. 1200 Utica, N. Y. Variable. WIBX 600 Bridgeport, Conn., EST 7:30 a.m.-12:30 p.m.; 1-7 p.m.; WEVD 1300 New York City, EST. 8-9 a.m.; 3-6 p.m.; 8-9 p.m.; WGY WICC 10-11 p.m. 760 St. Louis, Mo., CST. WHA 8-mid. 1200 St. Louis, Mo., CST. WIL WEW 8 a.m.-3:30 p.m. WHAD 1120 Milwaukee, Wis., CST. 7 a.m.-mid. 890 Urbana, Ill., CST. 8 a.m.-5 p.m. 1310 Royal Oak, Mich., EST. WILL 9:30-10:15 a.m.; 3-4 p.m.; 8:30-WEXL 10 a.m.-12:15 p.m.; 5-6 p.m. 1420 Wilmington, Del., EST. 7:30 a.m.-2 p.m.; 4:30-10 p.m. 1180 New York City, EST. 9:30 p.m. 8 a.m.-11 p.m. 800 Dallas, Texas, CST WFAA WHAM 1150 Rochester, N. Y., EST. WILM 7:45 a.m.-mid. 6:45-8:30 a.m.; 10:30 a.m.-12:30 WFAB 1300 New York City.

WFAB 1200 South Bend, Ind., CST 7:30-10:15 a.m.; noon-3 p.m.; WHAS 820 Louisville, Ky., CST. WINS 7 a.m.-10:15 p.m. 7 a.m.-mid. 1300 Miami, Fla., EST. WIOD WHAT 1310 Philadelphia, Pa., EST. 9-11 a.m.; 1-2; 5-mid. WHAZ 1300 Troy, N. Y., EST. 7 a.m.-1 a.m. next day. WIP 610 Philadelphia, Pa., EST. 5:30-8:30 p.m. 9 a.m.-mid. Silent. WFAN 610 Philadelphia, Pa., EST. 7 a.m.-130 p.m.; 5:30-11 p.m. 1120 Milwaukee, Wis., CST. 7-9:30 a.m.; 10:15 a.m.-3 p.m.; WIS WHB 860 Kansas City, Mo., CST. 9 a.m.-mid. 6 a.m.-sunset, 1210 White Plains, N. Y. WFAS WISN WHBC 1200 Canton, Ohio, EST. 3-5 p.m., EST. 6-9 a.m.; noon-3 p.m.; 6-9 p.m.

WHBD 1370 Mt. Orab, Ohio, EST.
7-11 a.m.; noon-5 p.m.; 6-9 p.m. 1200 Cincinnati, Ohio, EST. WFBE 4-8:30 p.m.; 9:30 p.m.-mid. 1310 Johnstown, Pa., EST. 7 a.m.-11:30 p.m. 1316 Altoona, Pa. 10:30 a.m.-4:30 p.m.; 8:45-12:45 WJAC WFBG 8:30-10:30 a.m.; 4:30-8:45 p.m. 1060 Norfolk, Neb., CST. WHBF 1210 Rock Island, Ill., CST. WJAG 10 a.m.-3 p.m.; 5 p.m.-mid. a.m. 6 a.m.-sunset 1410 Sheboygan, Wis., CST. 7-10 a.m.; 12:30-3 p.m.; 6-8 p.m.; 10 p.m.-mid. 1360 Syracuse, N. Y., EST. WHBL WJAR 890 Providence, R. I., EST. WFBL 7:30 a.m.-mid. 8 a.m.-mid. 1230 Indianapolis, Ind., CST. WJAS 1290 Pittsburgh, Pa., EST. WHBQ 1370 Memphis, Tenn., CST. 7:30 a.m.-11:30 p.m. 900 Jacksonville, Fla., EST 7:30-10:15 a.m.; noon-3 p.m.; 7:55 a.m.-10:30 p.m. 5:30 p.m.-mid. WJAX 7 a.m.-11 p.m. 1270 Baltimore, Md., EST. WHBU 1210 Anderson, Ind., CST. WFBR 7 a.m.-1 p.m.; 3-9:15 p.m. 610 Cleveland, Ohio, EST. WJAY 7 a.m.-mid. WHBY 1200 Green Bay, Wis., CST. 6 a.m.-6:45 p.m. 1200 LaSalle, Ill., CST. WFDF 1310 Flint, Mich., CST. 7 a.m.-10 p.m. 7 a.m.-11 p.m. WJBC 1500 Rome, Ga., CST. WHDF 1370 Calumet, Mich., CST 8-9 a.m.; 10 a.m.-12:30 p.m.; 6:30-10 p.m. WFDV 6-9 a.m.; noon-3 p.m.; 6-9 p.m. 9-10 a.m.; noon-1 p.m.; 4:40-7. 1210 Red Bank, N. J., EST. WHDH 830 Boston, Mass., EST. WJBI WFEA 1430 Manchester, N. H., EST. 8 a.m.-12:45 p.m.; 2:45-7:15 9 a.m.-11 p.m. 5-7- p.m. 560 Philadelphia, Pa., EST. 6:45-9 a.m.; 9:45-11 p.m.; 1-2 p.m.; 3-4:30 p.m.; 6 p.m.-7 WHDL 1420 Tupper Lake, N. Y., EST 7:45 a.m.-1 p.m.; 3-7:45 p.m. WJBK 1370 Detroit, Mich., EST. WFI 7 a.m.-11 p.m. 7 a.m.-1 p.m. 1200 Decatur, III., CST. 6:30-8 a.m.; 9-10 p.m.; 12:30-3 4:30-6:30 p.m. 1420 New Orleans, La. 1210 Lewisburg, Pa., EST. Noon-2 p.m.; 4-10 p.m. WHEB 740 Portsmouth, N. H., EST. WJBL 10 a.m.-sunset. 940 Hopkinsville, Ky., CST. 6 a.m.-3 p.m.; 5 p.m.-mid. 620 Clearwater, Fla., EST. WFIW 1430 Rochester, N. Y., EST. **WJBO** 8 a.m.-mid. WFLA WHEF 1500 Kosciusko, Miss. WHET 1210 Troy, Ala., CST. WJBU 7:15 a.m.-mid. WFOX 1400 Brooklyn, N. Y., EST. 11:15 a.m.-1:30; 6-7:30 p.m. 1200 New Orleans, La., CST. 6-8 a.m.; 11 a.m.-5 p.m. WJBW 1420 Cicero, Ill., CST. 7 a.m.-1:30 p.m.; 6-9 p.m.; 11 WHFC 8 a.m.-noon; 4-8 p.m. 1210 Gadsden, Ala., CST. 1310 Lancaster, Pa., EST. 10 a.m.-noon; 1:30-6 p.m.; 7-11 WJBY p.m.-1 a.m. next day. 6 a.m.-12:10 next day. 1270 Jackson, Miss., CST. 6:15-10 a.m.; 11:30 a.m.-10 p.m WHIS 1410 Bluefield, W. Va., EST. WJDX p.m. WGAR 1450 Cleveland, Ohio, EST 8-9 a.m.; noon-2 p.m.; 6-8 p.m. WHK 1390 Cleveland, Ohio, EST. WJEJ 1210 Hagerstown, Md. 6 a.m.-1 a.m. next day. WGRR 1210 Freeport, N. Y., EST. 7 a.m.-mid. WJEO 1370 Williamsport, Pa. 9 a.m.-noon; 7-mid. WHN 1010 New York City, EST. WJJD 1130 Chicago, Ill., CST. 6 a.m.-8:30 p.m. WGBF 630 Evansville, Ind., CST. 4 p.m.-1 a.m. 6:30 a.m.-3:30 p.m.; 4-6:45 p.m.; 1360 Gary, Ind., CST. 12:30-6-15 p.m.; 8:30 p.m.-mid. WHO 1000 Des Moines, Iowa. WJKS 7-9 p.m. WHOM 1450 Jersey City, N. J., EST. 8-noon; 3-6; 9-mid. WGBI 880 Scranton, Pa., EST. WJMS 1420 Ironwood, Mich., CST. 1430 Harrisburg, Pa., *EST*. 8:30-10:30 a.m.; 11:15 a.m.-1:30 p.m.; 2:30-4 p.m.; 4:30-8; 9:45-1 a.m. 9:30 a.m.-12:30 p.m.; 1:30-4:30 p.m.; 5:30-10:30 p.m. WHP 7 a.m.-2:30 p.m.; 4:30 p.m.-sunset. WGCM 1210 Gulfport, Miss., CST. 8 a.m.-2 p.m.; 3-9 p.m. WJR 750 Detroit, Mich., EST. 6:00 a.m.-1 a.m. nextday. 1250 Newark, N. J., EST 1460 Washington, D. C., EST. 1310 Ottumwa, Iowa, CST. WGCP WIAS WJSV 2-5 p.m.; 8-10 p.m. 7:30 a.m.-1:30 p.m.; 4-9 p.m. 7:30 a.m.-1 a.m. next day. WGES 1360 Chicago, Ill., CST. WIBA 1280 Madison, Wis., CST. WJTL 1370 Atlanta, Ga., CST. 6:45 a.m.-mid. 8 a.m.-12:30 p.m.; 6:15-8:30 6:30 a.m.-11:30 p.m.

1250 Paterson, N. J. 1410 Mobile, Ala., CST. 9 a.m.-4 p.m.; 5:30-9 p.m. 640 Ames, Iowa, CST. 1210 Akron, Ohio, EST. WMAL Washington, D. C., EST. WODA 8 a.m.-10 p.m. 8 a.m.-mid. WODX WJZ 760 New York City, EST. WMAQ 670 Chicago, Ill., CST. 7 a.m.-1 a.m. next day.

WMAS 1420 Springfield, Mass., EST WOI 7:30 a.m.-1 a.m. next day. 6:30 a.m.-1:30 p.m.

WOKO 1430 Albany, N. Y., EST. WKAQ 1240 San Juan, P. R., AST. 2:30-4:30 p.m.; 6:30-10 p.m. WKAR 1040 E. Lansing, Mich., CST. 7:45 a.m.-mid. 9 a.m.-1 a.m. next day.
1310 Washington, D. C., EST
7 a.m.-1 p.m.; 3-9 p.m.
1210 Manitowoc, Wis., CST. WMAZ 1180 Macon, Ga., EST. 7 a.m.-9:30 p.m. WOL Noon-12:30 p.m. 1310 Laconia, N. H., EST. 9 a.m.-1 p.m.; 3-8 p.m. 1310 Joliet, Ill., CST. 8-11 a.m.; noon-3 p.m.; 8 p.m.-WMBC 1420 Detroit, Mich., EST. WKAY WOMT :30 a.m.-mid. 7 a.m.-9 p.m.

WOOD 1270 Gd. Rapids, Mich., CST WMBD 1440 Peoria, Ill., CST. 6-9:30 a.m.; 1-2:30 p.m.; 8-mid. WMBG 1210 Richmond, Va., EST. 7 a.m.-mid. 1500 Bristol, Tenn., EST. 7 a.m.-2 p.m.; 4-9 p.m. 1300 Kansas City, Mo., CST. 10 p.m. WOPI Birmingham, Ala. 7:30 a.m.-1:30 p.m.; 5-11 p.m. WKBC 1310 WMBH 1420 Joplin, Mo.
Noon-2 p.m.; 6-9:30 p.m., CST.
WMBI 1080 Chicago, Ill., CST.
7-7:30 a.m.; 10-1:30; 3-4; 5:30-8 1400 Indianapolis, Ind., CST. WOQ 6:30 a.m.-1:15 p.m.; 3:45-10:30 6-7 a.m.; 8:35-9:05 a.m.; 11-11:30 a.m.; 2-3 p.m.; 6-7; 9p.m. WKBH 1380 LaCrosse, Wis., CST. 10; 11-mid. 710 Newark, N. J., EST. wmbo 1310 Auburn, N. Y., EST. 7:30 a.m.-10 p.m. WOR 1420 Cicero, Ill., CST. 1:30-4 p.m.; 9-11 p.m. 570 Youngstown, Ohio, EST. 7-9 a.m.; 11 a.m.-1 p.m.; 3-8 p.m WKBI 9 a.m. 9 p.m. 1500 Brooklyn, N. Y., EST. 6:45 a.m.-mid. 1200 Worcester, Mass., EST. WORC WKBN 9-11 a.m. 8 a.m.-mid. WMBR 1370 Tampa, Fla., EST. WORK\_ 1000 York, Pa., EST. WKBS 1310 Galesburg, Ill. 6:45 a.m.-10 p.m. 780 Memphis, Tenn., CST. 7:55 a.m.-sunset. 1500 Connersville, Ind., CST. 630 Jefferson City, Mo. WKBV WMC wos 9 a.m.-4 p.m., CST. 1130 New York City, EST. 10 a.m.-noon; 6-10 p.m. 7 a.m.-11 p.m. 570 New York City, EST. WMCA WOV WKBW 1480 Buffalo, N. Y., EST 9:15 a.m.-1 a.m. next day. 8-11 a.m.; noon-6 p.m.; 10-2 8 a.m.-6 p.m. 1500 Ludington, Mich., CST. 590 Omaha, Neb., CST. 6:15-10 a.m.; 10:45 a.m.-3 p.m.; WKBZ WOW WMIL 1500 Brooklyn, N. Y., EST. 9 a.m.-9 p.m. 1210 Greenville, Miss., CST. 2-6 p.m.; 10 p.m.-2:30 a.m. WMMN 890 Fairmont, W. Va., EST. 4-mid. WKFI 7 a.m.-2 p.m.; 4-9 p.m. WOWO 1160 Fort Wayne, Ind., CST. 1200 Lancaster, Pa., EST. 11 a.m.-3 p.m.; 6-8 p.m. 7 a.m.-9 p.m. 7:30 a.m.-7:45 p.m.; 9:15 p.m.-WKJC WMPC 1500 Lapeer, Mich., EST. 10 a.m.-2 p.m.; 3-:30-6 p.m.; mid. WPAD 1420 Paducah, Ky., CST. 7-9:30 a.m.; 11 a.m.-2 p.m. WKRC 550 Cincinnati, Ohio, EST. 7-10:30 p. m.
WMSG 1350 New York City, EST. 6:45 a.m.-mid. 900 Oklahoma City, Okla., 6:30 a.m.-11:30 p.m., CST. 4-mid. WKY 9 p.m.-mid. WPAP 1010 New York City, EST: WMT Waterloo, Iowa, CST. 9:30 a.m.-1 p.m. WKZO 590 Kalamazoo, Mich., CST. 7 a.m.-11 p.m. 6:30 a.m.-8:15 p.m. WPAW 1210 Providence, R. I., EST. 9 a.m.-1:45 p.m.; 3 p.m.-mid. WNAC 1230 Boston, Mass., EST. WLAC 1470 Nashville, Tenn., CST. 8 a.m.-1 a.m. next day. 7 a.m.-11 p.m. WPCC 560 Chicago, Ill. WNAD 1010 Norman, Okla. WLAP Silent. 1200 Louisville, Ky., CST. 8:15-9:15 p.m. 570 Yankton, S. D., CST. 810 New York City, EST. 6:30 a.m.-11 p.m. WPCH WNAX 1250 Minneapolis, Minn., WLB 8 a.m.-sunset. 6 a.m.-mid. 10:30-11:30 a.m.; 12:30-1 p.m., WPEN 1500 Philadelphia, Pa., EST. WNBF 1500 Binghamton, N.Y., EST. 7:30 a.m.-10:30 p. m. CST. a.m.-10 p.m. 1370 Hattiesburg, Miss., CST. WLBC 1310 Muncie, Ind., CST. WPFB WNBH 1310 New Belford, Mass, EST. 7 a.m.-2 p.m.; 4-9 p.m. 7 a.m.-11 p.m. 8:30 a.m.-1:10 p.m.; 3-11 p.m.
1200 Washington, Pa., EST. 1420 Kansas City, Kans. 1100 Atlantic City, N.J., EST. 8:15 a.m.-6 p.m.; 8 p.m.-1 a.m. WLBF WPG 7 a.m.-11 p.m., CST. 1200 Petersburg, Va., EST. WLBL 900 Stevens Point, Wis. 9 a.m.-noon; 3-6 p.m.; 9 p.m.-WPHR 8 a.m.-3:30 p.m., CST. mid. 7-11 a.m.; noon-5 p.m.; 6-9 p.m. WLBW 1260 Erie, Pa., EST. WNBR 1430 Memphis, Tenn., CST. 780 Norfolk, Va. WPOR 7:30 a.m.-12:30 p.m.; 3-10:15

WNBW 1200 Carbondale, Pa.

WNBX 1260 Springfield, Vt., EST. 1210 Providence, R. I., EST. 9 a.m.-1:45 p.m.; 3 p.m.-mid. 680 Raleigh, N. C., EST. WPRO 8 a.m.-1 a.m. next day. WLBZ 620 Bangor, Maine, EST. 8:30 a.m.-mid. WPTF 1370 Lexington, Mass., EST. Noon-3 p.m.; 6-9 p.m. 560 Philadelphia, Pa., EST. 6 a.m.-sunset. 6:45 a.m.-7:45 p.m. 560 Miami, Fla., EST. WLEY WNBZ 1290 Saranac Lake, N. Y WQAM WNJ 1450 Newark, N. J., EST. WLIT 7 a.m.-mid. noon-3 p.m. 560 Knoxville, Tenn., CST. 880 Scranton, Pa., EST. 9-9:30 a.m.; 12:30-1:30 p.m.; 9-9:45 a.m.; 11 a.m.-1 p.m.; 2-3 WQAN WNOX p.m.; 4:30-6 p.m.; 7-mid. 6:45 a.m.-11 p.m. 570 New York City, EST. WLOE 1500 Boston, Mass., EST 4:30-5:30 p.m. WNYC 10 a.m.-1:30 p.m.; 4:30-10 p.m. WQAO 1010 New York City, EST. 11 a.m.-noon; 6-10 p.m. 7:30-8:30 p.m. WLS 870 Chicago, Ill., CST. 1190 San Antonio, Tex., CST. 6:30-9:30 a.m.; 11:15 a.m.-3 WOAL 6-10:15 a.m.; 11:45 a.m.-3:30 p.m.; 7-8:30 p.m. **WQBC** 1360 Vicksburg, Miss., CST. 7:30 a.m.-2:30 p.m.; 5-10 p.m. p.m.; 4:45-10:45 p.m. WOAX 1280 Trenton, N. J., EST. WLTH 1400 Brooklyn, N. Y., EST. WQDM 1370 St. Albans, Vt., EST. 8-9 a.m.; 11 a.m.-2 p.m. 4-6 p.m.; 10-mid. 1370 Lynchburg, Va., EST. 1-3 p.m.; 6:30-10 p.m. Noon-2 p.m.; 8-mid. WLVA WQDX 1210 Thomasville, Ga. WOBU 580 Charleston, W.Va., EST. 9 a.m.-noon; 2-4 p.m.; 8:30 p.m.-WRAK 1370 Williamsport, Pa., EST. 8:30 a.m.-2:30 p.m.; 4:30-10:30. 700 Cincinnati, Ohio, EST. mid. 6:30 a.m.-1 a.m. next day. 1370 Wilmington, N. C., EST. 7:30 a.m.-3 p.m.; 6:30-11 p.m. WOC 1000 Davenport, Iowa, CST. WRAM WLWL 1100 New York City. 7 a.m.-11 p.m. 1310 Reading, Pa., EST. 7-9:30 a.m.; 6-7 p.m. 6-8 p.m., EST. WOCL 1210 Jamestown, N. Y., EST. WRAW WMAC 570 Syracuse, N. Y. Noon-mid.

WK	AX	INDEX BY CA	LLL	ETTERS AND WEDN
WRAX	1020	Philadelphia, Pa., EST.	WTAD	1440 Quincy, Ill., CST.
WRBL	1200	-sunset. Columbus, Ga., CST.	WTAG	9:30 a.m1 p.m.; 2:30-8 p.m. 580 Worcester, Mass., EST.
WRBX	7 a.m. 1410	-9 p.m. Roanoke, Va., ESTnoon; 3-6 p.m.; 8 p.m1. Washington, D.C., EST.	WTAM	8 a.m11:15 p.m. 1070 Cleveland, Ohio, EST.
WRC	9 a.m.	-noon; 3-6 p.m.; 8 p.m1.	WTAQ	6:30 a.m1 a.m. next day. 1330 Eau Claire, Wis., CST.
WRDO	6:45 a	.m1 a.m. next day.	•	7 a.m8 p.m. 780 Norfolk, Va., EST.
WINDO	7-9:30	.m1 a.m. next day. Augusta, Maine, <i>EST</i> . a.m.; 10:30 a.m1:30	WTAR	/ а.шщи.
WRDW	1500	.; 3:30-10 p. m. Augusta, Ga., EST.	WTAW	1120 College Station, Texas. 12:30-1:30 p.m.; 8-9 p.m., CST.
WREC	8 a.m.	-2 p.m.; 5-11 p.m. Memphis, Tenn. Lawrence, Kans., CST.	WTAX	1210 Springfield, Ill., CST. 7-11:30 a.m.: 3-6:45: 9-mid.
WREN	1220 7 a.m.	Lawrence, Kans., CST.	WTBO	1129 Contege Station, 1838. 12:30-1:30 p.m.; 8-9 p.m., CST. 1210 Springfield, Ill., CST. 7-11:30 a.m.; 3-6:45; 9-mid. 1420 Cumberland, Md., EST. 7 a.m1:30 p.m.; 2:30-8 p.m. 1310 Philodolphia Pa EST.
WRHM	1250 6:15-0	Minneapolis, Minn.	WTEL	
WRJN	9-1	:45 a.m.; 11:30-12:30; 1-8; a.m., CST.	WTFI	7 a.m9; noon-1 p.m. 1450 Athens, Ga., EST. 8 a.m4 p.m.; 6-10 p.m. 1060 Hartford, Conn., EST.
	8 a.m.	Racine, Wis., CST10:30 p.m. New York City.	WTIC	8 a.m4 p.m.; 6-10 p.m. 1060 Hartford, Conn., EST.
WRNY	1310	Knovulle Lenn ('S'I'	WTJS	
WRR	7 a.m. 1280	-10 p.m. Dallas, Texas, CST.	WTMJ	1310 Jackson, Tenn., CST. 7 a.m1 p.m.; 3-9 p.m. 620 Milwaukee, Wis., CST.
WRUF	6:30 a	.m11 p.m. Gainesville, Fla., EST.	WTOC	6:45 a.mmid.
	8 a.m.	-6:30 p.m.		1260 Savannah, Ga., EST. 7 a.mmid.
WRVA	7 a.m.	Richmond, Va., ESTmid.	WTRC	1310 Elkhart, Ind., CST. 7:30 a.m7:30 p.m.
WSAI	oa.m.	Cincinnati, Ohio, EST.	WTSL WWAE	1310 Laurel, Miss.
WSAJ	1310 Silent.	Grove City, Pa.		7 a.m8:30; 11-1 p.m.; 4-11:30 p.m.
WSAN	1440 Silent.	Allentown, Pa., EST.	MM1	920 Detroit, Mich., EST.
WSAR	1450	Fall River Mass EST	WWL	7:33 a.mmid. 850 New Orleans, La., CST.
WSAZ	200	-3:30 p.m.; 5-10 p.m. Huntington, W. Va.,	WWNC	8 a.m8:30 p.m. 570 Asheville, N. C., CST.
	6-9 a.r	ST. n.; noon-2 p.m.; 4-8:30. Atlanta, Ga., CST.	WWRL	7 a.mmid. 1500 Woodside, N. Y., EST.
WSB	1 a.m.	-mid.		8-9 a.m.; 11 a.mnoon; 8-10 p.m.
WSBC	1230	Chicago, Ill. South Bend, Ind., CST.	wwsw	1500 Pittsburgh, Pa., EST. 8 a.m1:30 p.m.; 3-11:30 p.m.
	6-7:30	a.m.; 10:15 a.mnoon; 30 p.m.	WWVA	1160 Wheeling, W. Va., EST.
WSEN	1210	Columbus, Ohio, EST. -11 p.m.	WXYZ	7:30 a.m7:45 p.m. 1240 Detroit, Mich., EST.
WSFA	1410	Montgomery, Ala., CST. msunset; 9-11 p.m.	XEA	7:30 a.mmid. 1155 Guadalajara, Mex., CST.
WSIX	1210	Springheld, Tenn., CST.	XEB	11 a.mnoon; 2-3 p.m.; 5-11. 1030 Mexico City, Mex., CST.
wsjs	o a.m.	-3 p.m.; 6-9 p.m. Winston-Salem, N. C.	XEC	1000 Toluca, Mex.
WSM	8 a.m.	-mid., EST.	XED	965 Reynosa, Mex. 1000 Oaxaco, Mex.
	6:30 a.	Nashville, Tenn., CST. mmid.	XEF	735 Villa Acuna, Mex. 24 hours daily.
WSMB	7 a.m		XEFA	1250 Mexico City, Mex.
WSMK	1380 7 a.m.	Dayton, Ohio, EST. -8 p.m.; 10 p.mmid.	XEFB	1315 Monterrey, Mex., CST. 11 a.m2 p.m.; 6-10 p.m.
SOC	1210	Gastonia, N. C., EST.	XEFC XEFD	1050 Merida, Mex.
WSPA	1420	-10 p.m. Spartanburg, S. C., <i>EST</i> .	XEFE	1000 Laredo, Mex.
WSPD	7:30 a.	m11 p.m. Toledo, Ohio, EST.	XEFI XEFO	1000 Chihuahua, Mex. 940 Mexico City, Mex., CST
WSUI	7:50 a.	.mma.		2-3 p.m.; 7-11 p.m.
,	9-10 a	Iowa City, Iowa, CST. i.m.; 11-12:30; 2-4; 6-10	XEFS	7:30-10:30 p.m.
WSUN	p.m. <b>620</b>	St. Petersburg, Fla., EST.	XEFZ	1370 Coyoacan, Mex., CST. 8-11 p.m.
wsvs	7:15 a.	mmid.	XEG	1070 Mexico City, Mex.
}	8:30 a.	Buffalo, N. Y., EST. m10 a.m.; 2-3 p.m.		1132 Monterrey, Mex., CST. 9 a.m1:30 p.m.; 6-10 p.m.
WSYB	10 a.m	Rutland, Vt., EST. 1 p.m.; 5-9 p.m.	XEI	1310 Morelia, Mex., CST. 2-3:30 p.m.; 8:30-10 p.m.
WSYR	570	Syracuse, N. Y., <i>EST</i> .  -3 p.m.; 4-11 p.m.	XEJ	1000 Juarez, Mex., CST. 11 a.m4 p.m.; 6-11 p.m.
		- p , p.m		ra diani-i pimi, v-ri pimi

XEK 990 Mexico City, Mex. 1000 Saltillo, Mex., CST. 11 a.m.-1 p.m.; 6-9 p.m. 1300 Tampico, Mex. 711 Mexico City, Mex., CST. 10 a.m.-noon; 2-4 p.m.; 7-11 1115 Neuvo Laredo, Mex. XEM XEN XENT 11400 Laredo, Mex. 750 Juarez, Mex., MST. 9a.m.-2 p.m.; 5-11 p.m. 735 Villa Acuna, Mex. XEP XEQ XER 24 hours daily. 1055 Tampico, Mex., CST. XES 9-10:30 a.m.; noon-2 p.m.; 7-15-10 p.m. 10 p.m. 590 Monterrey, Mex., CST. 9 a.m.-2 p.m.; 6-10 p.m. 1140 Mexico City, Mex. 1380 Torreon, Mex. Jalapa, Mex. 630 Veracruz, Mex., CST. 7-8 a.m.; noon-2 p.m.; 7 p.m. XET **XETA** XETB XETF mid. mid.
1000 Torreon, Mex.
1230 Mexico City, Mex.
610 Mexico City, Mex.
1007 Veracruz, Mex., CST.
7-8 a.m.; 10-11 a.m.; noon-3 XETG XET Q XEU p.m.; 6-mid. 1000 Pueblo, Mex. 910 Mexico City, Mex., CST XEV XEW 10 a.m.-mid. XEX Mexico City, Mex. 1210 Mexida, Mex.
Mexico City, Mex.
Mexico City, Mex.
Aguascalientes, Mex.
Chihuahua, Mex. XEY 1000 XEZ 780 810 XFF 875 683.3 Mexico City, Mex. XFG XFX YV1BC 867 960 1200 Mexico City, Mex. Caracas, Venz. Moose Jaw, Sask., MST. 10-AB 5:30-7 p.m. 1200 Stratford, Ont., EST. 10-AK 6-8 p.m. 1155 T Trail, B. C. 10-AT 10-BI 1200 Prince Albert, Sask. Noon-1 p.m.; 6-8 p.m., MST. 1199 Wingham, Ont., EST. 10-BP 1199 Silent. 1200 Brantford, Ont., EST. Noon-i p.m.; 6-7; 8-10 p.m. 1200 Canora, Sask. 10-BQ 10-BU

Imagine turning a dial and telling instantly the time in any country of the world. Nothing to add or subtract. Tells when you must tune for stations in other countries. The RADEX Time Converter with large Radio Map of the World. Price but 25c postpaid to any country.

# ALPHABETICAL INDEX TO SHORT WAVE STATIONS OF THE WORLD

Call	Megs.	Meters	: City		Call	Megs.	Meters	_	
	CAA t	o CEZ—	CHILE		DHO DIH	20.028 19.950	$14.97 \\ 15.03$	Nauen Nauen	
CEC	10.664	28.12			DIQ DIZ	5.144	58.33	Nauen	
CEC	19.678	15.24			DIZ DJA	$10.150 \\ 9.552$	$\frac{29.58}{31.38}$	Nauen Zeesen	
CFA	6.840	43.83	CANADA  Drummondville, Que.		DJA	9.560	31.36	Konigswusterhausen	
CFH	9.030	33.20	Halifax, N. S.		DJB DJB	15.190 15.200	$19.73 \\ 19.72$	Zeesen Konigswusterhausen	
CGA	4.782	62.70	Drummondville, Que.		DJC	6.020	49.80	Konigswusterhausen	
CGA CGA	9.340 13.296	$\frac{32.10}{22.55}$	Drummondville, Que. Drummondville, Que.		$_{ m DJD}$	11.760	$25.50 \\ 16.88$	Konigswusterhausen	
CGA	18.170	16.50	Drummondville, Que		DJE DWG	17.760 20.140	14.88	Konigswusterhausen Nauen	
CGE CGE	7.520 7.550	39.87 39.71	Calgary, Alta.		D4AFF	6.875		Colthen	
CKS	7.550	39.71	Calgary, Alta. Calgary, Alta.			EAA to	EHZ-	SPAIN	7
	CLA t	o CMZ-	–CUBA		EAJ1	15.760	19.02	Barcelona	
CMCI	6.057	49.50	Havana		EAJ7 EAJ25	10.090 6.000	$\frac{29.70}{49.97}$	Madrid Barcelona	
CM2LA CM2MK	10.013 7.184	$\frac{29.94}{41.75}$	Havana Havana		EAM	9.772	30.68	Madrid	
CM2MK	9.350 7.312	32.07	Havana		$\mathbf{E}\mathbf{A}\mathbf{Q}$	9.862	$30.40 \\ 15.23$	Madrid Madrid	
CM5RY CM6DW	7.312 7.300	$\frac{41.00}{41.07}$	Matanzas Cienfuegos		EAQ EAR25	19.684 6.120	48.99	Barcelona	
OHODII			IOROCCO		EAR58	7.207	41.60	Teneriffe, Canary Island s Madrid	ŀ
CN8MC	5.875	51.03	Casablanca		EAR110 EAR125	$\frac{6.976}{7.020}$	$\frac{43.00}{42.71}$	Madrid	
CN8MC	6.250	47.97	Casablanca		$\mathbf{EATH}$	8.100	42.71 37.01	Vienna, Austria Posen, Poland	
	CPA to	CPZ-I	BOLIVIA		$\mathbf{EATH}$ $\mathbf{EATH}$	8.900 10.800	$\frac{33.69}{27.76}$	Posen, Poland Posen, Poland	
CRA t	CRZ—PC	DRTUG	BOLIVIA UESE COLONIES DRTUGAL				EIZ-IR		
CT1AA	9.592	31.25	Lisbon			ELA to	ELZ-L	.IBERIA	
CT1BO	10.710	28.00	Lisbon				ESZ-E	STONIA FHIOPIA	
CT2AG CT3AQ	6.380 9.370	$\frac{46.99}{32.00}$	Madeira Islands Funchel, Madeira		F—FRANCE	AND COL	ONIES	AND PROTECTORATES	i
CT3AQ	12.490	24.00	Funchel, Madeira Funchel, Madeira		FIUI	5.689	$\frac{52.70}{48.99}$	Tanarive, Madagascar	
	CVA to C	VZ—R	DUMANIA		FL FL	6.120	$\frac{48.99}{32.48}$	Paris Paris	
	CZA to	CZZ-N	DUMANIA JRUGUAY MONACO JANY		FM8KR	9.230 3.750 12.150	79.95	Constantine, Algeria	
					FM8KR FQE-FQE FRE-FRO FRE-FRO	12.150 18.240	$24.68 \\ 16.44$	St. Assise St. Assise	
DAN DAN	8.328 11.340	36.00 26.44	Norden Nordeich		FRE-FRO	19.400	15.45	St. Assise	
DAN	12.490	24.00	Norden		FBR	20.680 19.830	$14.50 \\ 15.12$	Paris-Saigon, Indo China St. Assise	j
DAN	16.601	18.06	Norden S. S. Europa		FTD FTE	18.240	16.44	St. Assise	
DDAC	8.328 13.040	36.00 23.00	p. b. Europa		FTF	7.770	38.59	St. Assise	
DDAS	8.328	36.00	S. S. Bremen		FTI FTK	9.840 15.860	30.47 18.90	St. Assise St. Assise	
DDBR	13.040 8.328	23.00 36.00	S. S. Berlin		FTL	7.660	39.14	St. Assise	
,	13.040	23.00			FTM FTN	$19.282 \\ 12.250$	$15.55 \\ 24.46$	St. Assise St. Assise	
DDCB	8.328 13.040	36.00 23.00	S. S. Columbus		FW4 FYA	12.700	23.61	St. Assise	
DDCG	8.328	36.00	S. S. Resolute		FYA FYA	11.308 11.680	$26.51 \\ 25.67$	Paris Paris	
DDCP	13.040 8.328	23.00 36.00	S. S. Cap Polonio		FYA	11.898	25.20	Paris	
DDCF	13.040	23.00			FYA	15.234	19.68	Paris	
DDDT	8.328	36.00	S. S. Deutchland		FZA FZG	$18.365 \\ 12.000$	$16.32 \\ 24.99$	Saigon, Indo-China Saigon, Indo-China	
DDDX	13.040 8.328	23.00 36.00	S. S. Hamburg		FZG	13.010	23.04	Saigon, Indo-Unina	
	13.040	23.00			FZR FZS	16.200 18.310	$18.51 \\ 16.38$	Saigon, Indo-China Saigon, Indo-China	
DDEA	8.328 13.040	$\frac{36.00}{23.00}$	S. S. Cap Arcona		FZU	19.460	15.40	Tamatore, Madagascar	
DDED	8.328	36.00	S. S. New York		F31CD F8BP	15.750 5.450	$19.03 \\ 55.01$	Saigon, Indo-China Ruggles	
DDFF	13.040 8.328	23.00 36.00	S. S. Reliance		F8BZ	7.775	38.57	Paris	
	13.040	23.00			F8BZ	13.628	$22.00 \\ 19.40$	Paris Paris	
DDFT	8.328 13.040	36.00 23.00	S. S. Oceana		F8BZ F8KR	15.456 3.750	79.95	Constantine, Tunis,	
DDNY	8.328	36.00	S. S. Albert Ballin		F8KR	6.660	45.02	Constantine, Algeria	
	13.040	23.00			F8KR F8MC	7.005 6.875	$\frac{42.80}{43.61}$	Constantine, Algeria Casablanca, Morocco	,
DFA DGK	19.240 6.675	15.58 44.91	Nauen Nauen		F8MC	10.710	28.00	Casablanca	
DHC	10.160	29.51	Nauen			G-GF	REAT BE	RITAIN	
DHC DHI	11:435 10.054	$\frac{26.21}{29.82}$	Nauen		GBA	20.400		Rugby, England	
и	10.001	20.02		F#47				- **	

Call	Megs.	Meter	s City	Call	Megs.	Meters	City
GBB-GBC	13.591	22.06	Rugby		-		OLUMBIA
$\mathbf{G}\mathbf{B}\mathbf{C}$	4.975	60.27	Rugby	HJY	9.928	30.20	Bogota
GBC GBC	9,310	$\frac{32.20}{23.46}$	Rugby	HJY	18.444	16.25	Bogota
GBC	12.780 17.080	17.55	Rugby Rugby	HKA HKB	6.131 5.879	48.90 51.00	Barranquilla Tunja
GBJ	18.620	16.10	Bodmin, England	HKC	6.205	48.35	Bogota
GBK	9.250	32.41	Bodmin	HKD	5.996	50.00	Barranquilla
GBK GBK	11.490 18.100	26.10 16.56	Bodmin Bodmin	HKD HKF	6.993 7.143	$\frac{42.87}{41.95}$	Barranquilla Bogota
GBS	6.989	42.90	Rugby	HKF	7.610	39.40	Bogota
GBS	6.995	42.85	Rugby	HKF	8.690	34.50	Bogota
GBS GBS	9.022 9.200	$33.25 \\ 32.59$	Rugby Rugby	HKI	7.402	$\frac{40.50}{42.10}$	Bogota Cali
GBS	12.190	24.60	Rugby	HKK HKM	7.122 6.625	45.25	Bogota
GBS	12.250	24.46	Rugby	HKN	7.105	42.20	Medellin
GBS GBU	18,310 9,942	16.38 30.15	Rugby Rugby	HKN HKO	11.712 5.925	25.59 50.60	Medellin Medellin
GBU	12.290	24.40	Rugby	HKS	6.378	47.00	Cali
GBU	18.620	16.10	Rugby	$\mathbf{H}\mathbf{K}\mathbf{T}$	7.139	42.00	Manizales
GBW GBW	9.790 14.450	30.63 20.75	Rugby Rugby	HKX	7.140	41.99	Bogota
GBW	18.124	16.54	Rugby		HRA to	HRZ—H	ONDURAS
GBX	10.390	28.85 27.76	Rugby		HSA	to HSZ-	—SIAM
GBX GBX	10.800 12.190	24.60	Rugby Rugby	HS1PJ	17.750	16.89	Bangkok
GBX	16.150	18.56	Rugby	HS2PJ	6.080	49.31	Bangkok
GCW	9.798	30.60	Rugby	HS2PJ HS4PJ	10.167 8.100	29.48 37.01	Bangkok Bangkok
$\mathbf{GDLJ}$	4.174 8.830	$71.82 \\ 33.95$	S. S. Homeric	110410	0.100	01.01	Dangaou
	13.220	22.68		HV	A to HV2	-VATI	CAN CITY
	17.580	17.05	0.0361.0	HVJ	5.968	50.26	Vatican City
<b>GFWV</b>	4.174 8.830	71.82 33.95	S. S. Majestic	HVJ	14.850	20.19	Vatican City
	13.220	22.68		HVJ	15.120	19.83	Vatican City
CITTIII	17.580	17.05	O O Minutanka	1	-ITALY	AND CO	LONIES
GKFY	4.174 8.830	71.82 33.95	S. S. Minnetonka	IAC	6.648	45.09	Coltana
	13.220	22.68		IAC	12.785	23.45	Coltana
OTOO	17.580	17.05 71.82	S. S. Olympic	IBDK IMA	11.470 6.900	26.15 43.45	S. S. Electra Rome
GLSQ	4.174 8.830	33.95	s. s. Olympie	I1AX	6.667	44.98	Rome
	8.830 13.220	22.68		12RO	6.220	48.20 25.40	Rome Rome
GMBJ	17.580 4.174	17.05 71.82	S. S. Empress of Britain	I2RO I3RO	11.800 3.750	79.95	Rome
GMD	8.830 13.220	33.95	5. 5. Empress of Dittain	2020			
	13.220	22.68				J—JAPA	
GMJQ	17.580 4.174	17.05 71.82	S. S. Belgenland	JB TIAA	6.094 7.876	49.20	Johannesburg, So. Africa Kemikawa-Cho
Cintra	8.830 13.220	33.95	Di Di Dolgoniana	J1AA J1AA	7.890	38.07 38.00	Tokyo
	13.220	22.68		J1AA	8.100	37.01	Tokyo
GTSD	17.580 4.174	17.05 71.82	S. S. Monarch of Ber-	J1AA	13.074	$\frac{22.93}{19.02}$	Kemikawa-Cho
muda			2. 2	J1AA J1AA	13.074 15.760 17.380	17.25	Tokyo Tokyo
,	8.830 13.220	33.95 22.68		0			
	17.580	17.05				NITED S	
G2AA	8.570	34.98 18.37	London	KA1XR KDD	$12.245 \\ 3.170$	24.49 94.58	Manila, P. I. Pasco, Wash. Pasco, Wash.
G2GN G2NM	16.320 3.583	18.37 83.68	S. S. Olympic Sonning-on-Thames	KDD	5.600	53.53	Pasco, Wash.
G2NM	14.310	20.95	Sonning-on-Thames	KDK-KKH	7.518 7.715	39.89	Kahuku, Hawaii
G5SW	11.750	25.51	Chelmsford	KEE	7.715	38.86	Kahuku, Hawaii Bolinas, Calif. Bolinas, Calif.
G5SW	25.960	11.55	Chelmsford	KEJ KEL	9.012 6.860	$\frac{33.27}{43.71}$	Bolinas, Calif.
	HAA to HA	\Z—HU	NGARY	KEQ	6.888	43.54	Kahuku, Hawaii
HAT	9.125	32.86	Szekesvehervar	KEU	3.189	94.01 53.00	Burbank, Calif. Burbank, Calif.
1	HBA to HB	z-sw	TZERLAND	KEU KEZ	5.657 $10.410$	28.80	Bolinas, Calif.
HBJ	14.550	20.60	Geneva	KFO	3.170	94.58	Bolinas, Calif. Oakland, Calif.
$_{ m HBP}$	7.790	38.49	Geneva	KFO	5.600	53.54	Oakland, Calif.
HB9OC	9.130 3.488	32.84 85.96	Berne Zurich	KFM KFM	3.178 5.657	94.34 53.00	Sacramento, Calif. Sacramento, Calif.
${^{ m HB9XD}_{ m HB9XD}}$	7.220	41.53	Zurich	$\mathbf{KGE}$	3.178	94.34	Medford, Ore.
HB9XD	9.380	31.96	Zurich	KGE	5.057	53.00	Medford, Ore.
	HCA to	HCZE	CUADOR	KGJX KGOZ	$1.712 \\ 2.470$	175.13 121.40	Pasadena, Calif. Cedar Rapids. Iowa
нсјв	5.710	52.51		KGPA	2.414	$121.40 \\ 124.20$	Cedar Rapids, Iowa Seattle, Wash.
HC1DR	6.380	46.99	Quito Quito	KGPA KGPB	2.416	124.09	Minneapolis, Minn.
HC2JM	8.570	34.98	Guayaquil	KGPC KGPD	$1.712 \\ 1.558$	175.13 192.43	St. Louis, Mo. San Francisco, Calif.
	HHA t	o HHZ-	-HAITI	KGPD	2.470	121.40	San Francisco, Calif.
			CAN REPUBLIC	KGPE	2.422	123.79	San Francisco, Calif. Kansas City, Mo. Vallejo, Calif.
HIX	4.610	65.04	Santo Domingo	KGPG	2.422	123.79	vailejo, Calif.

Call	Megs.	Meters	City	Call	Megs.	Meters	s City
KGPH	2.450	122.40	Oklahoma City, Okla.	KSW	3.100	96.72	Amarillo, Texas Amarillo, Texas
KGPI KGPJ	2.470 1.712	121.40 $175.13$	Omaha, Neb.	KSW	5.560	53.92	Amarillo, Texas
KGPK	2.470	121.40	Beaumont, Texas Sioux City, Iowa	KSX KSX	3.100 5.560	$96.72 \\ 53.92$	Albuquerque, N. M. Albuquerque, N. M.
KGPL	2.470 1.712	175.13	Los Angeles, Calif. Kingman, Ariz.	KSY	3.100	53.92 96.72	Albuquerque, N. M. Tulsa, Okla. Tulsa, Okla.
KGPL KGPL	3.100 5.560	$96.72 \\ 53.92$	Kingman, Ariz. Kingman Ariz.	KSY KVO	5.560 3.178	53.92 94.34	Tulsa, Okla.
KGPM	2.470	53.92 121.40	Kingman, Ariz. San Jose, Calif. Davenport, Iowa	KVŎ KVP	5.657 1.712	53.00	Portland, Ore.
KGPN KGPO	$\frac{2.470}{2.450}$	121.40 $122.40$	Davenport, Iowa	KVP	1.712	175.13	Portland, Ore. Portland, Ore. Dallas, Texas Dixon, Calif.
KGPP	2.422	123.79	Tulsa, Okla. Portland. Ore.	KWO KWU	15.410 15.344	19.46 19.54	Dixon, Calif.
KGPQ KGPR	2.450	123.79 $122.40$	Portland, Ore. Honolulu, Hawaii Fort Worth, Texas Bakersfield, Calif.	KWV	10.830	27.68	Dixon, Calif. Dixon, Calif. Dixon, Calif. Dixon, Calif. Dixon, Calif.
KGPS	$1.712 \\ 2.414$	$175.13 \\ 124.20$	Fort Worth, Texas	KWX KWY	7.605 7.562	39.42 39.65	Dixon, Calif.
KGPV	2.502	119.83	Des Moines, Iowa Salt Lake City, Utah	KZJ	3.178	94.34	Seattle, Wash,
KGPW KGPX	$\frac{2.470}{2.422}$	121.40 $123.79$	Salt Lake City, Utah	KZJ KZRM	5.657	53.00	Seattle, Wash.
KGPY	1.574	190.48	Denver, Colo. Shreveport, La.	KZRM	6.140 9.570	48.83 31.33	Seattle, Wash. Seattle, Wash. Manila, P. I. Manila, P. I.
KGPZ	2.450	122.40	Wichita, Kans.	KZRM	11.840	25.34	Manila, P. I.
KGT KGT	3.178 5.657	94.34 53.00	Wichita, Kans. Fresno, Calif. Fresno, Calif.		LAA to I	LNZ-N	IORWAY
KGTD	3.100	96.72	Wichita, Kans.	LGN	9.600	31.23	Bergen
KGTD	5.560	53.92	Wichita Kans.		LOA to LV	/Z—AR	GENTINE
KGTJ KGTJ	3.100 5.560	$96.72 \\ 53.92$	Las Vegas, Nev. Las Vegas, Nev. St. Louis, Mo.	LQA LSA LSA LSG	9.600	31.23	Buenos Aires
$\mathbf{KGTR}$	3.100	96.72	St. Louis, Mo.	LSA	9.890	30.32	Buenos Aires
KGTR	$\frac{5.560}{3.490}$	53.92	St. Louis, Mo.	LSA	14.530 19.895	20.65 15.07	Buenos Aires Buenos Aires
KGUA KGUA	5.630	85.91 53.25	El Paso, Texas	LSJ	15.000	19.99	Buenos Aires
KGUC	3.490	85.91	St. Louis, Mo. St. Louis, Mo. El Paso, Texas El Paso, Texas Fort Worth, Texas Fort Worth, Texas Pollas Texas	LSL LSM	$9.993 \\ 21.129$	$\frac{30.00}{14.19}$	Buenos Aires
KGUC KGUF	5.630 3.490	53.25 85.91	Port Worth, Texas	LSN	9.895	30.30	Buenos Aires Buenos Aires
KGUF KGUF	5.630	85.91 53.25	Dallas, Texas Dallas, Texas Dallas, Texas Big Springs, Tex. Shreveport, La. Shreveport, La. Abilona Texas	LSN	10.300	29.00	Buenos Aires
KGUG KGUG	3.490	85.91 53.25	Big Springs, Tex.	LSN LSN	14.480 20.680	$20.70 \\ 14.50$	Buenos Aires Buenos Aires
KGUK	5.630 3.490	85.91	Shreveport, La.	LSN	21.020	14.27	Buenos Aires
KGUK KGUK	5.630	53.25	Shreveport, La.	LSOR LSR	9.810 18.958	$\frac{30.56}{15.82}$	Buenos Aires
KGUL KGUL	3.490 5.630	85.91 53.25	Abilene, Texas Abilene, Texas Fresno, Calif.	LSRD	9.810	30.56	Buenos Aires Buenos Aires
KGZA KGZB	2.416 1.712	124.09	Fresno, Calif.	LSX LSX	10.300	29.00	Buenos Aires Buenos Aires
∞KGZB KIO	1.712 11.690	175.13 25.65	Houston, Texas	LSX	10.345 20.680	28.98 14.50	Buenos Aires Buenos Aires
KIXR	9.560	31.36	Manila, P. I.	LSY	10.410	28.80	Buenos Aires
KIXR KIXR	11.440	$\frac{26.20}{25.39}$	Houston, Texas Habuku, Hawaii Manila, P. I. Manila, P. I. Manila, P. I.	LSY	20.710	14.47	Buenos Aires
KIXR	$11.820 \\ 12.250$	25.39 $24.46$	Manila, P. I. Manila, P. I.		LZA to LZ	Z-BU	LGARIA
KJE KJE	3.170	94.58	Manila, P. I. Reno, Nev. Reno, Nev. Elko, Nev. Elko, Nev.		M—GN N—UN	ITED S	RITAIN TATES
KKO	$\frac{5.600}{3.170}$	53.54 94.58	Reno, Nev.	NAA	4.105	73.03 33.79	Arlington, Va.
KKO	5.600	53.5 <del>4</del>	Elko, Nev.	NAA NAA	$8.872 \\ 12.045$	33.79 24.89	Arlington, Va. Arlington, Va. Arlington, Va.
KKP	16.024 11.945	$18.71 \\ 25.10$	Kahuku, Hawaii Bolinas, Calif. Bolinas, Calif. Dixon, Calif.	NAA	16.060	18.66	Arlington, Va. Arlington, Va.
KKQ KKQ	11.949	25.10 $25.05$	Bolinas, Calif.	NPO NSS	8.872	33.79	Cavite, Manila, P. I.
KKW	13.776	21.77	Dixon, Calif.	NSS	12.045	24.89	Annapolis, Md.
KKX KKZ	13.690 14.150	$\frac{21.90}{21.17}$	Bolinas, Calif. Bolinas, Calif. Omaha, Neb. Omaha, Neb.			OCZ-	
KMP	3.170	94.58	Omaha, Neb.	OBE OCI	13.043 10.962	$\frac{22.98}{27.35}$	La Punta Lima
KMP	5.600	53.54	Omaha, Neb.	oci	18.670	16.06	Lima
KMR KMR	3.170 5.600	$94.58 \\ 53.54$	No. Platte, Neb. No. Platte, Neb.		OHA to	OHZI	FINLAND
KQC KQC	3.170	94.58	Rock Springs, Wyo. Rock Springs, Wyo. Salt Lake City, Utah Salt Lake City, Utah	01	(A to OKZ-	-CZEC	HOSLOVAKIA
KQC KQD	5.600 3.170	53.54 94.58	Rock Springs, Wyo.	OHK2	4.280	70.05	Vienna, Austria
KOD	5.600	53.54	Salt Lake City, Utah	OKI OK1MPI	21.000 5.169	$\frac{14.28}{58.00}$	Podebrady Prague
KÕE KÕE KÕJ	3.170	94.58	Cheyenne, Wyo. Cheyenne, Wyo. Bolinas, Calif.				-
KOI	5.600 18.000	53.54 16.67	Cheyenne, wyo.	OPL	20.028		AND COLONIES Leopoldsville, Belgian
KQM	3.170	94.58	Des Moines, lowa	Congo	20.026	14.97	Deopoiusville, Deigian
KQM	5.600	53.54	Des Moines, Jowa	OPM	10.090	29.70	Leopoldsville, Belgian
KQQ KQQ KQX	3.170 5.600	94.58 53.54	Iowa City, Iowa lowa City, Iowa Bakersfield, Calif.	Congo ORG	19.194	15.62	Brussels
KQX	3.178	94.34	Bakersfield, Calif.	ORK	10.340	28.99	Brussels
KQX KRA	5.657 3.170	$\frac{53.00}{94.58}$	Bakersfield, Calif. Boise, Idaho		OUA to O	ZZ-D	ENMARK
KRA	5.600	53.54	Boise, ldaho Boise, ldaho Lincoln, Neb.	OXO-OXZ	6.057	49.50	Copenhagen
KRF	3.170	94.58	Lincoln, Neb.	OXO-OXZ OXO-OXZ OXO-OXZ	9.488	31.60	Copenhagen
KRF KSI	5.600 3.100	53.54 $96.72$	Lincoln, Neb. Los Angeles, Calif.	OXY-OXZ	15.300 9.520	$19.53 \\ 31.49$	Copenhagen Copenhagen
KSI	5.560	53.92 96.72	Los Angeles, Calif.	OXY	15.300	19.53	Lyngby
KST KST	. 3.100 5.560	$96.72 \\ 53.92$	Kansas City, Mo.	OZ7MK OZ7R	9.375 3.560	$31.97 \\ 84.22$	Copenhagen Copenhagen
KSW	2.422	123.79	Kansas City, Mo. Kansas City, Mo. Berkeley, Calif.	OZ7RL	9.500	31.56	Copenhagen

	Megs.	Meters	: City HERLANDS	Call	Megs.	Meter:	s <i>City</i> Thuania
PRF5	6.438	46.58	Hague		SAA to	SMZ-	SWEDEN
PCJ PCJ PCK PCK	9.590	31.26	Eindhoven	SAJ	6.065	49.44	Motala
PCJ	15.220 7.770	19.71	Hilversum	SAS	11.760	25.50	Kalsborg
PCK	18.400	38.59 16.29	Kootwijk Kootwijk	SBG	6.065	49.44	Motala POLAND
PCL	16.300	18.39	Kootwijk	SR1			
PCL PCM PCP PCV	6.430 10.800	$\frac{46.63}{27.76}$	Hague	pri	9.570		Poznan -EGYPT
PCV	17.830	16.82	Kootwijk Kootwijk	SUS		32.91	
PDK	10.410	28.80	Kootwijk	SUV	9.110 10.051	29.83	Cairo Cairo
PDM PDV PHI	18.600 7.830	16.12	Kootwijk	SUZ	13.816	21.70	Cairo
PHI	7.830 17.775	$\frac{38.29}{16.87}$	Kootwijk Huizen		SVA	o SZZ_	-Greece
PHO	17.775	16.87	Huizen		TAA to	TCZ-	-Greece TURKEY CELAND
		PJZ—CI	JRACAO		TFA to	TFZ—I	GELAND Jatemala
PKA	to POZ-	DUTC	JRACAO I EAST INDIES	TCCA	13.043	22.98	
PKP	10.410	28.80	Medan, Sumatra	TGCA TGGA	9.370	32.00	Guatemala City
PK1AA	3.998	75.00	Batavia, Java.	TGW	6.480	46.27	Guatemala City
PK2AF PK2AG	6.000 3.156	$\frac{49.97}{95.00}$	Djocjocarta, Java Semarang, Java	TGW	6.678	44.90	Guatemala City
PK2AG	7.890	38.00	Semarang, Java	TGW TGX	10.800 8.950	27.76 33.50	Guatemala City Guatemala City
PK3AN	6.040	<b>49.64</b>	Semarang, Java Surabaya, Java Surabaya, Java	TGX	9.516	31.52	Gautemala City
PK3CH PK4PA	6.662 $59.964$	45.00 5.00	Surabaya, Java Palambang Sumatra		TIA to T	IZ—CO	STA RICA
PK6K	11.720	25.58	Palembang, Sumatra Makassar, Calebes Makassar, Calebes Bandoeng, Java	TIRA	6.080	49.31	
PK6KZ PLE	11.993	25.00 31.86	Makassar, Calebes	TIRA	9.590	31.26	Electra Cartago Electra Cartago
PLE	9.410 18.820	31.86	Bandoeng, Java	TITR TI4NRH	11.790 9.670	$\frac{25.42}{31.00}$	S. Jose Heredia
PLE PLF	17.640	15.93 16.99	Bandoeng, Java Malabar	TI4NRH	15.066	19.90	Heredia
DT.IZ	17.850 15.950	16.80	Bandoeng, Java		TOA to T	97	AR RASIN
PLG	15.950	18.80	Bandoeng, Java		UHA to	UHZ-	HEDJAZ I EAST INDIES EMBURG
PLM PLR	12.290 10.630	24.40 28.20	Bandoeng, Java	UIA	to UKZ-	DUTCH	I EAST INDIES
PLV	9.410 8.120	31.86	Bandoeng, Java Bandoeng, Java Bandoeng, Java Bandoeng, Java	'	UNA to U	NZ-JU	IGOSLAVIA
PLW	8.120	36.92	Bandoeng, Java				AUSTRIA
PLW PMB	9:480 5.170	31.63 57.99	Bandoeng, Java Surabaya, Java	UOR2	6.072	49,37	Vienna
PMB	20.600	14 55	Bandoong Java	UOR2	11.800	25.40	Vienna
LIVID	20.000	14.00	Danuoche, Java		11.000		
PMC	18.170	14.55 16.50 58.30	Bandoeng, Java Bandoeng, Java Bandoeng, Java				
	18.170 5.143	58.30	Bandoeng, Java		UWA to VAA to	UWZ—	GANADA Canada
PMC PMY	18.170 5.143 PPA to	58.30 PYZ—	Bandoeng, Java BRAZIL	VAS VBS	UWA to VAA to 10.700 8.400	UWZ	GANADA Canada
PMC PMY PPQ PPU	18.170 5.143 PPA to 11.644 19.270	58.30 PYZ— 25.75 15.57	Bandoeng, Java BRAZIL Rio de Janeiro	VAS VBS VE9AF	UWA to VAA to 10.706 8.400 2.850	28.02 35.69 105.20	CANADA CANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que.
PMC PMY PPQ PPU PRADO	18.170 5.143 PPA to 11.644 19.270 6.618	58.30 PYZ— 25.75 15.57 45.31	Bandoeng, Java BRAZIL Rio de Janeiro Rio de Janeiro Rìobamba, Ecuador	VAS VBS VE9AF VE9AK	UWA to VAA to 10.700 8.400 2.850 2.830	28.02 35.69 105.20 105.90	CANADA CANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta.
PMC PMY PPQ PPU PRADO PRAG	18.170 5.143 PPA to 11.644 19.270 6.618 8.450	58.30 PYZ— 25.75 15.57 45.31 35.48	Bandoeng, Java  BRAZIL  Rio de Janeiro Rio de Janeiro Riobamba, Ecuador Porto Alegro	VAS VBS VE9AF VE9AK VE9AP VE9AR	UWA to VAA to 10.708 8.400 2.850 2.830 6.335 2.850	28.02 35.69 105.20 105.90 47.35 105.20	CANADA CANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta.
PMC PMY PPQ PPU PRADO PRAG PRBA PSA	18.170 5.143 PPA to 11.644 19.270 6.618 8.450 9.492	58.30 PYZ— 25.75 15.57 45.31 35.48 31.58 18.55	Bandoeng, Java BRAZIL Rio de Janeiro Rio de Janeiro Rio de Janeiro Rio de Janeiro Roto Alegro Rio de Janeiro Rio de Janeiro	VAS VBS VE9AF VE9AK VE9AP VE9AR VE9AR	UWA to VAA to 10.706 8.400 2.850 2.830 6.335 2.850 3.030	28.02 35.69 105.20 105.90 47.35 105.20 98.95	CANADA CANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta.
PMC PMY PPQ PPU PRADO PRAG PRBA PSA	18.170 5.143 <b>PPA to</b> 11.644 19.270 6.618 8.450 9.492 16.162 10.212	58.30 PYZ— 25.75 15.57 45.31 35.48 31.58 18.55 29.35	Bandoeng, Java BRAZIL Rio de Janeiro Rio de Janeiro Rio de Janeiro Rio de Janeiro Roto Alegro Rio de Janeiro Rio de Janeiro	VAS VBS VE9AF VE9AK VE9AP VE9AR VE9BA	UWA to VAA to 10.706 8.400 2.850 2.830 6.335 2.850 3.030 6.130	28.02 35.69 105.20 105.90 47.35 105.20 98.95 48.91	CANADA CANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta.
PMC PMY PPQ PPU PRADO PRAG PRBA PSA PSH PSK	18.170 5.143 <b>PPA to</b> 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180	58.30 PYZ— 25.75 15.57 45.31 35.48 31.58 18.55 29.35 36.65	Bandoeng, Java BRAZIL Rio de Janeiro Rio de Janeiro Riobamba, Ecuador Porto Alegro Rio de Janeiro	VAS VBS VE9AF VE9AK VE9AR VE9AR VE9BA VE9BA	UWA to VAA to 10.706 8.400 2.850 2.830 6.335 2.850 3.030 6.130 11.705 15.190	28.02 35.69 105.20 105.90 47.35 105.20 98.95 48.91 25.63 19.73	CANADA CANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta.
PMC PMY PPQ PPU PRADO PRAG PRBA PSA	18.170 5.143 PPA to 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682	58.30 PYZ— 25.75 15.57 45.31 35.48 31.58 18.55 29.35	Bandoeng, Java BRAZIL Rio de Janeiro Rio de Janeiro Rio de Janeiro Rio de Janeiro Roto Alegro Rio de Janeiro Rio de Janeiro	VAS VBS VE9AF VE9AF VE9AP VE9AR VE9AR VE9BA VE9BA VE9BA VE9BA	UWA to VAA to 10.706 8.400 2.850 2.830 6.335 2.850 3.030 6.130 11.705 15.190 6.090	28.02 35.69 105.20 105.90 47.35 105.95 48.91 25.63 19.73 49.23	CANADA CANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta.
PMC PMY PPQ PPU PRADO PRAG PRBA PSA PSH PSK PSS PTH	18.170 5.143 <b>PPA to</b> 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682 6.120	58.30 PYZ— 25.75 15.57 45.31 35.48 31.58 18.55 29.35 36.65 20.42 48.99	Bandoeng, Java BRAZIL Rio de Janeiro Rio de Janeiro Riobamba, Ecuador Porto Alegro Rio de Janeiro	VAS VBS VE9AF VE9AK VE9AP VE9AR VE9BA VE9BA VE9BA VE9BJ VE9BY	UWA to VAA to 10.706 8.400 2.850 2.830 6.335 2.850 3.030 6.130 11.705 15.190 6.090 4.792	28.02 35.69 105.20 105.20 47.35 105.20 98.95 48.91 25.63 19.73 49.23 62.56	CANADA CANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta.
PMC PMY PPQ PPU PRADO PRAG PRBA PSH PSH PSS PTH	18.170 5.143 PPA to 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682 6.120 PZA to 1	58.30 PYZ— 25.75 15.57 45.31 35.48 31.58 18.55 29.35 20.42 48.99 PZZ—\$	Bandoeng, Java BRAZIL Rio de Janeiro Rio RODE	VAS VBS VE9AF VE9AF VE9AR VE9AR VE9BA VE9BA VE9BA VE9BJ VE9BY	UWA to VAA to 10.708 8.400 2.850 2.830 6.335 2.850 3.030 6.130 11.705 15.190 6.090 4.792 6.426 8.645	28.02 35.69 105.20 105.20 47.35 105.20 98.95 48.91 25.63 19.73 49.23 62.56 46.68	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. London, Ont. London, Ont. London, Ont.
PMC PMY PPQ PPU PRADO PRAG PSA PSH PSK PSS PTH	18.170 5.143 PPA to 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682 6.120 PZA to to Q—RESE to RQZ—	58.30 PYZ— 25.75 15.57 45.31 35.48 31.58 18.55 29.35 36.65 20.42 48.99 PZZ—S RVED I	Bandoeng, Java BRAZIL Rio de Janeiro	VAS VBS VE9AF VE9AF VE9AR VE9AR VE9BA VE9BA VE9BA VE9BJ VE9BY VE9BY VE9BY	UWA to VAA to 10.706 8.400 2.850 2.830 6.335 2.850 3.030 6.130 11.705 15.190 6.090 4.792 6.426 8.645 2.750	28.02 35.69 105.20 105.20 47.35 105.20 98.95 48.91 25.63 19.73 49.23 62.56 46.68	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. London, Ont. London, Ont. London, Ont.
PMC PMY PPQ PPU PRADO PRAG PSA PSA PSH PSK PSS PTH	18.170 5.143 PPA to 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682 6.120 PZA to Q—RESE to RQZ—	58.30 PYZ— 25.75 15.57 45.31 35.48 31.58 18.55 29.35 36.65 20.42 48.99 PZZ—S RVED I	Bandoeng, Java BRAZIL Rio de Janeiro Rio de Code URINAM OR CODE R. (RUSSIA) Moscow	VAS VBS VE6AF VE6AF VE6AF VE6AR VE8AR VE8BA VE6BA VE6BA VE6BA VE6BJ VE6BJ VE6BJ VE6BJ VE6BJ	UWA to VAA to 10.706 8.400 2.830 6.335 2.850 3.030 6.130 11.705 15.190 6.090 4.792 8.645 2.750	28.02 35.69 105.20 105.20 47.35 105.20 98.95 48.91 25.63 19.73 49.23 62.56 34.68 109.00 25.28	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. London, Ont. London, Ont. London, Ont.
PMC PMY PPQ PPU PRADO PRAG PSA PSH PSH PSS PTH REN	18.170 5.143 PPA tu 11.64 ta 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682 6.120 PZA to Q—RESE to RQZ— 6.000 6.430	58.30 PYZ— 25.75 15.57 45.31 35.48 31.58 18.55 29.35 20.42 48.99 PZZ—S RVED I 49.97 46.63	Bandoeng, Java BRAZIL Rio de Janeiro Rio Rio de Janeiro Rio	VAS VBS VE6AF VE6AF VE6AR VE9AR VE9BA VE9BA VE9BA VE9BY VE9BY VE9BY VE9BZ VE6CI	UWA to VAA to 10.70e 8.400 2.850 2.830 6.335 2.850 3.030 6.130 11.705 6.090 4.792 6.426 8.645 2.735	28.02 35.69 105.20 105.20 47.35 105.20 98.95 48.91 25.63 19.73 62.56 46.65 34.68 109.00 25.28 49.66	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Calgary, Alta. Halifax, N. S. London, Ont.
PMC PMY PPQ PPU PRADO PRAG PSA PSA PSA PSS PSS PTH REN REN REN	18.170 5.143 PPA to 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682 6.120 Q—RESE to RQX— 6.000 6.430 6.611	25.75 15.57 45.31 35.48 31.58 18.55 29.35 20.42 48.99 PZZ—SRYED 40.63 45.35 49.97	Bandoeng, Java BRAZIL Rio de Janeiro Rio RODE R. (RUSSIA) Moscow Moscow Moscow	VAS VBS VE9AF VE9AF VE9AR VE9AR VE9BA VE9BA VE9BA VE9BJ VE9BY VE9BY VE9BY VE9CI	UWA to VAA to 10.708 8.400 8.400 2.850 2.830 6.130 6.130 6.090 4.792 6.645 2.750 11.860 6.050 2.735 5.710	28.02 35.69 105.20 105.90 47.35 105.90 98.95 48.91 25.63 19.73 49.23 62.56 46.65 34.65 34.65 109.00 25.28 49.56 109.62 52.51	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, On. Winnipeg, Man.
PMC PMY  PPQ PPU PRAG PRAG PRBA PSH PSK PSS PTH  REN REN REN REN RFN	18.170 5.143 PPA 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682 6.120 PQ—RESE to RQZ— 6.000 6.430 6.611 6.000 6.560	25.75 15.57 45.31 35.48 31.58 18.55 29.35 20.42 48.99 PZZ—SRYED 40.63 45.35 49.97	Bandoeng, Java BRAZIL Rio de Janeiro URINAM OGRODE R. (RUSSIA) Moscow Moscow Moscow Moscow Moscow Moscow	VAS VBS VE9AF VE9AF VE9AF VE9AR VE9BA VE9BA VE9BA VE9BY VE9BY VE9BY VE9BY VE9CI VE9CI VE9CI	UWA to VAA to 10.70e 6.426 6.426 6.8645 5.710 6.50	28.02 35.69 105.20 105.90 47.35 105.90 98.95 48.91 25.63 19.73 49.23 62.56 34.68 109.00 25.28 49.56 109.62 52.51 48.75	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Hailfax, N. S. London, Ont. Winnipeg, Man.
PMC PMY  PPQ PPU PRADO PRAG PSA PSH PSK PSS PTH  REN REN REN REN REN REN REN REN REN RE	18.170 5.143 PPA tu 11.644 19.270 6.278 8.450 9.492 16.162 10.212 8.180 14.682 6.000 6.430 6.611 6.000 6.560	58.30 PYZ— 25.75 15.57 45.31 35.48 31.58 18.55 29.35 36.65 20.42 48.99 PZZ—\$ RVED 1 49.97 46.63 49.97 45.35 49.97 45.35	Bandoeng, Java BRAZIL Rio de Janeiro URINAM OR CODE R. (RUSSIA) Moscow	VAS VBS VE6AF VE6AF VE6AF VE6AR VE8AR VE8BA VE6BA VE6BA VE6BA VE6BY VE6BY VE6CC VE6CL VE6CL VE6CS	UWA to VAA to 10.706 8.400 2.850 2.850 3.030 6.335 2.850 11.705 15.190 6.090 4.792 6.426 2.750 16.050 2.735 6.050 6.050	28.02 35.69 105.90 47.35 105.20 98.95 48.91 25.63 19.73 49.23 62.56 46.65 31.90 25.28 49.56 109.00 25.25 49.36	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Hailfax, N. S. London, Ont. Winnipeg, Man.
PMC PMY  PPQ PPU PRADO PRAG PRBA PSA PSK PSS PTH  REN REN REN REN REN REN REN REN REN RE	18.170 5.143 PPA tu 11.644 19.270 6.168 8.450 9.492 16.162 10.212 8.180 14.682 6.000 6.430 6.611 6.000 6.5614 8.333 4.273	58.30 25.75 15.57 45.31 35.48 31.58 18.55 29.35 36.65 20.42 48.99 PZZ—Si NU—Si 49.97 46.63 45.35 49.97 45.35 49.97 45.70 53.40 35.98	Bandoeng, Java BRAZIL Rio de Janeiro Rio	VAS VBS VE6AF VE6AF VE6AR VE9AR VE9BA VE9BA VE9BY VE9BY VE9BY VE9CI VE6CI VE6CI VE6CS VE8CS VE8CS	UWA to VAA to 10.70e 8.400 2.850 2.850 6.335 5.030 6.130 15.190 6.426 6.050 5.710 6.150 6.050 6.	28.02 35.69 105.20 105.20 105.20 98.95 48.91 25.63 19.73 49.23 62.56 46.65 34.68 109.00 25.28 49.26 109.62 52.51 48.91 48.93 49.84	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Hailfax, N. S. London, Ont. Winnipeg, Man.
PMC PMY  PPQ PPU PRADO PRAG PRBA PSA PSK PSS PTH  REN REN REN REN REN REN REN REN REN RE	18.170 5.143 PPA tu 11.644 19.270 6.643 6.162 10.212 8.180 14.682 6.120 PZA te Q—RESE te RQZ— 6.000 6.430 6.611 6.000 6.560 5.614 8.333 4.273	58.30 PYZ— 25.75 15.57 15.57 45.31 35.48 31.58 29.35 36.65 20.42 48.99 PZZ—S 49.97 46.63 49.97 40.	Bandoeng, Java BRAZIL Rio de Janeiro Rio ROBE R. (RUSSIA) MOSCOW KENDATOVSK Khabarovsk	VAS VBS VE9AF VE9AF VE9AR VE9AR VE9BA VE9BA VE9BA VE9BY VE9BY VE9BY VE9CI VE9CI VE9CI VE9CX VE9DN	UWA to VAA to 10.706 8.400 2.850 2.850 2.850 3.030 6.130 15.190 6.090 4.792 6.426 8.2750 11.860 6.050 2.735 5.710 6.150 6.070 6.015 6.005 9.580	28.02 35.69 105.20 105.20 98.95 47.35 105.20 98.95 48.91 25.63 19.73 49.23 62.56 46.65 34.68 109.00 25.28 49.56 109.62 49.84 49.83 31.30	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Hailfax, N. S. London, Ont. Winnipeg, Man.
PMC PMY  PPQ PPU PRADO PRAG PRBA PSH PSK PSS PTH  REN REN REN REN REN REN REN RFN RFN RW38 RW38 RW35 RW15 RW15	18.170 5.143 tr 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682 6.120 PQ—RESE to RQZ— 6.000 6.6611 6.000 6.560 5.614 8.333 8.238 8.278 8.570	58.30 25.75 45.31 35.48 31.58 31.58 29.35 20.42 48.99 PZZ—\$\$ RVED \$\$ 49.97 46.63 45.35 49.97 53.40 35.98 70.65 34.98 36.95	Bandoeng, Java BRAZIL Rio de Janeiro URINAM OSCOW MOSCOW	VAS VBS VE9AF VE9AF VE9AR VE9AR VE9BA VE9BA VE9BA VE9BJ VE9BJ VE9BZ VE9CI VE9CI VE9CL VE9CS VE9DN VE9DN VE9DN VE9DN	UWA to VAA to 10.706 8.400 2.850 2.850 6.335 2.850 15.190 6.090 6.426 8.6426 8.6426 11.860 6.050 2.735 5.710 6.070 6.070 6.005 9.580	UWZ—VGZ— 28.02 35.69 105.20 105.20 98.95 105.20 98.95 48.91 25.63 19.73 49.23 62.56 34.65 34.65 34.65 109.00 25.28 49.56 109.62 52.51 48.75 49.39 49.39 31.30 25.21	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Wontreal, Que. Montreal, Que.
PMC PMY  PPQ PPU PRADO PRAG PSA PSH PSK PSS PTH   REN REN REN REN REN REN REN RFN RFN RFN RFN RFN RFN RW38AA RW15 RW15 RW15 RW15 RW15 RW19 RW38	18.170 5.143 PPA tu 11.644 19.270 6.450 8.450 9.492 16.162 10.212 8.180 14.682 6.000 6.430 6.611 6.000 6.560 6.5614 8.333 4.273 8.151 5.515	58.30 25.75 15.57 45.31 35.48 31.58 18.55 29.35 36.65 29.35 20.42 48.99 PZZ—S RVED 1 49.97 46.63 49.97 45.70 53.49 35.98 70.65 34.98 36.96 54.98 36.96 54.98	Bandoeng, Java BRAZIL Rio de Janeiro	VAS VBS VBSAF VESAK VESAR VESAR VESBA VESBA VESBA VESBJ VESBJ VESBJ VESBZ VESCJ VESC	UWA to VAA to 10.706 8.400 2.850 2.850 2.850 6.335 2.850 6.130 11.705 15.190 6.090 6.090 2.735 5.710 6.050 2.735 5.710 6.015 6.005 6.015 6.005 6.015 6.005 6.015 6.005 6.015 6.005 6.015 6.005	28.02 35.69 105.20 105.20 105.90 47.35 105.20 98.95 48.91 25.63 19.73 49.23 62.56 46.65 34.68 109.00 25.28 49.56 49.62 49.93 31.30 31.30	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Wontreal, Que. Montreal, Que.
PMC PMY  PPQ PPU PRADO PRAG PRBA PSA PSH PSK PSS PTH   REN REN REN REN REN REN RFN RFN RFN RFN RFN RFN RFN RFN RFN RF	18.170 5.143 PPA tu 11.644 19.270 6.8450 9.492 16.162 10.212 8.180 14.682 6.000 6.430 6.611 6.000 6.560 6.5614 8.333 4.273 8.570 8.111 5.515 511.923	58.30 25.75 15.57 45.31 35.48 31.58 18.55 29.35 36.65 29.36 36.65 29.36 48.99 PZZ S 49.97 46.63 49.97 45.33 49.97 45.70 53.40 35.98 70.65 34.98 36.98 70.65 34.98 36.93 36.93 36.93 36.93 36.93 36.93 36.93 36.93 36.93 36.93 36.93 49.97 45.70 53.40 35.98 70.65 34.98 36.93 36	Bandoeng, Java BRAZIL Rio de Janeiro URINAM FOR CODE R. (RUSSIA) Moscow	VAS VBS VE6AF VE6AF VE6AR VE9AR VE9BA VE9BA VE9BA VE9BY VE9BY VE9BY VE9CC VE6CL VE9CL VE9CL VE9CD VE9DN VE9DN VE9DN VE9DR VE9DR VE9DR VE9DR	UWA to VAA to 10.70e 8.400 2.850 2.850 6.335 5.190 6.130 11.792 6.426 6.050 5.710 6.150 6.050 9.558 11.780	VWZ—VGZ— 28.02 35.69 105.20 105.90 47.35 105.20 98.95 48.91 25.63 19.73 49.23 62.56 34.68 109.00 25.23 49.56 109.62 49.33 49.33 49.33 31.37 25.21	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Wontreal, Que. Montreal, Que.
PMC PMY  PPQ PPU PRADO PRAG PSA PSA PSH PSK PSS PTH   REN REN REN REN REN RFN RFN RFN RFN RFN RFN RW38 RW38AA RW15 RW15 RW19 RW38 RW50 RW54 RW54	18.170 5.143 PPA tu 11.644 19.270 6.8450 9.492 16.162 10.212 8.180 14.682 6.000 6.430 6.611 6.000 6.560 6.5614 8.333 4.273 8.570 8.111 5.515 511.923	58.30 25.75 15.57 45.31 35.48 31.58 18.55 29.35 36.65 29.36 36.65 29.36 48.99 PZZ S 49.97 46.63 49.97 45.33 49.97 45.70 53.40 35.98 70.65 34.98 36.98 70.65 34.98 36.93 36.93 36.93 36.93 36.93 36.93 36.93 36.93 36.93 36.93 36.93 49.97 45.70 53.40 35.98 70.65 34.98 36.93 36	Bandoeng, Java BRAZIL Rio de Janeiro	VAS VBS VB9AF VE9AF VE9AR VE9AR VE9BA VE9BA VE9BA VE9BY VE9BY VE9BY VE9CI VE9CI VE9CI VE9CI VE9CI VE9CI VE9CR VE9DN VE9DN VE9DN VE9DR VE9DR VE9DR VE9DR VE9DR VE9DR VE9DR	UWA to VAA to 10.706 8.400 2.850 2.850 2.850 3.030 6.130 15.190 6.090 4.792 6.426 8.2750 11.860 6.050 2.735 6.050 6.070 6.015 6.005 6.050 6.050 6.050 6.050 6.050 6.050 6.050 6.050 6.050 6.050 6.050 6.050 6.050 6.050 6.050	UWZ— VGZ— 28.02 83.69 105.20 105.20 105.20 44.35 44.92 49.23	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Wontreal, Que. Montreal, Que.
PMC PMY  PPQ PPU PRADO PRAG PRBA PSA PSA PSN PSS PTH   REN REN REN REN RFN RFN RFN RFN RFN RFN RFN RFN RFN RF	18.170 5.143 PPA tu 11.644 19.270 6.450 6.162 10.212 8.180 14.682 6.120 PZA to Q—RESE to RQZ 6.000 6.430 6.000 6.5614 8.333 4.273 8.570 8.570 8.570 8.700 5.515 11.923 4.273 6.000 6.501,724	58.30 PYZ— 15.57 15.57 45.31 31.58 18.55 29.35 36.65 20.42 49.97 49.97 49.97 49.97 49.97 49.97 49.97 49.97 49.97 49.97 49.97 49.97 49.97 49.97 53.40 65.36 49.97 65.40 99.70 65 54.38 49.87 70.65 54.38 49.97	Bandoeng, Java BRAZIL Rio de Janeiro	VAS VBS VE9AF VE9AF VE9AR VE9AR VE9BA VE9BA VE9BA VE9BY VE9BY VE9BY VE9BY VE9CI	UWA to VAA to 10.706 8.400 2.850 2.850 3.030 6.335 2.850 3.030 6.130 11.705 15.190 6.090 4.792 6.426 8	UWZ— VGZ— 28.02 28.02 105.20 105.20 105.20 105.20 44.35 105.20 48.91 48.91 49.93 40.25 44.66 102.51 49.93 40.93 49.94 49.93 49.94 49.94 49.94 br>49.94 49	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Vancouver, B. C. Wolfwille, N. S. Montreal, Que. Montreal, Que. Montreal, Que. Drummondville, Que. Drummondville, Que. Charlottetown, P. E. I. Bowmanville, Ont.
PMC PMY  PPQ PPU PRADO PRAG PRBA PSH PSS PSS PTH  REN REN REN REN REN RFN RFN RFN RFN RW15 RW15 RW15 RW10 RW54 RW10 RW54 RW50 RW54	18.170 5.143 PPA tu 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682 6.120 6.200 6.480 6.611 6.000 6.560 5.614 8.333 4.273 8.111 5.515 11.923 4.273 6.4273 6.4273 6.4273 6.4273 6.4273 6.4273 6.4273 6.4273 6.4273	58.30 15.57 45.31 31.58 31.58 31.58 31.58 31.58 29.35 29.35 48.99 PIZ-Si 49.97 49.97 70.65 54.38 36.96 49.97 70.65 54.38 36.96 49.97 70.65 54.38 36.96 49.97 70.65 54.38 36.96 49.97 70.65 54.38 36.96 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 40.97 40.97 40.97 40.97	Bandoeng, Java BRAZIL Rio de Janeiro	VAS VBS VBSAF VESAK VESAR VESAR VESBA VESBA VESBA VESBA VESBY VESBY VESBY VESBY VESBY VESBY VESCA VESC	UWA to VAA to 10.706 8.400 2.850 2.850 2.850 3.030 6.130 11.705 6.090 2.735 5.750 6.050 2.735 6.005 6.050	UWZ— 28.02	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Wolfville, N. S. Montreal, Que. Montreal, Que. Drummondville, Que.
PMC PMY  PPQ PPU PRADO PRAG PRBA PSA PSK PSS PTH   RAA  REN REN REN REN REN REN REN REN REN RE	18.170 5.143 PPA tu 11.644 19.270 6.188 8.450 9.492 16.162 10.212 8.180 14.682 6.120 PZA to 1 Q—RESE to RQI— 6.000 6.430 6.5614 8.333 4.273 8.570 8.111 1.923 4.273 6.000 51.724 6.420 3.560	58.30 PYZ— 15.57 45.31 15.57 45.31 18.53 1	Bandoeng, Java BRAZIL Rio de Janeiro RIO RODE R. (RUSSIA) Moscow Mos	VAS VBS VEGAF VEGAF VEGAR VEGAR VEGAR VEGBA VEGBA VEGBA VEGBA VEGBY VEGBY VEGCA VEGCF VEGCL VEGCL VEGCS VEGC	UWA to VAA to 10.70e 8.400 2.850 2.850 6.335 2.850 6.130 11.70e 6.150 12.750 12	UWZ	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Wolfville, N. S. Montreal, Que. Montreal, Que. Drummondville, Que.
PMC PMY  PPQ PPU PRADO PRAG PSA PSA PSH PSK PSS PTH   RAA  REN REN REN REN REN RFN RFN RFN RFN RFN RW38 RW38AA RW15 RW15 RW19 RW54 RW50 RW54 RW50 RW54 RW50 RW54 RW50 RW54 RW50 RW54 RW50 RW55 RW60 RW54 RW50 RW56 RW60 RW57	18.170 5.143 PPA tu 11.644 19.270 6.618 8.450 9.492 16.162 10.212 8.180 14.682 6.120 6.200 6.480 6.611 6.000 6.560 5.614 8.333 4.273 8.111 5.515 11.923 4.273 6.4273 6.4273 6.4273 6.4273 6.4273 6.4273 6.4273 6.4273 6.4273	58.30 15.57 45.31 31.58 31.58 31.58 31.58 31.58 29.35 29.35 48.99 PIZ-Si 49.97 49.97 70.65 54.38 36.96 49.97 70.65 54.38 36.96 49.97 70.65 54.38 36.96 49.97 70.65 54.38 36.96 49.97 70.65 54.38 36.96 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 70.65 54.38 49.97 40.97 40.97 40.97 40.97	Bandoeng, Java BRAZIL Rio de Janeiro	VAS VBS VBSAF VESAK VESAR VESAR VESBA VESBA VESBA VESBA VESBY VESBY VESBY VESBY VESBY VESBY VESCA VESC	UWA to VAA to 10.706 8.400 2.850 2.850 2.850 3.030 6.130 11.705 6.090 2.735 5.750 6.050 2.735 6.005 6.050	UWZ— 28.02	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Vancouver, B. C. Wolfwille, N. S. Montreal, Que. Montreal, Que. Montreal, Que. Drummondville, Que. Drummondville, Que. Charlottetown, P. E. I. Bowmanville, Ont.
PMC PMY  PPQ PPU PRADO PRAG PSA PSA PSH PSK PSS PTH   REN REN REN REN RFN RFN RFN RFN RFN RFN RW38 RW38AA RW15 RW15 RW19 RW54 RW54 RW54 RW54 RW54 RW54 RW54 RW54	18.170 5.143 PPA tu 11.644 19.270 6.618 6.18 4.50 9.492 16.162 10.212 8.180 14.682 6.120 PZA te Q—RESE to RQZ— 6.000 6.430 6.611 6.000 6.560 5.614 8.333 4.273 8.111 5.11923 4.273 6.420 5.1724 6.420 5.690	58.30 PYZ— 25.75 15.57 45.31 15.57 45.31 81.58 29.35 36.65 29.35 48.99 PXVED 1 U. S. S. S. 49.97 45.70 53.98 36.96 54.38 36.96 54.38 36.96 64.38 36.96 54.38 55.98 36.96 55.38 55.98	Bandoeng, Java BRAZIL Rio de Janeiro	VAS VBS VBSAF VESAK VESAR VESAR VESBA VESBA VESBA VESBY VESBY VESBY VESBY VESCI VESC	UWA to VAA to 10.706 8.400 2.850 2.850 2.850 2.850 6.335 2.850 6.130 11.5190 6.090 2.735 6.050	UWZ— VGZ— 28.02 83.69 105.20 105.20 105.20 44.93 49.23 49.23 49.23 49.23 49.23 49.56 100.02 49.84 49.93 31.37 49.23 49.24 49.2	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. S. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Vancouver, B. C. Wolfville, N. S. Montreal, Que. Montreal, Que. Drummondville, Que. Tonto, Ont.
PMC PMY  PPQ PPU PRADO PRAG PSA PSA PSH PSK PSS PTH   RAA  REN REN REN REN REN RFN RFN RFN RFN RFN RW38 RW38AA RW15 RW15 RW19 RW54 RW50 RW54 RW50 RW54 RW50 RW54 RW50 RW54 RW50 RW54 RW50 RW55 RW60 RW54 RW50 RW56 RW60 RW57	18.170 5.143 PPA tu 11.644 19.270 6.8450 9.492 16.162 10.212 8.180 14.682 6.000 6.430 6.611 6.000 6.560 6.5614 8.333 4.273 8.5770 8.111 1.923 4.200 5.1792 6.000 5.1792 6.000 5.000 6.6420 6.5600 6.5600 6.5600	58.30 PYZ 15.57 15.57 45.31 15.57 45.31 31.58 131.58 131.58 20.42 48.99 49.77 45.70 46.63 45.35 40.42 49.97 45.70 67.65 67.65 67.65 67.65 67.65 67.65 67.65	Bandoeng, Java BRAZIL Rio de Janeiro	VAS VBS VBSAF VESAK VESAR VESAR VESBA VESBA VESBA VESBA VESBY	UWA to VAA to 10.706 8.400 2.850 2.850 2.850 3.030 6.130 11.705 6.090 2.735 5.710 6.050 6.	UWZ—28.02 28	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. St. John, N. B. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Vancouver, B. C. Montreal, Que. Montreal, Que. Drummondville, Ont. Halifax, N. S. Winnipeg, Man. Montreal, Que. Toronto, Ont.
PMC PMY  PPQ PPU PRADO PRAG PSA PSA PSH PSK PSS PTH   REN REN REN REN RFN RFN RFN RFN RFN RFN RW38 RW38AA RW15 RW15 RW19 RW54 RW54 RW54 RW54 RW54 RW54 RW54 RW54	18.170 5.143 PPA tu 11.644 19.270 6.450 9.492 16.162 10.212 8.180 14.682 6.162 PZA to Q—RESE to RQZ— 6.430 6.613 8.333 4.273 8.111 1.923 4.273 6.000 5.1924 6.650 1.900 5.000 6.6610 6.610	58.30 PYZ— 15.57 15.57 45.31 15.57 45.31 31.58 131.58 20.42 48.99 PXED 7 45.70 55.70 55.76 56.38 49.97 70.65 54.98 55.98 56.38 56.98 57.06 57.06 57.06 57.06 58.22 57.80 58.70	Bandoeng, Java BRAZIL Rio de Janeiro	VAS VBS VBSAF VESAK VESAR VESAR VESBA VESBA VESBA VESBY VESBY VESBY VESBY VESCI VESC	UWA to VAA to 10.706 8.400 2.850 2.850 2.850 2.850 6.335 2.850 6.130 11.5190 6.090 2.735 6.050	UWZ— VGZ— 28.02 83.69 105.20 105.20 105.20 44.93 49.23 49.23 49.23 49.23 49.23 49.56 100.02 49.84 49.93 31.37 49.23 49.24 49.2	GANADA GANADA Glace Bay, N. S. Glace Bay, N. S. Montreal, Que. Red Deer, Alta. Drummondville, Que. Saskatoon, Sask. Saskatoon, Sask. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. Montreal, Que. S. John, N. B. London, Ont. London, Ont. London, Ont. London, Ont. Vancouver, B. C. Calgary, Alta. Halifax, N. S. London, Ont. Winnipeg, Man. Winnipeg, Man. Winnipeg, Man. Vancouver, B. C. Wolfville, N. S. Montreal, Que. Montreal, Que. Drummondville, Que. Tonto, Ont.

Call	Megs.	Meters	City		Call	Megs.	Meters	City
VK2ME	7.940	37.76	Sydney		WNA	9.162	32.72	Lawrenceville, N. J.
VK2ME	9.585	31.28 30.75	Sydney Sydney		WNB	5.868 9.750	51.09 30.75	Lawrenceville, N. J. Deal, N. J.
VK2ME-VLK VK2ME	$9.750 \\ 9.940$	30.16	Sydney		WNC	14.480	20.70	Deal, N. J.
VK2ME	10.520	28.50	Sydney		WNC	19.220	15.60	Deal, N. J.
VK2ME	16.320	18.37	Sydney		WND	6.753	$\frac{44.40}{22.37}$	Deal, N. J.
VK2ME VK3LO	19.400 9.369	$\frac{15.45}{32.01}$	Sydney Melbourne		WND WND	13.400 18.350	16.35	Deal, N. J. Deal, N. J.
VK3ME	9.090	32.98	Melbourne		WOA	6.752	44.41	Lawrenceville, N. J.
VK3ME	9.548	31.40	Melbourne		WOB	6.752	44.41 30.77	Lawrenceville, N. J.
$rac{VK3UZ}{VK3VZ}$	8.820 9.375	$33.99 \\ 31.97$	Melbourne Melbourne		WOF WOK	9.742 10.540	28.44	Lawrenceville, N. J. Lawrenceville, N. J.
VK6AG	7.195	41.67	Perth		WON	9.862	30.40	Lawrenceville, N. J.
VK6AG	15.000	19.99	Perth		woo	3.124	95.97	Deal, N. J.
VLK VLK	$10.540 \\ 16.320$	$28.44 \\ 18.37$	Sydney Sydney		WOO WOO	4.116 4.748	72.87 $63.13$	Deal, N. J. Deal, N. J.
A TIV	10.020	10.01	byuney		wŏŏ	6.515	46.02	Deal, N. J.
vo	A to VOZ	-NEW	FOUNDLAND		woo	8.562	35.02	Deal, N. J. Deal, N. J.
VO8Z	6.800		St. Johns		WOO WOO	8.630 12.836	$\frac{34.74}{23.36}$	Deal, N. J. Deal, N. J.
, ,					WOO	17.110	17.52	Deal, N. J.
VPA to			COLONIES AND		WPDA	2.414	124.20	Tulare, Calif.
	PRO	FECTOR	RATES		WPDB	1.712	175.13	Chicago, Ill.
VPD	7.890	38.00	Suva, Fiji Islands	-	WPDC	$1.712 \\ 1.712$	175.13 175.13	Chicago, Ill.
VPD	14.420 6.060	20.80	Suva, Fiji Islands	•	WPDD WPDE	2.422	123.79	Chicago, Ill, Louisville, Ky.
VO7LO	9.616	$\frac{49.48}{31.18}$	Nairobi, Kenya, Afric Nairobi, Kenya	a.	WPDF WPDG WPDH	2 442	122.77	Flint, Mich.
VQ7LO VRT-ZFA	5.045	59.42	Hamilton, Bermuda		WPDG	2.458 2.422 2.430	121.97	Youngstown, Ohio
VRT-ZFB	10.060	29.80	Hamilton, Bermuda		WPDH	2.422 2.430	$123.79 \\ 123.45$	Richmond, Ind. Columbus, Ohio
VS1AB	7.195	41.67	Singapore, Straits Sett	:16-	WPDK	2.450	122.40	Milwaukee, Wis.
VS3AB	7.055	42.50	Johore Baru, British		$\mathbf{WPDL}$	2.450 2.442	122.77	Lansing, Mich.
Malaya		22,00	V 0110110 12 11 11 11 11 11 11 11 11 11 11 11 11		WPDN	2.458 2.458	121.97 $121.97$	Lansing, Mich. Auburn, N. Y. Akron, Ohio
					WPDO WPDP	$\frac{2.458}{2.470}$	121.40	Philadelphia Ps.
			TISH INDIA		WPDR	2.458	121.97	Philadelphia, Ps. Rochester, N. Y.
VUC	11.870	25.27			WPDS	2.416	124.09	St. Paul, Minn.
VVD	6.110	49.07	Bombay		WPDT	2.470 1.712	$121.40 \\ 175.13$	Kokomo, Ind.
	WU	NITED S	STATES	_	WPDU WPDV	2.458	121.97	Pittsburgh, Pa. Charlotte, N. C.
WAEA	3.100	96.72	Indianapolis, Ind.		WPDW	2.458 2.422 2.414 2.470 2.458 2.442 2.470 1.712 2.450 2.450 2.450 1.712	123.79	Washington, D. C.
$\mathbf{W}\mathbf{A}\mathbf{E}\mathbf{A}$	5.560	53.92	Indianapolis, Ind. Indianapolis, Ind.		WPDY	2.414	124.20	Atlanta, Ga.
WAEB	3.100	96.72	Columbus, Ohio Columbus, Ohio Pittsburgh, Pa.	_	WPDZ WPEA	2.470 2.458	$121.40 \\ 121.97$	Fort Wayne, Ind. Syracuse, N. Y.
WAEB WAEC	$\frac{5.560}{3.100}$	$\begin{array}{c} 53.92 \\ 96.72 \end{array}$	Pittsburgh. Pa.	_	WPEB	2.442	122.77	
WAEC	5.560	53.92	. Pittsburgh, Pa.		WPEC	2.470	121.40	Memphis, Tenn. Arlington, Mass. Brooklyn, N. Y. Bronx, N. Y. New York, N. Y.
WAED	3.100	96.72	Harrisburg, Pa.		WPED	1.712	175.13 $122.40$	Arlington, Mass.
WAED WAEE	$\frac{5.560}{3.100}$	$\frac{53.92}{96.72}$	Harrisburg, Pa. Camden, N. J.		WPEE WPEF	2.450	122.40	Bronx, N. Y.
WAEE	5.560	53.92	Camden, N. J. Newark, N. J. Newark, N. J. New York, N. Y.		WPEG	2.450	122.40	New York, N. Y.
WAEF	3.100	96.72 53.92 187.85	Newark, N. J.		WPEG WPEH	1.712	175.13	Sommervine, Mass.
WAEF	5.560	197.95	Newark, N. J.		WPDJ WPDM	$2.414 \\ 2.414$	$124.20 \\ 124.20$	Passaic, N. J.
WCF WCK-WPDX	$\frac{1,596}{2,414}$	124.20	Detroit, Mich. Rocky Point, N. Y. Rocky Point, N. Y. Rocky Point, N. Y.		WQDP	3.490	85.91	Dayton, Ohio Atlanta, Ga.
WEF-W2BJ	9.488	31.60	Rocky Point, N. Y.		WQDP	5.630	53.25	Atlanta, Ga. Aurora, Ill.
WEJ-W2XBJ	6.732	44.54	Rocky Point, N. Y.		WQDU	3.170	94.58	Aurora, III.
WEL-W2XBJ WEM-W2XBJ	$8.945 \\ 7.396$	$\frac{33.52}{40.54}$	Rocky Point, N. Y.		WQDU WRBH	$\frac{5.600}{2.450}$	53.54 122.40	Aurora, Ill. Cleveland, Ohio
WES-W2XBJ	9.448	31.74	Rocky Point, N. Y.		WRDQ	2.470	121.40	Toledo, Ohio
WEY	1.558	192.43	Boston, Mass.		WRDR	2.414	124.20	Grosse Pt. Village, Mich
WIY-W2XB	J 13.860	21.63	Rocky Point, N. Y.	•	WRDS	1.574	190.48 187.85	E. Lansing, Mich. Brooklyn, N. Y.
WKA WKDT	21.054	14.24 187.85	Lawrenceville, N. J. Detroit, Mich.		WRDU WSBN	1.596 4.174	71.82	S. S. Leviathan
***WKDU	1,596 1,712	175.13	Cincinnati, Ohio		WEDI	8.830	33.95	D. D. 20120000
WKF	19.207	15.61	Lawrenceville, N. J.			13.220	22.68	
WKK	21,400	14.01	Lawrenceville, N. J.		WODD	17.580	17.05	Toolsoon Miss
WKN WKU-W2XBJ	19.816 14.796	$\begin{array}{c} 15.13 \\ 20.27 \end{array}$	Lawrenceville, N. J.		WSDB WSDB	3.490 5.630	85.91 53.25	Jackson, Miss. Jackson, Miss.
WKW-W2XBJ	19.012	15.77	Rocky Point, N. Y. Rocky Point, N. Y.		WSDC	5.657	53.00	Newark, N. J.
WLA	18.340	16.35	Lawrenceville, N. J.		WSDE	3.490	85.91	Tuscaloosa, Ala.
WLK	16.260	18.44	Lawrenceville, N. J.		WSDE	5.630	53.25	Tuscaloosa, Ala.
WLO	10.540	28.44 18.39	Lawrenceville, N. J. Lawrenceville, N. J.		WSDM WSDO	5.657 5.657	53.00 53.00	Albany, N. Y. Buffalo, N. Y.
WLO WLO	$16.300 \\ 21.400$	14.01	Lawrenceville, N. J.		WSDO	5.657	53.00	Cleveland, Ohio
WMA	13.380	22.40	Lawrenceville, N. J.		W1XAB	4.700	63.79	Portland Me.
$\mathbf{WMDZ}$	2.422	123.79	Indianapolis, Ind.		W1XAB W1XAL W1XAZ	11.790	25.42	Boston, Mass. Springfield, Mass.
WMF	$14.464 \\ 19.850$	$20.73 \\ 15.10$	Lawrenceville, N. J. Deal, N. J.		WIXAZ	9.570 8.690	$31.33 \\ 34.50$	Schenectady N. Y.
WMI WMJ	2.422	123.79	Buffalo, N. Y.		W2XAC W2XAD	15.320	19.57	Schenectady, N. Y.
$\mathbf{WMN}$	14.582	20.56	Lawrenceville, N. J.		W2XAF	9.530	31.46	Schenectady, N. Y. Schenectady, N. Y. Schenectady, N. Y.
WMO	2.414	124.20	Highland Park, Mich.		W2XAO	17.850	16.80	New Brunswick, N. J. New Brunswick, N. J.
≈ WMP	1.475	190.48	Framingham, Mass.		W2XB	34.600	8.67	TICM DEGINANCE, IV. J.
WIXAU	Book	tion	1550	[78]		1.0.0	187	Loud hans Sp.
101745	Gara	<del>.</del> .	1500		WIKO	which	Charles Co	CYCARET ATTENDED 3'10

VIXAV Boston 1550 VIXAV Boston 1550 ZXAR kun Kullo 1550 1574 190.60 from W. Hours

Call	Megs.	Meters	City	Call Megs. Meters City
W2XBC	51.400	5.83	New Brunswick, N. J.	YV11BMO 6,125 48.95 Maracaibo
W2XBH W2XCU	5.502 8.650	54.50	Brooklyn, N. Y.	ZAA to ZAZ—ALBANIA
W2XCII	12.850	$\frac{34.66}{23.33}$	Ampere, N. J. Ampere, N. J.	ZKA to ZMZ-NEW ZEALAND
W2XCU W2XCU	12.850 17.300	17.33	Ampere, N. J. Deal, N. J.	ZLT 8.897 33.70 Wellington ZLW 10.980 27.30 Wellington
W2XDJ	21.420	14.00	Deal, N. J.	ZLW 10.980 27.30 Wellington ZLW 12.290 24.40 Wellington
WZXDO	8.630 17.110	$34.74 \\ 17.52$	Ocean Gate, N. J.	ZLW 18.340 16.35 Wellington
W2XDO W2XDO W2XE	6.120	48.99	Ocean Gate, N. J. Ocean Gate, N. J. Richmond Hill, N. Y.	ZL2XX 4.770 62.86 Wellington
W2XE	11.840	25.34	Richmond Hill, N. Y.	ZL2XX 9.560 31.36 Wellington ZL2ZX 6.057 49.50 Wellington
WZXE	15.280	$19.62 \\ 17.34$	Richmond Hill, N. Y.	ZL3ZC 6.000 49.97 Christchurch
W2XK W2XV	17.300 4.797	62.50	Schenectady, N. Y. Long Island City, N. Y. Long Island City, N. Y.	ZPA to ZPZ—PARAGUAY
W2XV	4.975	60.27	Long Island City, N. Y.	ZSA to ZUZ—UNION OF SOUTH AFRICA
$egin{array}{c} W2XV \ W3XAL \end{array}$	8.650 6.096	34.66 49.18	Long Island City, N. Y.	ZTD 7.400 40.52 Durban
W3XAL	17.772	16.87	Boundbrook, N. J.	ZTJ 6.072 49.37 Johannesburg ZTJ 7.329 40.90 Johannesburg
W3XAL W3XE	8.650	34.66	Long Island City, N. Y. Boundbrook, N. J. Boundbrook, N. J. Baltimore, Md.	210 1.020 10.00 00mmmondag
W3XL	6.386	46.96	Boundbrook, N. J.	
W3XX W3XZ	8.650 4.795	$\frac{34.66}{62.53}$	Washington, D. C. Washington, D. C.	Short Wave Stations of Canada
W3XZU	9.585	31.28	Washington, D. C. Philadelphia, Pa.	
W4XG	8.650	34.66	Miami, Fla.	COTE 7.500 20.87 Thurs tout
W6XAJ W6XD	17.300 27.800	17.33 10.78	Oakland, Calif. Palo Alto, Calif.	CGE 7.520 39.87 Tues., & Thurs., test- ing.
W6XQ	24.000	12.48	San Mateo, Calif.	CKS 7.550 39.71
W7XA	24.000 17.300	12.48 17.33	San Mateo, Calif. Portland, Ore.	CGE 7.550 39.71 Western Broadcasting
W7XC	17.300	17.33	Seattle, Wash.	Co., Ltd. VE9CA 11.860 25.28 Western Broadcasting
W8XAG W8XAL	8.650 6.060	34.66 49.48	Dayton, Ohio Cincinnati, Ohio	Co., Ltd.
W8XI W8XK	31.000 6.140	9.67	Pittsburgh, Pa. Pittsburgh, Pa.	Red Deer
W8XK	6.140	48.83	Pittsburgh, Pa.	VE9AK 2.830 105.90
W8XK W8XK	11.872 14.480	$25.25 \\ 20.70$	Pittsburgh, Pa. Pittsburgh, Pa.	Vancouver—BRITISH COLUMBIA
W8XK	15.204 17.780 21.540	19.72	rittsburgh, ra.	VE9BZ 2.750 109.00 VE9CS 6.070 49.39 United Church of Can- ada, Sun., 3:30 p. m. to midnight. Fri., 0 to 1:30 a. m. (6148 kc.)
W8XK W8XK	17.780	16.87	Pittsburgh, Pa.	ada Sun. 3:30 p. m. to midnight. Fri. 0 to 1:30
W8XK W8XL	17.300	13.92 17.33	Pittsburgh, Pa. Dayton, Ohio	a. m. (6148 kc.)
W9XAA	6.076	49.34	Chicago, Ill.	Winnipeg—MANITOBA
W9XAA	11.840 18.105	25.34	Chicago, Ill. Chicago, Ill.	VE9CL 5.710 52.51
W9XAA W9XAM	18.105 4.795	$16.56 \\ 62.53$	Chicago, III. Elgin, Ill.	VE9CL 6.150 48.75 Jas. Richardson &
W9XF	6.020	49.80	Chicago, Ill.	Sons, Ltd. Daily, ex. Sun., 6 to 8:30 p. m. (6148 kc.)
W9XF	6.095	49.19	Chicago, Ill. Chicago, Ill. Chicago, Ill.	VE9JR 11.720 25.58 Jas. Richardson &
$W_9XF$ $W_9XL$	20,500 3.076	14.63 97.47	Chicago, III.	Sons, Ltd. Daily, ex. Sat., Sun., 11:45 a. m. to 1:30 p. m.; 5:30 to 7:30 p. m.
W9XL	3.256	92.08	Chicago, Ill.	
W9XL	4.795	62.53	Chicago, Ill. Anoka, Minn.	VE9BJ 6.090 49.23 C. A. Munro, Ltd.
$_{ m W9XL}$	6.425 8.650	46.66 34.66	Chicago, Ill.	VE9BJ 6.090 49.23 C. A. Munro, Ltd. Relays CFBO (6020?)
W9XL	12.850	34.66 23.33	Anoka, Minn.	
W9XL	17.300	17.33	Anoka, Minn. Anoka, Minn.	VBS 8.400 35.69
		XFZN		VAS 10.700 28.02 7 a.m. to 4 p.m.
XAM	5.766	52.00	Merida, Yucatan Merida, Yucatan Mexico City	Halifax
XAM XDA	11.530 5.357	26.00 55.96	Merida, Yucatan Merico City	VE9HX 6.050 49.56 Wm. C. Borrett (6100 kc.?). 6 to 10 p. m. Tues., Thur., Fril; 8 to 9 p. m.
XDA	5.879	51.00	Mexico City Mexico City Mexico City Mexico City	Wed.; 6:30 to 8:15 p. m. Sunday.
XDA	6.818	44.00	Mexico City	VE9HX 6.050 49.56 Relays CHNS Mon.
XDA XDA	9.375 $11.760$	31.97 25.50	Mexico City Mexico City	Tues. 6 to 10 p. m. Other days, 6 to 7 p. m. CFH 9.030 33.20
XDA	14.620	20.51	Mexico City	Wolfville
XEW	6.020	49.80	Mexico City	VE9CX 6.015 48.85 Acadia University.
XFD	6.667	44.98	Mexico City	Bow manville—ONTARIO
XFD XFD	9.091 11.111	32.97 26.98	Mexico City Mexico City	VE9GW 6.092 49.22 Gooderham & Worts,
XIF	6.380	46.99	Mexico City	Ltd., Toronto. Sunday, 12:30 p. m. to 6 p. m.; Weekdays 4 to 10 p. m.
		XUZ-		Weekdays, 4 to 10 p. m. VE9GW 24.380 12.30
XGTE	5.000		Shanghai	London
	YAA to YA	Z—AFG	HANISTAN Hebrides	VE9CI 2.735 109.60 Sun., 11 a. m. to 7 p. m. Daily, 9 to 11 p. m. VE9BY 4.792 62.56 Saturday midnight on.
	THA 10 TH	to YIZ—	IRAO	VE9BY 4.792 62.56 Saturday midnight on.
	YLA to	YLZ-L	AÍVTA.	VE9BY 4.792 62.56 Saturday midnight on. VE9BY 6.426 46.67 Wed., 8:30 to 9:30 p. m.; Fri., 7 to 7:55 a. m.; Sat., 8 to 11 p. m. VE9BY 8.645 34.68 Monday, 3 to 4 p. m. and irregular times.
	YMA to	YMZ-	DANZIG	m.; Fri., 7 to 7:00 a. m.; Sat., 8 to 11 p. m. VEORY 8.645 34.68 Monday 3 to 4 p. m.
	YSA to YS	7—FI 9	ANAGUA ALVADOR	and irregular times.
	YVA to Y	VZ-VE	HEBRIDES IRAQ ATVIA DANZIG CARAGUA ALVADOR NEZUELA	Toronto
YVQ	11.680	25.67	Maracay	VE9RM 2.004 149.80
YVQ	18.296	16.39	Maracay	Charlottetown—PRINCE EDWARD ISLAND VE9EH 6.080 49.31 Island Radio Broad-
YV2BC YV4BV	6.000 11.700	$\frac{49.97}{25.62}$	Caracas Valencia	VE9EH 6.080 49.31 Island Radio Broad- casting Co., Ltd.
1 1 213 1	*****	20.02		

Call M	eas.	M eters	City	
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_		dvilleQ		
CGA	4.782	62.70	Phones to ships ir	-
regularly				
VE9DŘ	6.005	49.93	Canadian Marconi Co	٠.
Montrea			7 p. m. to midnight.	
VE9AP	6.335	47.33		
CFA	6.840			
CGA	9.340	32.10	6 p. m. to 6 a. m. (9330	J
or 9335 k				
VE9DR	9.555	31.37	Canadian Marconi Co.	,
Montrea				
CGA _	13.296	22.55	Tests with GBB Rug	-
by Eng.				
VE9DR	11.780	25.44	Canadian Marconi Co.	,
Montrea				
CGA	18.170	16.50	Telephony to England	
Montreal				
VE9OS	2.100	142.80		
VE9AF	2.850	105.20		
VE9DN	6.005	49.93	Canadian Marconi Co.	,
Montreal				
VE9BA	6.130	48.91	Canadian National	I
Railways				
VE9DN	9.580	30.44	Canadian Marconi Co	
VE9BA	11.705	25.62	Canadian National	l
Railways				
VE9DN	11.895	25.20	Canadian Marconi Co	
VE9BA	15.190	19.73	Canadian National	l
Railways	١.			
Sas	katoon-	-SASKATO	HEWAN	
VE9AR	2.850	105.20		
VE9AR	3.030	98.95		
		NEWFOU	NDLAND	

### The Month's Changes

6.800 44.09

		POWER
810 1050 1130		Minneapolis, Minn., 5000 to 50000 Hollywood, Cal., 5000 to 25000 Salt Lake City, Utah, 5000 to 50000
1380		Clarinda, Iowa, 500 to 100
		OWNERS
910	XEW	Mexico City, to Cadena Radio-difusor Mexicana S. A.
1210	WCBS	Springfield, Ill., to WCBS, Inc.
1370	WGLC	Glens Falls, N. Y., to O. T. Griffin an G. F. Bissell
1500	KPJM	Prescott, Ariz., to Scott & Sturm
		NEW
790	CMJK	Camaguey, Cuba
960	YV1BC	Caracas, Venezuela
1210	WGNY	Chester Twp., N. Y.
		DELETED
1210	WMRJ	Jamaica, N. Y.
1230	WPSC	State College, Pa.
		LOCATION
1010	KGGF	Coffeyville, Kans., from S. Coffeyville Okla.
1270	WESG	Elmira, N. Y., from Ithaca, N. Y.
		FREQUENCY
1270	CMJN	Camaguey, Cuba, from 1240
1365	CMCW	Havana, Cuba, from 1325

## Emory, Va., to Charlottesville, Va. Glens Falls, N. Y., to Hudson Falls, N. Y.

Joliet, Ill., to E. Dubuque, Ill.

1370 WGLC 1380 Clarinda, Iowa, to Des Moines, Iowa PERMIT TO CHANGE FREQUENCY

PERMIT TO CHANGE LOCATION

1380	KSO	Clarinda, Iowa, to 1370
		CHAINS
1380	KSO	Clarinda, Iowa, new NBC

1310

1350

WKBB

WEHC

## 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, Ohio, for October 1, 1932. State of Ohio

County of Cuyahoga | 88.

Before me, a notary public in and for the State and county aforesaid, personally appeared Fred C. Butler, who, having been duly sworn 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 aforesaid 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:

That the names and addresses of the publisher, editor

nanaging 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, none.

Business Manager, none.

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. not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, com-pany, or other unincorporated concern, its name and address, as well as those of each individual member, must

be given.)
The Radex Press, Inc., 5005 Euclid Ave., Cleveland, O. Fred C. Butler, 5005 Euclid Ave., Cleveland, Ohio.

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 para-graphs contain statements embracing affiant's full knowl-edge 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 (This information is required from the date shown above is. daily publications only.)

Fred C. Butler.

Sworn to and subscribed before me this 1st day of April, [Seal] H. S. Craigle.

(My commission expires April 13, 1933.)

"I received the Time Converter just in time to get 4QG, Brisbane, Australia, Friday morning, October 28th, the very first morning after I received the Converter. It surely is a handy arrangement."

-Philip R. Nichols, East Hartford, Conn.



# What could be nicer than a Year's Subscription to RADEX \*\*\* for a Christmas Gift?

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#### THE RADEX PRESS. INC.

5005 Euclid Avenue

Cleveland, Ohio



Sometimes I think there ought to be a law to make everyone do a little studying every week. I didn'tthink that a year ago because it looked like the cards were allagainst me. stackedBut I am certainly rolling in the money now. Maybe my story will show you the way to larger earnings also.

# I Thought Radio Was a Plaything But Now My Eyes Ard Opened, and I'm Making Over \$75.00 a Week!

\$50 a week! Man alive, a year ago I thought anyone making that much was just plain lucky.

Twelve months ago I was just barely getting by. It was the same old story—a little job; a salary as small as the job.

If you had told me that twelve months later I would be making \$75 a week in my own Radio business—I'd thought you were crazy.

But I am getting ahead of my story—let me tell you how it all started. I was hard up a year ago because I had been kidding myself—that's all—not because I had to be. I thought a fellow either had to be lucky or have a string of college degrees a halí a mile long to make good money.

One day I picked up a magazine and the headline of an ad attracted me because it seemed to fit my case. It said, "I will show you how to start a spare time or full time Radio business of your own WITHOUT CAPITAL."

"They're trying to kid somebody," I thought, "but I'll find out what it is all about anyway."

I wrote in and within a few days received a 64-page book telling about the opportunities in Radio, how I could prepare right at home in my spare time, and how they would show me how to start making money in my neighborhood selling and repairing Radio sets. It would probably have sounded too good to be true if the promises had not been backed up by 100 Terters trom fellows who had taken their course and were very enthusiastic about it.

What has happened since seems almost like a dream to me now. I took their course and in about a month I was ready to start making money in my neighborhood—as much as \$5 and \$15 a week. It wasn't long until I had saved enough money to start a little business of my own.

That business has since grown to the point where I am clearing an average of \$75 a week: All this took place under the watchful guidance of my friends at the National Radio Institute. They also offered to train me for other lines—in case I wasn't interested in having my own business. Broadcasting stations, Radio Manufacturers, Operating on Board Ship, Servicing Sets, Aircraft Radio, Television and Talking Movies

are other fields their training covers. And to think, until the day I wrote for that book, I'd been wailing, "I have never had a chance—will never have one because I have no pull and have never had the advantage of a good eduacation!"

Friend—you may not be as bad off as I was—but think it over—are you satisfied? Are you making as much money as you need? Would you sign a contract to stay where you are for the next ren years at the same salary? Those are the things you have to think about—because no one is going to make it his business to push you ahead—you must make it your own business.

Take my tip—write for their book. It won't cost you anything—only a three-cent stamp. It shows you a lot of things which I don't believe you know now—a lot of facts and figures on the opportunities in this new, fast-growing field. Where the jobs are, what they pay, how to get ready for one. Beginners as well as experienced men are making as much as \$1,000 to \$2,000 a year more as a result of N. R. I. training. You place yourself-under no obligation because the book is free and is gladly sent to anyone who is ambitious and wants to get ahead. Just address J. E. Smith, President National Radio Institute, Dept. 2NO, Washington, D. C.

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COME CHANG	J. E. Smith, President, National Radio Institute, Dept. 2NO, Washington, D. C.	Control Control
AC PRODUCT COSTS	Dear Mr. Smith: Send me your free book, "Rich Rewards in Radio," which points out the opportuni- ties for spare time and full time jobs in Radio and your famous—50-50 method of training men to	CELTS COMES COM
ON STATE OF	become Radio Experts through home study. I understand this request places me under no obligation.	म्स्याच्या स्थापन स
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